On the event structure of Chinese resultative compounds

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Abstract

It has been observed that Chinese resultative compounds display varied aspectual behaviors. Yong (1997) distinguishes between simple change resultatives, i.e. resultatives expressing an instantaneous change, but allowing a process preliminary to the final change, and complex change resultatives, i.e. those allowing a gradual development of the action. Starting from this distinction, this paper aims at providing a structural account of these resultative compounds, based on the constructionist framework put forth by Ramchand (2008), arguing that only simple change resultatives are characterized by having a result layer in their eventive structure. Complex change resultatives, in contrast, are characterized by having the result element in the complement position of the process projection, providing a scalar path. This allows a gradual change of state, and telicity emerges when the path is bounded. The paper also discusses the relation between complex change resultatives and degree achievements.

Keywords

resultatives – event structure – telicity – degree achievements – viewpoint aspect – aspectual classes

1   Introduction

The aim of this paper is to propose a new account of the event structure of resultative compounds in Mandarin Chinese. I will take into account two different kinds of resultative compounds, starting from the distinction between simple change resultatives and complex change resultatives (Chen 1988, Yong 1997). According to Yong (1997), simple change resultatives, such as *dǎ-pò* 打破 'hit-break, break', express an instantaneous change, and thus they behave as achievements. However, Yong states that English achievements allow a detachable preliminary process (though it is not a part of the action), while Chinese resultatives do not. In contrast, according to Yong, complex change resultatives, like *lā-cháng* 拉長 'pull-long, lengthen', allow a gradual development of the action; differently from accomplishments, though, they express a gradual development toward a predetermined culmination, much like degree achievements.

These verbs display a different behavior as far as the interaction between lexical aspect and grammatical aspect is concerned: in particular, complex change resultatives are compatible with the progressive aspect marker *zài* 在/ *zhèngzài* 正在, differently from simple change resultatives, which do not allow the progressive. The difference in compatibility between different types of resultative compounds and the progressive marker suggests that they have distinct lexical aspectual structures.

I will propose an analysis of different kinds of resultative compounds adopting the framework put forth by Ramchand (2008), which is based on a syntactic decomposition of the event structure. Ramchand adopts a neo-constructionist approach, according to which "the reason constructions have meaning is because they are systematically constructed as part of a generative system (syntactic form) that has predictable meaning correlates" (p. 11). Accordingly, I will interpret the different aspectual properties displayed by the two types of resultatives at issue as due to different verbal structures. In particular, I will argue that not all of the so-called resultatives are 'real' resultatives, in the sense that some of them do not imply a result projection in the *v*P, corresponding to the result subevent.

This paper is organized as follows. Firstly, I will illustrate the aspectual properties of the two types of resultative compounds at issue, also showing the interaction with grammatical aspect. Then, I will introduce the framework adopted for the analysis and the account provided for English resultatives within it. I will then carry out an analysis of the different kinds of Chinese resultative compounds, arguing that their different aspectual properties derive from different eventive structures. Also, I will discuss the relation between complex change resultatives and degree achievements. Lastly, I will make some remarks on a particular class of complex verbs formed with the root *jiā* 加 'add, increase', which closely resemble degree achievements.

2   The aspectual properties of resultative compounds

Chen (1988) proposes that Chinese, along with the traditional aspectual classes of states, activities and accomplishments, has two further classes of verbs, i.e. simple change and complex change verbs. Simple change verbs include both simple verbs like *sǐ* 死 'die', *zuò* 坐 'sit down', and resultative compounds like *dǎ-pò* 打破 'hit-break', *kàn-jiàn* 看見 'look-see, see'. Complex change resultatives, in contrast, are complex verbs like *biàn-chéng* 變成 'change-become, change into', *gǎi-liáng* 改良 'change-good, improve', *jiǎn-shǎo* 減少 'subtract-little, reduce', *zǒu-jìn* 走進 'walk-enter', *èhuà* 恶化 'worsen'. According to Chen, simple change verbs have an inherent endpoint and do not allow a gradual process towards it (the starting point overlaps with the endpoint); these verbs, which undergo an instantaneous change, are generally considered as achievements (see e.g. Smith 1997), and are incompatible with imperfective markers, as well as with 'for X time' expressions. In contrast, for complex change verbs, once the event starts, it will gradually proceed towards the result. Also, Chen (1988:412) observes that complex change verbs containing adjectival elements, like e.g. *lā-cháng* 拉長 ' stretch-long, lengthen' and *suō-duǎn* 縮短 'shrink-short, shorten', express a gradable change on a continuum, and such gradable change is a unique aspectual class observed in Chinese. This class of verbs, according to Chen, is incompatible with the durative aspect marker *zhe* 著, but is compatible with the progressive *zài* 在, as well as with 'for X time' expressions.

Along these lines, Yong (1997), on the basis of Chen's situational system, proposes that Chinese resultative compounds that possess the features of achievements are simple change verbs, while other resultatives exhibit 'complex changes'. As I mentioned in the introduction, Yong states that simple change compounds undergo an instantaneous change but, differently from achievements, they do not allow a process preliminary to the final change. In contrast, complex change compounds express an action developing toward a terminal result. According to Yong, differently from accomplishments, these verbs are [-durative], since the process to the terminal result is a development that contains different stages, while accomplishments express actions that allow "a steady durative period before its termination is reached" (Yong 1997:18). Actually, these verbs seem to resemble closely the so-called 'degree achievements', as I will discuss below.

2.1.   *Compatibility with the progressive aspect*

Yong (1997) states that both kinds of resultatives, i.e. simple change and complex change resultatives, are incompatible with the durative aspect marker *zhe* 著, as e.g. **xǐ-gānjìng-zhe* 洗乾淨著 'wash-clean-DUR', **dǎ-pò-zhe* 打破著 'hit-break-DUR', **biàn-chéng-zhe* 變成著 'change-become-DUR'. However, a difference in the (in)compatibility with the progressive aspect marker *zài* 在/ *zhèngzài* 正在 is observable between the two types. As a matter of fact, while simple change resultatives are incompatible with the progressive (1a), complex change resultatives do allow the progressive, as shown by the examples in (1b-c)[1]:

(1)　　a. *那個人在打破窗子。(Yong 1997:9)

nà	*ge*	*rén*	*zài*	*dǎ-pò*	*chuāngzi*
that	CLF	person	PROG	hit-break	window

'That person is breaking the window.' (cf. Eng. *That man is breaking the window*)

b. [...] 所有的日日夜夜都在拉長我和母親的距離。

suǒyǒu	*de*	*rì~rì-yè~yè*		*dōu*	*zài*	*lā-cháng*	*wǒ*	*hé*
all	DET	night~night-day~day		all	PROG	pull-long	1SG	and

mǔqīn	*de*	*jùlí*
mother	DET	distance

'Every night and day are lengthening the distance between my mother and me.'

c. 彭德懷洗過澡, 正在擦乾身子，衛士來報告:"朱德總司令來了。"

Péng Déhuái	*xǐ-guo*	*zǎo*	*zhèngzài*	*cā-gān*	*shēnzi,*
Peng Dehuai	wash-PFV	bath	PROG	wipe-dry	body

wèishì	*lái*	*bàogào*	*Zhū Dé*	*zǒngsīlìng*	*lái-le*
bodyguard	come	report	Zhu De	commander.in.chief	come-PFV

'Peng Dehuai, after having a shower, was drying his body (lit. wiping his body dry) when the bodyguard announced: "The commander-in-chief Zhu De has arrived."'

As highlighted by Klein, Li & Hendriks (2000:726), according to traditional analyses, the imperfective markers 著 *zhe* and *zài* 在 (/ *zhèngzài* 正在) apply to different verb types (see Li & Thompson 198l:185–237): while *zài* 在 cannot be used with stative verbs indicating fully homogeneous states, *zhe* 著 can be used with verbs expressing at least some homogeneous states, but is not normally used with dynamic events. According to Smith (1991:271-277), *zài* 在 has a dynamic meaning, while *zhe* 著 has a static meaning. However, Klein, Li & Hendriks (2000:727) point out that dynamicity/stativity comes from the verb with which the particles combine, rather than to the particles themselves[2].

The marker *zhe* 著 signals the durative aspect, indicating that a situation is viewed as enduring or continuing, often as background information (Klein, Li & Hendriks 2000:726). According to Yong (1997), the aspect marker *zhe* 著 refers to a continuous moment that excludes either endpoint of the action; it refers to "a durative moment after the action starts and such a continuous moment includes neither the inception nor the termination of the action itself" (p. 20). Since it excludes endpoints, it is incompatible with all resultatives. As a matter of fact, Xiao & McEnery (2004:194) point out that this aspect marker is generally found with activities, while it is strictly incompatible with achievements: the encoding of a result makes a situation complete and perfective, and thus incompatible with the aspect marker *zhe* 著, which is imperfective in nature. Moreover, even though it may take a while to achieve the result, achievements are typically instantaneous and this is incompatible with the durative nature of the aspect marker *zhe* 著. As to accomplishments, Xiao and McEnery (2004) claim that, since

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[2] For example, the durative aspect marker attached to verbs like *xiě* 寫 'write', *huà* 畫 'draw' and *zhòng* 種 'plant' can either express the duration of the state resulting from the action, in existential sentences (a), or continuation of an action (b). However, according to Lu (2006:302), when it expresses the latter meaning, it is often used together with the adverb *zhèng* 正 and the final particle *ne* 呢 (the marker *zhe* 著 is not necessarily present):

a. 院子裡種著很多樹。

yuànzi	*lǐ*	*zhòng-zhe*	*hěn*	*duō*	*shù*
courtyard	in	plant-DUR	very	many	tree

'In the courtyard there are many trees.'

b. 爸爸正寫(著)信呢。

bàba	*zhèng*	*xiě-(zhe)*	*xìn*	*ne*
father	PROG	write-DUR	letter	PROG

'My father is writing a letter.'

accomplishments have a natural final spatial endpoint, they are rarely found with the durative aspect marker *zhe* 著; when an accomplishment takes *zhe* 著, it co-occurs with the progressive marker *zài* 在, forming a complex viewpoint which signals "a continuation of a progressive activity" (p. 193; see also fn. 2).

As for the progressive *zài* 在, it signals that an action or event is in progress. According to Yong (1997), the action modified by this aspect marker may have a terminative point, and the interval it refers to has the [+stage] property, differently from *zhe* 著, which refers to "the state property that is in continuity after the action starts" (p. 20), and does not include the final point of the action.

As highlighted by Xiao and McEnery (2004:213-214), the progressive *zài* 在 only corresponds to the canonical use of the English progressive, i.e. to denote ongoing situations (real, imagined or perceived). This aspect marker is more likely to be found with activities, while it is strictly incompatible with achievements, both simple and resultative ones. As for accomplishments, they are incompatible with the progressive when taking a direct bounded object (incremental theme), which makes the predicate telic, attaching a final spatial endpoint to the situation (2b); in contrast, when they are followed by an unbounded (non-quantized) object, they behave like activities and, as such, they are compatible with the progressive (2a):

(2)   a.我在吃蘋果

     wǒ   *zài*   *chī*   *píngguǒ*
     1SG   PROG   eat   apple
     'I am eating apples'
    b.*我在吃兩個蘋果
     wǒ *zài* *chī* *liǎng* *ge* *píngguǒ*
     1SG PROG eat two CLF apple
     'I am eating two apples'

Besides, the progressive is strictly incompatible with individual-level states, while stage-level states, which are more 'event-like', are compatible with this aspect marker. Finally, we may remark that the progressive cannot occur with 'for X time' expressions and frequency phrases, which indicate a definite time stretch or add a temporal endpoint to the situation. In a nutshell, the progressive marker is generally compatible only with dynamic unbounded situation, while it is strictly incompatible with endpoints (both spatial and temporal ones).

The compatibility with the progressive displayed by complex change resultatives, then, seems to indicate that they are not strictly telic. According to Yong (1997), *zài* 在 is compatible with complex changes since they express a developing process toward a destined termination; this aspect marker then can describe the ongoing process before the termination is eventually reached.

2.2   *Compatibility with the durative aspect*

However, it should be noted that despite Yong's claim on the incompatibility between complex change resultatives and the durative aspect marker (see also Chen 1988), some resultatives do allow the durative, as in the example below:

(3)   另外的 4 位村民不顧湍急的洪水, 站在齊大腿的水裡，不斷挖深著溢洪道。

     lìngwài   *de*   *sì*   *wèi*   *cūnmín* *bùgù* *tuānjí* *de*   *hóngshuǐ*   *zhàn-zài*
     other   DET   four   CLF   villager ignore rushing DET flood   stand-stay
     jì   *dàtuǐ* *de*   *shuǐ-lǐ* *bùduàn*   *wā-shēn-zhe* *yìhóngdào*
     equal.in.height   thigh DET water-in unceasingly dig-deep-DUR spillway
     'The other four villagers ignored the rushing flood and stood in the water up to their thighs, unceasingly

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deepening the spillway (by digging).'[3]

As a matter of fact, Guo (1993) shows that there is a class of resultatives which is compatible both with the progressive and with the durative (see also Wang 2011), as e.g. *tí-gāo* 提高 'raise-high, raise, heighten', *suō-xiǎo* 縮小 'shrink-small, reduce, narrow' (on these verbs see also § 4.6 below).

According to Wang (2011), the durative marker *zhe* 著 expresses an homogeneous duration, i.e. each portion of the event in the durative process must be alike. For example, in *pǎo-zhe bù* 跑著步 'run-DUR step', each subevent in the durative process is *pǎo-bù* 跑步 'run-step, run', but in *zài chī yī ge píngguǒ* 在吃一個蘋果 'PROG eat one CLF apple, be eating an apple', the subevents are not identical, since each subevent involves different parts of 'an apple', thus it is not possible to use the durative: **chī-zhe yī ge píngguǒ* 吃著一個蘋果 'eat-DUR one CLF apple'[4] (Wang 2011:78). According to Wang (2011:78-80), resultatives compatible with the durative *zhe* 著 must satisfy these semantic restrictions and can be divided into two types. The first type is formed by complex verbs which express a change in quantity; this group includes those verbs having as a resultative element adjectives like *cháng* 長 'long', *duǎn* 短 'short', *shēn* 深 'deep', *qiǎn* 淺 'shallow', *dà* 大 'big', *xiǎo* 小 'small', *gāo* 高 'high, tall', *dī* 低 'low', etc., which occupy opposite poles of a scale. From these examples, one could be tempted to say that *zhe* 著 is compatible only with those complex verbs having as a complement an open scale adjective; indeed, open scale adjectives project scales without a maximal degree and as such are more suited to provide an atelic interpretation (on this issue see § 2.3.2 below). As a matter of fact, as Wang (2011:79) shows, if a measure phrase, providing an explicit bounded difference value, is added, the durative *zhe* 著 is no longer allowed (see also § 2.3.2):

(4) 飛行員把飛機降低著(*五十米)

fēixíngyuán	*bǎ*	*fēijī*	*jiàng-dī-zhe*	*wǔshí*	*mǐ*
pilot	OBJ	aircraft	descend-low-DUR	fifty	meter

'The aircraft is descending (*fifty meters) (the pilot is making the aircraft descend)'

However, closed scale adjectives too, like *àn* 暗 'dark' (*bùduàn biàn-àn-zhe* 不斷變暗著 'unceasingly change-dark-DUR, unceasingly getting dark'; Wang 2011:79) or *gān* 乾 'dry' in the example below, can be used in resultatives allowing the durative aspect marker:

(5) 說完，她便用自己稚嫩的小手指，擦乾著林佳眼角上的淚水。

shuō-wán	*tā*	*biàn*	*yòng*	*zìjǐ*	*zhì-nèn*	*de*	*xiǎo-shǒuzhǐ*,
speak-finish	3SG.F	then	use	self	young-tender	DET	little-finger

cā-gān-zhe	*Lín Jiā*	*yǎn-jiǎo-shàng*	*de*	*lèishuǐ*
wipe-dry-DUR	Lin Jia	eye-corner-on	DET	tear

'When she finished speaking, she wiped the tears in Lin Jia's corners of the eyes with her little young and tender fingers.'[5]

Wang (2011:78-79) further remarks that this group of verbs compatible with the durative generally cannot be followed by a concrete object, as the following examples seem to suggest:

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[3] Newspaper article: http://www.lxxnews.com/Info.aspx?ModelId=1&Id=37041 (last access: 17/07/2017)

[4] Cf. 我正吃著飯呢　　　　　　　vs.　　　*我吃著飯

wǒ	*zhèng*	*chī-zhe*	*fàn*	*ne*		*wǒ*	*chī-zhe*	*fàn*
1SG	PROG	eat-DUR	food	PROG		1SG	eat-DUR	food

'I am eating'

See also fn. 2.

[5] Novel: https://www.69shu.com/txt/29096/19568474 (last access: 23/10/2018)

(6)   a. 他們(瘋狂地)抬高著物價。

      tā-men   (*fēngkuáng-de*)   *tái-gāo-zhe*   *wù-jià*

      3SG.M-PL   insane-ADV   raise-high-DUR   thing-price

      'They are raising commodity prices (like crazy).'

    b. *他們抬高著一架鋼琴。

      tā-men   *tái-gāo-zhe*   *yī*   *jià*   *gāngqín*

      3SG.M-PL   raise-high-DUR   one   CLF   piano

      'They are raising a piano.'

    c. 他們拓寬著想象的空間。

      tā-men   *tuò-kuān-zhe*   *xiǎngxiàng*   *de*   *kōngjiān*

      3SG.M-PL   expand-wide-DUR   imagination   DET   space

      'They are broadening their imagination.'

    d. *他們拓寬著那條道路。

.   *tā-men*   *tuò-kuān-zhe*   *nà*   *tiáo*   *dàolù*

      3SG.M-PL   expand-wide-DUR   that   CLF   road

      'They are broadening that road.'

According to Wang (2011:79), this has to do with the indeterminacy of abstract objects, which have blurred, indeterminate space boundaries, which in turn results in a temporal indeterminacy of the whole complex verb; thus the temporal axis corresponding to the complex verb can be instantaneous or expand in a process. However, examples (3) and (4) show two resultatives followed by the durative marker *zhe* 著 and a concrete object, thus the object does not need to be abstract. Compare (6b-d) to the examples below, which display the same resultatives followed by *zhe* 著 and a concrete object:

(7)   a. 推土機正在轟隆隆地拓寬著路面[…]

      tuītǔjī   *zhèngzài*   *hōnglónglóng-de*   *tuò-kuān-zhe*   *lùmiàn*

      bulldozer   PROG   tumble-ADV   expand-wide-DUR   road

      'The bulldozer is broadening the road tumblingly […]'[6]

    b. 她將左臂一公分一公分地向上抬高著[…]

      tā   *jiāng*   *zuǒ-bì*   *yī-gōngfēn-yī-gōngfēn-de*   *xiàng*

      3SG.F   OBJ   left-arm   one-centimeter-one-centimeter-ADV   towards

      shàng   *tái-gāo-zhe*

      up   raise-high-DUR

      'She was raising her left arm up centimeter by centimeter […]'[7]

In (7) the objects are concrete bare nouns. We may speculate, then, that the sentences in (6) are ungrammatical due to quantization effects created by the numeral *yī* 一 'one' and the demonstrative *nà* 那 'that', which make the event bounded. This issue, however, requires further investigation in order to be clarified, also because sentences like (8), with a concrete object preceded by a 'demonstrative+CLF' can be found, and indeed demonstrative objects are not necessarily bounded in Chinese[8]:

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[6] Novel: http://www.shoujikanshu.cc/xt/14164_192.html (last access: 23/10/2018)

[7] PKU corpus, periodical publications, 1994 (last access: 23/10/2018).

[8] Soh & Kuo (2005), following Jackendoff (1991), consider noun arguments to have the feature [±b] (bounded), i.e. bounded or unbounded in space, and [±i] (internal structure), which indicates inherent division into discrete members ([-i] stands for absence of entailment about internal structure). According to these authors, a numeral object in Mandarin is [+b], while a demonstrative object is [±b]: e.g. *shū* 書 'book' ([-b, +i]); *sān běn shū* 三本書 'three books' ([+b, +i]), *nà běn shū* 那本書 'that book' ([±b, +i]). As for *yī* 一 'one', it can be interpreted

(8) 還有幾台老式的起重機[…]不斷拓寬著這片垃圾場的占地面積。

háiyǒu	*jǐ*	*tái*	*lǎo-shì*	*de*	*qǐzhòngjī*	*bùduàn*
furthermore	some	CLF	old-fashion	DET	crane	unceasingly

tuò-kuān-zhe	*zhè*	*piàn*	*lājī-chǎng*	*de*	*zhāndì-miànjī*
expand-wide-DUR	this	CLF	garbage-place	DET	occupy-area

'Furthermore, some old-fashioned cranes were unceasingly broadening the area occupied by this dump.'[9]

According to Wang (2011:80), there is yet another context in which *zhe* 著 can be added to a resultative, i.e. when it signals the duration of the result state brought about by the action expressed by V_1, as e.g. in *zhǎng-hóng-zhe* 漲 紅著 'rise-red-DUR, be flushing'.

As highlighted by Klein, Li & Hendriks (2000:763), the exact distribution of the aspect markers *zài* 在 and *zhe* 著 is a much debated issue, and the difference between the two is further complicated by factors such as pragmatics and regional variation: e.g. they point out that *zài* 在 is more common in the spoken language, while *zhe* 著 is more common in the written language, and is frequently used for background events. Furthermore, they stress the fact that the borderline between these two markers has become blurred, especially in Northern varieties. It goes without saying, then, that further investigation on the differences between the two imperfective aspect markers is needed. In addition, further research is needed in order to assess in which contexts the durative is allowed, and whether it depends on the characteristics of the result element involved. This by far exceeds the scope of the present paper, and thus I leave these issues for further research. Here I will focus on the differences at the level of event structure between resultatives allowing the progressive *zài* 在 and those not allowing it. However, it is important to stress that the compatibility with *zhe* 著 further seems to suggest that some resultatives in Mandarin have [+durative] features (see Peck, Lin & Sun 2013).

2.3 *Complex change resultatives and degree achievements*

To accommodate Chinese verbs that do not fit in the traditional Vendlerian classification, including complex change resultatives, Peck, Lin & Sun (2013) introduce a new aspectual feature, [±scale], in close relation to the notion of telicity, based on the similarity between these verbs and English degree achievement verbs (see § 2.3.2).

2.3.1 Degree achievements

As highlighted by Hay, Kennedy & Levin (1999), the basic semantic characteristic of degree achievement verbs is that their affected argument, as in the case of the incremental theme object of a verb like *eat*, undergoes a change in some property. One peculiarity of these verbs is that they display both telic and atelic behavior according to standard diagnostics; this is the reason why Levin & Rappaport Hovav (1995:172) state that, even though degree achievement verbs are verbs of change of state, they should be set apart from other change of state verbs, since they do not necessarily entail the achievement of an endstate.

According to Abusch (1986), the atelic sense of a deadjectival verb is 'become A-er', while the telic one is 'become A'. Levin & Rappaport Hovav (1995:129-130) and Jackendoff (1996:331) share a similar view: they consider the change of state described by these verbs as a movement along a path constituted of degrees of a property indicated by the adjectival base. According to Jackendoff (1996), if the path has a boundary, reaching the property described by the adjective, the sentence is telic; if the path is unbounded, going on indefinitely in the direction

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either as a numeral, 'one' ([+b, +i]), or as an indefinite determiner, 'a' ([±b, +i]). Thus, while numeral objects create boundedness, demonstrative objects and those containing *yī* 一 as an indefinite determiner are not necessary bounded. In contrast, in English, definite/indefinite singular count NPs are [+b]: e.g. *the/that sandwich* ([+b, -i]), *a sandwich* ([+b, -i]). As highlighted by Loar (2018:155), in Chinese a demonstrative only has the function of reference, but it does not set limits to the amount of an NP, i.e. it does not make it bounded. Therefore, definiteness does not necessarily correlate with boundedness.

[9] Novel: http://www.00txt.com/wanjiayihao/4210.html (last access: 15/10/2018).

described by the adjective, the sentence is atelic. Kennedy & Levin (2002) observe that verbs of gradual change have as part of their meaning gradable properties; telicity is not determined by a lexical diacritic, as for example [±bounded], or by some morphosyntactic feature, but it is determined solely by the semantic properties of the degree of change.

There are different views on whether this ambiguity is related to the nature of the property of the scale denoted by the adjective or not. Hay, Kennedy & Levin (1999) propose that the kind of base adjective is crucial in determining the telicity of a degree achievement verb. They propose that degree achievement verbs derived from closed scale adjectives normally behave as telic (*the clothes are drying* does not entail *the clothes have dried*), while degree achievement verbs derived from open scale adjectives normally behave as atelic (*the snow is slowing* entails *the snow has slowed*). However, a measure phrase can provide an explicit bounded difference value, as e.g. *Kim lengthened the rope five inches*, in which case the predicate is always telic, regardless of the type of property expressed by the adjective: "when the difference value identifies a bound on the measure of change in the affected argument over the course of the event, the predicate is telic" (Hay, Kennedy & Levin 1999:130). Also, Hay, Kennedy & Levin observe that in particular collocations and contexts, verbs derived from open scale adjectives, which are usually atelic, may be associated with closed scales, displaying telic behavior: for example, in *the tailor lengthened my pants*, real-world knowledge imposes a conventional maximal length for pants.

Contrary to Hay, Kennedy & Levin (1999), Kearns (2007) argues that telicity in deadjectival degree achievement verbs is not dependent on the property nature of the scale. According to Kearns (2007), there are two kinds of telic senses for deadjectival verbs: an achievement sense and an accomplishment sense. The achievement sense is related to the state 'become -er'. Kearns (2007) observes that all deadjectival verbs can express at least the change of state 'become A-er', which is entailed by all of the aspectual senses of a deadjectival verb; she terms it 'comparative endstate'. Kearns further observes that predicates which lexically entail an endstate are usually telic, and therefore one could conclude that all deadjectival verbs are telic, since they entail a comparative endstate (see also Bertinetto & Squartini 2006).

The other telic sense of deadjectival verbs, according to Kearns (2007), is the accomplishment sense, which is related to the state 'become X'. Kearns (2007) points out that while deadjectival verbs like *widen* only have a comparative endstate, verbs like *quiet*, *cool* and *clear* have both the comparative endstate and a standard endstate, i.e. 'X is A'. Therefore, Kearns (2007), differently from Hay, Kennedy & Levin (1999), assumes that the telic (accomplishment) interpretation with deadjectival verbs is assigned the content 'become A' (where A is the positive form of the corresponding adjective), rather than 'completely' (giving the interpretation 'X becomes maximally A'). Thus, the interpretation of the implicature is given by the standard value of the property and it is not dependent on the property nature of the scale (open scale adjectives vs. closed scale adjectives).

To sum up, Kearns (2007) argues that, while a telic (achievement) sense and a process sense are always available for degree achievement verbs, the telic accomplishment sense depends on the characteristics of the standard value, rather than on the kind of scale of the adjectives (*contra* Hay, Kennedy & Levin 1999; see also Rothstein 2008).

What clearly emerges from the different positions found in the literature on the topic is that degree achievements, despite being change of state verbs, are not obligatorily telic; thus, not all inchoative verbs are necessarily telic (see Piñón 1997, Marín & McNally 2011). The ambiguity of these verbs, showing both telic and atelic behavior, has been widely recognized in the literature; the differences among proposals, as we have seen, concern the kind of telic sense associated to degree achievement verbs and, also, what determines their different behaviors.

2.3.2   Degree achievements and scalarity in Mandarin verbs

As mentioned earlier, Peck, Lin & Sun (2013) in their classification of Chinese aspectual classes introduce a new feature, [±scale], distinguishing different kinds of scalar changes. They basically follow Kennedy & Levin (1999) and Rappaport Hovav & Levin (2010), and consider verbs with an open scale as atelic and those with a closed

scale as telic. Furthermore, they observe that, besides boundedness, verbs lexicalizing a scalar change can be divided into two types: those having scales composed of many points (degrees or intervals with measurement values), like *straighten* or *dry*, which express a change through multiple points along a scale, and those having only two points, like *die*, whose scale consists only of two values ('dead' and 'alive'), but no other points, as e.g. 'half dead' (see Rappaport Hovav & Levin 2010, among others). They call these two types 'multi-point' scalar change verbs and 'two-point' scalar change verbs respectively. Verbs of the first type correspond to degree achievements and are [+durative], while those of the second type are [-durative]. In a nutshell, according to Peck, Lin & Sun (2013) the scalar features 'open' and 'closed' correspond to 'atelic' and 'telic', while 'multi-point' and 'two-point' correspond to durative and punctual verbs respectively.

Using the features [±dynamic], [±scalar], [±telic] ([±closed]), and [±punctual] ([±two-point]), Peck, Lin & Sun (2013:679) single out the verb classes shown in Table 1.

Table 1 – Aspectual classes in Peck, Lin & Sun (2013)

Aspectual class	Examples	[±dynamic]	[±scalar]	[±telic] ([±closed])	[±punctual] ([±two-point])
State = **no change**	*zhīdào* 知道 'know', *xǐhuan* 喜歡 'like', *zuò* 坐 'sit'	-	-	-	-
Semelfactive = **nonscalar punctual change**	*késou* 咳嗽 'cough', *tiào* 跳 'jump', *zhǎyǎn* 眨眼 'wink'	+	-	-	+
Activity = **nonscalar durative change**	*fēi* 飛 'fly', *tuī* 推 'push', *chī* 吃 'eat'	+	-	-	-
Open scale	*shēn-cháng* 伸長 'stretch-long, lengthen', *gǎi-liáng* 改良 'change-good, improve'	+	+	-	-
Multi-point closed scale change = **accomplishment**	*guò* 過 'cross', *huí* 回 'return', *mǎi* 買 'buy'	+	+	+	-
Two-point closed scale change = **achievement**	*sǐ* 死 'die', *jìn* 進 'enter', *chuī-gān* 吹乾 'blow-dry, dry (by blowing)'	+	+	+	+

According to this classification, resultative compounds may be either open scale verbs or two-point closed scale change verbs, as in the examples provided in Table 1. Therefore, resultatives whose result is an open scale adjective, like *lā-cháng* 拉長 'pull-long, lengthen', *pū-kuān* 鋪寬 'pave-wide, widen (by paving)' or *kuò-dà* 擴大 'expand-big, enlarge', are [+durative], and as such are compatible with the progressive marker (9a) and with the adverb *jìnyíbù* 進一步 'further' (9b), while resultatives like *shā-sǐ* 殺死 'kill-die, kill', *chuī-gān* 吹乾 'blow-dry, dry (by blowing)', *lā-zhí* 拉直 'stretch-straight, straighten' or *zá-píng* 砸平 'pound-flat, flatten (by pounding)' would be [-durative] and, thus, incompatible with the progressive aspect marker[10].

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[10] According to Tai (1984), Chinese resultative compounds express only the result and not the duration, despite the fact that V₁ is a durative verb, and this is what prevents these verbs to appear with *zài* 在. According to Klein, Li & Hendriks (2000:764), *zài* 在 and *zhe* 著 are not compatible with resultatives, i.e. they cannot apply to the source phase (the action expressed by V₁), because in Chinese the distinguished

(9)   a. 我們的群體在慢慢擴大。

wǒ-men	*de*	*qúntǐ*	*zài*	*mànmàn*	*kuò-dà*
1SG-PL	DET	group	PROG	gradually	expand-big

'Our group is expanding gradually.'

b. 集團於去年進一步改良生產流程。

jítuán	*yú*	*qùnián*	*jìnyíbù*	*gǎi-liáng*	*shēngchǎn*	*liúchéng*
group	at	last.year	further	change-good	production	process

'Last year, the group further improved the production process.'

(Examples from Peck, Lin & Sun 2013: 687)

Even though I believe that the notion of scalarity is an important feature of the aspectual structure of these verbs and is fundamental in understanding their behavior, there are still problems in the distinction proposed by Peck, Lin & Sun (2013) as far as resultatives are concerned. As a matter of fact, they group together resultative compounds like *shā-sǐ* 殺死 'kill-die, kill' and those like *chuī-gān* 吹乾 'blow-dry, dry (by blowing)' or *lā-zhí* 拉直 'stretch-straight, straighten', considering them as two-point closed scale change verbs (achievements). However, while it is undoubtable that verbs like *shā-sǐ* 殺死 'kill-die, kill' are incompatible with the progressive, verbs like *chuī-gān* 吹乾 'blow-dry, dry (by blowing)' may appear with the progressive, even though the result element is a closed scale adjective (see example 1c):

(10)   a. 她的記憶僅止於她在吹乾頭髮，覺得很累很累，所以……她睡着了！

tā	*de*	*jìyì*	*jǐn*	*zhǐyú*	*tā*	*zài*	*chuī-gān*	*tóufa*
3SG.F	DET	memory	only	stop.at	3SG.F	PROG	blow-dry	hair

juéde	*hěn*	*lèi*	*hěn*	*lèi,*	*suǒyǐ*	*tā*	*shuì-zháo*	*le*
feel	very	tired	very	tired	so	3SG.F	sleep-succeed	PFV

'The last thing she remembers is she was drying her hair; she felt really tired, so…she fell asleep!'[11]

b. 為參加成人禮慶祝活動, 卡門岡薩雷斯正在拉直頭髮。

wèi	*cānjiā*	*chéngrén-lǐ*	*qìngzhù*	*huódòng*
in.order.to	attend	adult-celebration	celebrate	activity

Kǎmén	*Gāngsàléisī*	*zhèngzài*	*lā-zhí*	*tóufa*
Carmen	González	PROG	stretch-straight	hair

'In order to celebrate entry into adulthood, Carmen González is straightening her hair.'[12]

This means that resultatives in (10), containing the adjectives *gān* 乾 'dry' and *zhí* 直 'straight' as result elements, are able to express a gradual development of the action towards the culmination point. I will go back to this issue in § 4.2, where I will propose an analysis of resultative compounds allowing the progressive.

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phase is the target phase (the result, indicating change of state). In contrast, in English the distinguished phase is the source phase and, thus, the imperfective marking applies to it; the sentence *John is eating up an apple* is perfectly acceptable then. The same goes for monomorphemic achievements like *dào* 到 'arrive', which, as we have seen above (§ 2), are incompatible with the progressive. In contrast, the corresponding English verb, *arrive*, can be used with the progressive, which applies to the source phase. However, Klein, Li & Hendriks (2000) explicitly state that their analysis, in principle, does not exclude the possibility that *zài* 在 could be applied to the target phase. They state that the target phase (the result element) in resultative compounds seems to indicate states that result from the source-phase action (i.e. change of state), thus they hypothesize that explicit imperfective markers are possibly blocked because the result states are instantaneous (we cannot talk, e.g., about the duration of *pò* 破 'broken' in *dǎ-pò* 打破 'hit-broken'), and imperfective markers require a duration event. These analyses, however, do not take into account those resultatives in which the progressive is allowed.

[11] PKU corpus, Modern literature, Taiwanese writer Yu Qing 于晴, *Hóng píngguǒ zhī liàn* 红苹果之恋 (last access: 30/07/2017).

[12] Newspaper article (caption): http://www.chinadaily.com.cn/micro-reading/interface_yidian/2016-01-21/14497465.html (last access: 30/07/2017).

2.4 *Factors determining the compatibility with the progressive*

So far, it would seem that we can rely on the result element to establish whether the whole resultative compound is compatible with the progressive or not. However, the picture seems to be more complex than this. Wang (2011) highlights that it is not possible to rely only on the verb or on the result complement to determine the possibility of the resultative compound to appear with the progressive; sometimes the object plays a role as well. Wang points out that sometimes the difference between a concrete and an abstract object (see the discussion in § 2.2 above) determines whether the progressive can be used or not, as in the following examples (Wang 2011:77):

(11) a. *那個杯子正在被打破。

nà	*ge*	*bēizi*	*zhèngzài*	*bèi*	*dǎ-pò*
that	CLF	glass	PROG	PASS	hit-broken

'That glass is being broken.'

  b. 國有石油公司的壟斷地位正在被打破。

guóyǒu	*shíyóu*	*gōngsī*	*de*	*lǒngduàn*	*dìwèi*	*zhèngzài*
nationalized	oil	company	DET	monopolize	position	PROG

bèi	*dǎ-pò*
PASS	hit-broken

'The monopoly position of state-owned oil companies is being broken.'

However, at a closer look, it seems that the difference considered above is not just a matter of abstract vs. concrete object. I believe we must consider both V_1 and the result element in order to get a clearer picture. First of all, the verb *dǎ* 打, when appearing as the first element in resultative compounds, is ambiguous between being a verb with a full lexical meaning, i.e. 'hit, beat, strike', and a phonetically realized light verb (see Basciano 2013 for an overview). In the latter case, it does not express a specific action, origin or manner, but it is rather a bleached verb with a general causative meaning (on causative light verbs, see § 4.5 below). This is the case of example (11b), where *dǎ* 打 does not mean 'hit', but simply conveys a general causative meaning; the meaning of the complex verb *dǎ-pò* 打破, indeed, is 'break, smash (old rules, restrictions, etc.)'.

As for the result element, *pò* 破, it is a quite complex lexical item. Xu (2006:174-188) points out that *pò* 破 'break' was a transitive verb in Old Chinese, but it gradually lost its transitive use, and eventually also changed into a pseudo-adjectival form. This hypothesis seems to be confirmed by the fact that in Mandarin Chinese it is possible to say *pò xié* 破鞋 'worn-out shoes' along with *pò le de xié* 破了的鞋 'break PFV DET shoe, broken shoes (shoes that broke)'. Actually, *pò* 破 may be considered both as a verb and as an adjective. As a verb, it has different meanings. Among the meanings listed in the *Hànyǔ dòngcí yòngfǎ cídiǎn* 汉语动词用法词典 (1996:287-288, hereafter HDYC), which are found in the *Xiàndài Hànyǔ cídiǎn* 现代汉语词典 – *The Contemporary Chinese dictionary* (2002) as well, we find the following ones (only the relevant ones are listed)[13]:

1. 完整的東西受到損傷變得不完整 'Split or cracked into pieces; broken; damaged; torn; worn-out'. E.g. *chuāngzi pò-le* 窗子破了 'window break PFV, the window broke'
2. 使損壞；使分裂 'break, damage, split, cut'. E.g. *pò bǎnzi* 破板子 'break boards'
3. 突破；破除 （規定、習慣、思想等）'break, do away with (rules and regulations, habits, ideas, etc.)'. E.g. *pò le liǎng xiàng shìjiè jìlù* 破了兩項世界紀錄 'break PFV two CLF world record, break two world records'

If we go back to the examples in (11), we can state that in (11a) *pò* 破 has the meaning 1, while in (11b) it has the meaning 3. Interestingly, while *pò*₁ 破 expresses an instantaneous event and lacks durativity, aspectually *pò*₃ 破

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[13] The English translations are those provided by the *Xiàndài Hànyǔ cídiǎn* 现代汉语词典 – *The Contemporary Chinese dictionary* (2002).

seems to behave differently: as a matter of fact, differently from *pò₁* 破, it can reduplicate (see HDYC; see also Lü 1980)

(12)   a. *破破玻璃

   pò~po   bōli
   break~break glass
   'break the glass a bit'

   b. 我的祖母在臨終前半年一直囑咐我父親，說她走後要破破規矩。

wǒ	*de*	*zǔmǔ*		*zài*	*lín-zhōng*	*qián*		*bàn*	*nián*	*yīzhí*
1SG	DET	grandmother		at	approach-end	before		half	year	always

zhǔfù	*wǒ*	*fùqin*	*shuō*	*tā*	*zǒu*	*hòu*	*yào*	*pò~po*		*guīju*
exhort	1SG	father	say	3SG.F	leave	after	must	break~break		rule

   'In the six months before her death, my grandmother always told my father that after she had left he should break the rules a bit.'[14]

Verbal reduplication with a diminishing meaning in Mandarin Chinese imposes strict aspectual constraints on the base verb, which must be a dynamic and volitional verb (Li & Thompson 1981), i.e. it should possess the features [+controlled], [+dynamic], [+durative]. This means that the base verb must be a process/activity under the control of an agent (but semelfactives too, i.e. punctual events lacking a *telos*, are possible, see Basciano & Melloni 2017). Diminishing reduplication, indeed, does not apply to telic verbs: they are incompatible with accomplishments followed by a quantized object and achievements, including resultative compounds; stative verbs generally do not reduplicate[15] (see Xiao & McEnery 2004, Tsao 2004, Basciano & Melloni 2017). This seems to suggest that *pò₃* 破 is not a telic verb, thus example (11b) does not actually represent an exception to the incompatibility between the progressive and verbs with a defined boundary/*telos*. As for V₁ in (11b), as we mentioned, *dǎ* 打 is a causative light verb spelling out the causative component (see § 4.5 below), even if *pò₃* 破 itself may be used transitively, as we have seen. This is quite expected, since Mandarin Chinese has just a few labile verbs (e.g. *chén* 沉 'sink', *kāi* 開 'open') and causativity is mainly expressed by complex verbs, more specifically resultative compounds and complex verbs containing a causative light verb, as well as periphrastic constructions (see Basciano 2017). Chen (2008) points out that even when the lexical causative for a verb is available (e.g. *kāi* 開 'open'), a compound form is generally preferred for the transitive variant (e.g. *dǎ-kāi* 打開 'hit-open'). Thus, in causative alternations the causative component tends to be spelled out.

The picture, however, seems to be even more complicated. As an anonymous reviewer pointed out, examples like the one below, where the resultative verb with *pò* 破 is not followed by an abstract object (cf. Wang 2011:77) may easily be found:

(13)   水獺媽媽正在撕破小水獺身上包裡的胎衣。

shuǐtǎ	*māma*	*zhèngzài*	*sī-pò*	*xiǎo*	*shuǐtǎ*	*shēn-shàng*	*bāoguǒ*
otter	mother	PROG	tear-break	little	otter	body-on	wrap

de	*tāiyī*
DET	afterbirth

   'Otter mum is tearing up the afterbirth wrapping the little otter.'[16]

In this example, *pò* 破 is clearly used in a concrete rather than an abstract sense (cf. 11b), thus it would seem to be an exception to the incompatibility between simple change resultatives and the progressive. However, I believe that this apparent exception can be well explained, again, if we consider the features of *pò* 破. First of all, if we take *pò₂* 破 'break, damage, split, cut' considered above, we can observe that differently from *pò₁* 破, it is a dynamic rather than a punctual verb: it can be used with 'for X time' expressions, like *pò le wǔ tiān* 破了五天 'break/split/cut PFV five day, cut for five days' (HDYC: 287). In addition, it is compatible with the durative aspect marker *zhe* 著 and can reduplicate, as in the following examples (HDYC:287):

(14)   a. 你等一等，他們在外邊破著木材呢。

nǐ	*děng-yi-děng*	*tā-men*	*zài*	*wàibiān*	*pò-zhe*	*mùcái*	*ne*
2SG	wait-one-wait	3SG.M-PL	at	outside	cut-DUR	wood	DUR

'Wait a moment, they are outside cutting wood.'

b. 你替我破破那塊板子。

nǐ	*tì*	*wǒ*	*pò~po*	*nà*	*kuài*	*bǎnzi*
2SG	on.behalf.of	1SG	cut~cut	that	CLF	board

'Please, cut that board a bit for me.'

Thus, the compatibility with the progressive displayed by (14) may follow from the fact that *pò* 破 actually does not express an instantaneous change (i.e. it is not an achievement), but is rather dynamic.

In addition, we must remark that *pò* 破, as we already mentioned, may also be an adjective, whose meaning is 'damaged, torn, worn-out, tattered, ragged, old and shabby'. Interestingly, it displays the properties of gradable adjectives (*Hànyǔ xíngróngcí yòngfǎ cídiǎn* 汉语形容词用法词典 2003:158): it may be modified by degree adverbs (e.g. *hěn pò* 很破, *fēicháng pò* 非常破 'very torn'), may be used in comparative sentences (e.g. *bǐ nà jiàn hái pò* 比那件還破 'even older/more ragged than that one'), may be modified by a measure of change (e.g. *pò yīdiǎr* 破一点儿 / *yī xiē* 一些 'a bit more ragged'). Thus, it meets the requirements to be used as the result element in complex change resultatives, as in the following example:

(15)   我的鞋底正在磨破[...]

wǒ	*de*	*xié-dǐ*	*zhèngzài*	*mó-pò*
1SG	DET	shoe-bottom	PROG	rub-worn.out

'The soles of my shoes are getting worn out (by rubbing) [...]'[17]

From the discussion above, what seems to emerge is that the difference in (in)compatibility with the progressive depends on the features of the result element rather than on the kind of object (concrete vs. abstract).

Wang (2011) further highlights that another factor influencing the use of the progressive with this kind of verbs is the distinction between singular and plural objects. She points out contrasts like the following one, which shows that the verb followed by a singular object does not allow the progressive, while when it is followed by a plural object the progressive may occur with it (Wang 2011: 77):

(16)   a. ?? 推土機在推倒那棟建築。

tuītǔjī	*zài*	*tuī-dǎo*	*nà*	*dòng*	*jiànzhù*
escavator	PROG	push-over	that	CLF	building

'The escavator is tearing down that building.'

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[17] Newspaper article: http://world.people.com.cn/GB/8212/30204/30206/3605186.html (last access: 14/11/2018)

b. 那邊是隆隆的推土機 [...] 在推倒那些要搬遷的舊的建築。

nà-biān	*shì*	*lónglóng*	*de*	*tuītǔjī*	*zài*	*tuī-dǎo*
that-side	be	rumble	DET	escavator	PROG	push-over

nà	*xiē*	*yào*	*bānqiān*	*de*	*jiù*	*de*	*jiànzhù*
that	some	must	move	DET	old	DET	building

'On that side there was the rumbling escavator [...] it was tearing down those building which needed to be moved.'

One may wonder if the difference observed is due to different quantization effects created by the two NPs. We have mentioned (fn. 8) that demonstratives in Chinese have the function of marking referentiality, but do not (necessarily) set a boundary to the event. According to Loar (2018:155), both *zhè* 這 'this' / *nà* 那 'that' and *zhèxiē* 這些 'these' / *nàxiē* 這些 'those' refer to an indefinite amount or quantity and, as such, do not provide a temporal boundary to the event. According to Li (1999:88), *xiē* 些 is a quantity suffix attached to the demonstrative to express a larger amount of something. If we follow Soh & Kuo (2005) and consider that demonstrative objects may be bounded or not, then we may speculate that the plural *zhèxiē* 這些 'these' / *nàxiē* 那些 'those' are more prone to an unbounded interpretation than *zhè* 這 'this' / *nà* 那 'that'. However, as we have seen, in principle objects with *zhè* 這 'this' / *nà* 那 'that', as the one in (16a) may be interpreted as unbounded as well, and indeed sentences like those below can be found, questioning the validity of the generalization exemplified by the contrast in (16).

(17) a. 只見幾輛大車正在推倒這座人行天橋。

zhǐ	*jiàn*	*jǐ*	*liàng*	*dà-chē*	*zhèngzài*	*tuī-dǎo*	*zhè*
only	see	some	CLF	big-vehicle	PROG	push-over	this

zuò	*rénxíngtiānqiáo*
CLF	elevated.footbridge

'You could only see several big vehicles which were tearing down this elevated footbridge.'[18]

b. 人們在推倒那座有塔樓的舊房子 [...]

rén-men	*zài*	*tuī-dǎo*	*nà*	*zuò*	*yǒu*	*tǎlóu*	*de*	*jiù*	*fángzi*
person-PL	PROG	push-over	that	CLF	have	tower	DET	old	building

'People were tearing down that old building with the tower.'[19]

Finally, Wang (2011) states that even different choices in the 'nature' of the argument undergoing the change of state, depending either on the result complement or on the main verb, may determine differences in (in)compatibility with the progressive. She points out contrasts like the following:

(18) a. 他正在慢慢地把那根鐵絲拉直。

tā	*zhèngzài*	*màn-màn-de*	*bǎ*	*nà*	*gēn*	*tiě-sī*
3SG.M	PROG	slow-slow-ADV	OBJ	that	CLF	iron-wire

lā-zhí
pull-straight

'He is slowly straightening that iron wire.'

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[18] Newspaper article: https://www.v4.cc/News-1312352.html (last access: 15/11/2018)

[19] Novel: http://book.bixueke.com/tonghua/taikongrenlixian/ (last access: 15/11/2018)

b. *他正在慢慢地把那根鐵絲拉斷。

tā	*zhèngzài*	*màn-màn-de*	*bǎ*	*nà*	*gēn*	*tiě-sī*
3SG.M	PROG	slow-slow-ADV	OBJ	that	CLF	iron-wire

lā-duàn
pull-break
'He is slowly breaking that iron wire.'

(19) a. 他正在慢慢地吃掉那個蘋果。

tā	*zhèngzài*	*màn-màn-de*	*chī-diào*	*nà*	*ge*	*píngguǒ*
3SG.M	PROG	slow-slow-ADV	eat-up	that	CLF	apple

'He is slowly eating that apple up.'

b. *他正在慢慢地扔掉那個蘋果。

tā	*zhèngzài*	*màn-màn-de*	*rēng-diào*	*nà*	*ge*	*píngguǒ*
3SG.M	PROG	slow-slow-ADV	throw-away	that	CLF	apple

'He is slowly throwing that apple away.'

According to Wang, in example (18a) each part of the object 'iron wire' participates in the process leading to the final stage; the spatial boundaries of each part of the object determine the durativity of the action, and thus the progressive is allowed. In contrast, in (18b) it is the object as a whole that participates to the process; the change can be instantaneous and thus the progressive is not allowed. According to Wang, the different result elements involved determine differences in the choice of the object. In (19a), again, Wang states that the progressive is allowed because each part of the object takes part in the process; the durativity created by the disappearance in succession of each part makes the situation compatible with the progressive. In contrast, in (20b) the object 'apple' is considered as a whole and the change of state event can be instantaneous, thus the progressive is not allowed.

However, in my opinion the contrasts in (18) and (19) may be explained by considering the features of the verb and those of the result element involved, without resorting to objects. While in (18a) we have a scalar adjective, *zhí* 直 'straight', as result element, in (18b) we have the instantaneous change of state verb (achievement) *duàn* 斷 'break', which, as we have seen, is incompatible with the progressive. As for (19), the contrast can be well explained by considering the types of events expressed by the two main verbs. In (19a), we find a consumption verb (accomplishment), *chī* 吃 'eat', which is not obligatorily telic; it is followed by a demonstrative object, which, as we have seen, is not necessarily bounded, thus completion is not necessary (see Soh & Kuo 2005). In contrast, in (19b) the verb *rēng* 扔 'throw' is an achievement, which is incompatible with the progressive; the result *diào* 掉 'off', which is one of the so-called phase-complements (see e.g. Li & Thompson 1981), simply confirms the change of state (see Talmy 2000), conveying "a strong sense of finality" (Sybesma 2017:191), and indeed it can be used after other result elements too, like *nòng-huài-diào* 弄坏掉 'make-broken-off', *pǎo-huài-diào* 跑壞掉 'run-to.pieces-off', in which case the progressive is never allowed (Sybesma 2017). Thus, different event structures can well explain the contrasts above; we will return to this issue in § 4.2. Note that Sybesma (2017) highlights that phase complements are not compatible with the progressive; for example, he shows that the accomplishment verb *mài* 賣 'sell' when followed by the phase complement 掉 *diào* is incompatible with the progressive. However, as (19a) shows, consumption verbs followed by 掉 *diào* apparently allow a gradual development of the process towards the endpoint, and thus allow the progressive. Since this paper does not focus on phase complements, I leave this issue for further research.

All in all, what seems to emerge from the discussion in this section is that the compatibility of the progressive with resultatives is conditioned both by the features of the result element and by those of the main verb.

2.5 *Summary and aims of the paper*

In a nutshell, Chinese resultative compounds pose a challenge for traditional aspectual classifications because they display mixed properties. As emerges from the debate in the literature, the behavior and classification of complex change resultatives is extremely varied and still in need of a better explanation. In this paper I will address the following issues: what kind of result elements can appear in complex change resultatives? What is their eventive structure? Why is the progressive allowed? What are the structural differences between simple change and complex change resultatives?

In order to answer these questions, I will attempt an analysis of different kinds of resultative compounds within the constructionist framework put forth by Ramchand (2008), which seeks to correlate the morphosyntax and the semantics of event structure in a direct way. I will propose a syntactic account of the two kinds of verbs at issue; I will try to show that their different aspectual properties derive from distinct verbal structures, and that the (in)compatibility with the progressive can be systematically predicted by different event structures characterizing resultatives. The analysis will be mainly based on actual language data, and especially on productive resultative compounds. Nonetheless, I assume that lexicalized forms, such as *kuò-dà* 擴大 'enlarge-big, enlarge/expand', *tí-gāo* 提高 'lift-high, raise' (see e.g. Dong 2007), were originally created in the same way as productive resultative compounds; their current event structure, then, reflects that of productive resultative compounds, displaying the same features and the same aspectual properties. In addition, it must be noted that, as observed by Dong (2007), there is a continuum between lexicalized and non-lexicalized forms, with different degrees of lexicalization.

In the next section, I will first introduce Ramchand's framework and the account of English resultative constructions within it. I will then move to the analysis of Chinese resultative compounds.

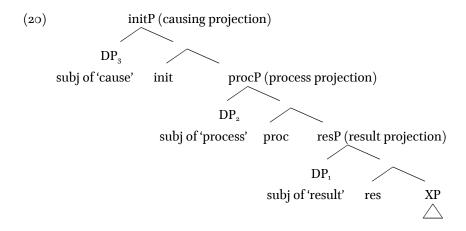## 3 The event structure of resultatives

Since the early 1990s, a number of studies have put forth the hypothesis that thematic and aspectual requirements of events are directly encoded in syntax (see e.g. Travis 2000, 2010, Borer 1994, 2005, McClure 1995, Ramchand 1997; for Chinese see e.g. Huang 1997, Lin 2001). The common idea behind the proposals seeking to correlate the morphosyntax and the semantics of event structure in a direct way is that the syntactic projection of arguments is based on event structure. Ramchand's (2008) 'first-phase syntax' is closely related in spirit to these proposals, aiming at representing event structure at the syntax-semantics interface, but differs in some details, above all in the finer-grained decomposition of the event structure adopted.

Ramchand's approach denies the lexicon as a submodule of the language faculty with its own primitives and modes of combination, like in the lexical-thematic approach, where the relevant information is projected from the lexicon, and assumes an approach which is generative-constructivist in spirit. However, it differs from the extreme constructivist view, where lexical roots contain no syntactically relevant information able to constrain their insertion in syntactic terminals at all and are just seen as bundles of cognitive and encyclopedic information (e.g. Borer 2005). In this kind of approach, all category information come from the functional structure on top of the root; it is just extralinguistic factors, such as convention, habits of speech and real-world knowledge, which rule out certain combinations of roots and functional information (Borer 2005). While Ramchand is sympathetic with such an approach, which voids the lexicon of argument-structure information and processes, she does not assume that lexical items contain no syntactic information at all and that they are always inserted at the bottom of the tree; lexical items rather possess some selectional information that constrains the way lexical items can be associated with syntactic structure. These syntactic labels allow lexical items to associate to syntactic representations.

In what follows I will first introduce the framework put forth by Ramchand (2008), and I will then illustrate Ramchand's account of English resultatives within this framework.

3.1 *Ramchand's 'first phase syntax'*

In Ramchand's (2008) framework, the event structure can be decomposed into a maximum of three subevents[20], each represented with its own projection, ordered in a hierarchical causal embedding relation: the causative subevent (initP), which introduces the causation event and the verb external argument hosted in its specifier (i.e. the subject of cause or initiator in Ramchand's theory); the process subevent (procP), which specifies the nature of the change or process and introduces the entity undergoing the change or process[21] (i.e. the subject of process or undergoer)[22]; the result subevent (resP), which provides the *telos* or result state and hosts the subject of result (or resultee). The procP is the heart of the dynamic predicate, since it represents change through time, and it is present in every dynamic verb (Ramchand 2008:39).

(20)

initP (causing projection)

DP$_3$
subj of 'cause'   init

procP (process projection)

DP$_2$
subj of 'process'   proc

resP (result projection)

DP$_1$
subj of 'result'   res   XP

In this framework, as we mentioned, lexical items specify the syntactically-relevant information by means of a category label or 'tag', which permits their insertion in the eventive structure, and may have multiple features. For example, in English the lexical entry for an activity verb such as *push* will be [init, proc], while for an achievement like *throw* the lexical entry will be [init, proc, res]. Given the existence of this functional sequence, the syntactic structures are freely built up by Merge, but they have to be licensed by the presence of specific lexical items. The lexical items simply Merge and project according to their category features[23].

Ramchand (2008:97) assumes that a lexical item may be inserted to spell out a sequence of heads if its category signature is a superset of the sequence to be spelled out. At the interface, the encyclopedic content of the lexical item is unified with the semantics given by the combinatory system. A lexical item can only associate with a node that matches the category features it is listed with.

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[20] Note that, as pointed out by an anonymous reviewer, the three-layered aspectual structure in syntax has already been proposed by Tenny (2000), and adopted for Chinese by Liao (2004) and Tsai (2008). However, here the three-layered structure concerns the lowest (event-building) verbal domain, while in the afore-mentioned studies it concerns different aspectual levels, including viewpoint aspect.

[21] It can be a change of location (a), of state (b) or of material properties (c) (Ramchand 2008:28).
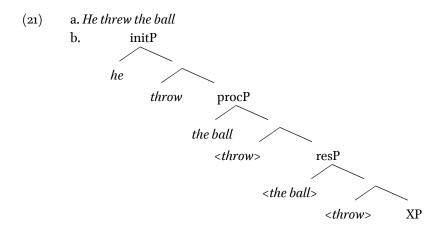
a. *John pushed the cart.*
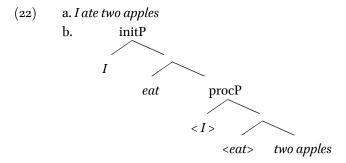
b. *Mary dried the cocoa beans.*

c. *Michael stretched the rubber band.*

[22] Ramchand does not make distinctions between different initiational heads in a feature-based sense and she also does not distinguish a causational head from an agent introducing one to account for different kinds of subjects. Different subjects can rather be accounted for in terms of the difference between initiator and initiator-undergoer (an entity continuously involved in the process), and in relation to the encyclopedic content (either the verb's lexical-encyclopedic information or the referential properties of the DP participant, i.e. animate vs. inanimate).

[23] Since lexical items have more than one category label, Ramchand (2008:59-60) assumes that elements may Merge and project and then Remerge at a later state of the derivation. For example, the verb *push* has two features, [init, proc]. The verb *push* will Merge with a DP in its specifier position and project its [proc] label. Since it also has an [init] feature, it Remerges with procP, which now projects the [init] label. This new syntactic object then Merges with the specifier to project an initP.

Note that the procP head can either combine with a whole resP (result projection) to create a telic pair or take a simple XP (DP, AP or PP) in its complement position, which does not determine its own independent subevent, but acts as a further modifier or descriptor of the process subevent (see Ramchand 2008:46). Accordingly, telicity in this framework can arise in two ways: either it is lexically encoded (in Ramchand's terms, the lexical item is marked by the [res] feature; see example 21) or it is compositionally obtained in procP by means of a spatial bounded path in the complement position, as in the case of accomplishments followed by a quantized object (22).

(21)   a. *He threw the ball*
       b.

             initP
         he
            throw   procP
              the ball
                 <throw>   resP
                    <the ball>
                        <throw>   XP

(22)   a. *I ate two apples*
       b.

             initP
       I
          eat   procP
             < I >
                <eat>   *two apples*

In the first case, we have a punctual verb, i.e. an achievement. The presence of resP makes the verb obligatorily telic: "these verbs resist the atelicity test because their objects are already defined as holders of a final state. They don't just undergo some change, but they also end up in a final state as specified by the verb itself" (Ramchand 2008:32).

In the second case, we have a creation/consumption verb. Verbs belonging to this category are not obligatorily telic, but can be interpreted as such depending on the nature of the direct object: the object contributes the measure scale which is homomorphic with the event. Thus, the direct object of this class of verbs, according to Ramchand, is not an undergoer, but is rather a path in the complement position of procP[24]: the object does not travel some abstract path of change, but it actually defines the path of change, creating quantization effects. The telicity effects in the class of creation/consumption verbs with quantized objects would be due to semantic entailments and not encoded in the lexical determination of the verb or its syntactic reflexes.

It must be noted that "the complement position of a process head is associated with the semantic relation of structural homomorphism, regardless of the category of that complement" (Ramchand 2008:47). Thus, the path contributes a measuring scale that is homomorphic with the event, and this is true not only when the path is

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[24] For these verbs, Ramchand (2008:66) assumes that it is the initiator itself which fills the undergoer position too, because of its status as continuous experiencer of the process. The reader is referred to Ramchand (2008) for further details.

derived from the object, as in the case of the creation/consumption verbs just considered, but also when it comes from the scale inferred from a gradable adjective (23a), or when it is a physical path contributed by a PP with a motion verb (23b) (Ramchand 2008:30). The notion of path, then, cross-cuts a number of distinct domains.

(23)   a. Mary dried the cocoa beans in only twelve hours.
         b. John pushed the cart to the end of the garden.

In (23a), the transition is related to the object's change of state, and only the specification of the final relevant state creates telicity (see § 4.2). In (23b), there is the motion verb *push*, and the object is an undergoer, since it experiences the change of location described by the PP, which is a path of motion; the specification of a final location creates telicity (cf. *John pushed the coconut along the beach*).

To sum up, while some verbs are obligatorily telic due to the presence of a result state specified by the verb itself, for other verbs telicity emerges from the semantic combination of the verb, its object (undergoer or path), and the presence of an implicit or explicit final state.

3.2   *English resultatives in Ramchand's framework*

English resultatives have been widely discussed in the literature and different approaches, both syntactic and semantic, have been adopted to explain the distribution of these constructions and their interpretation, as well as to account for their argument structure and their constraints (see e.g. Hoekstra 1988, Jackendoff 1990, Goldberg 1995, Levin & Rappapoport Hovav 1995, Wechsler 1997, among many others). Ramchand participates in this debate, proposing an account of resultatives at the syntax-semantic interface, which has much in common with other approaches.
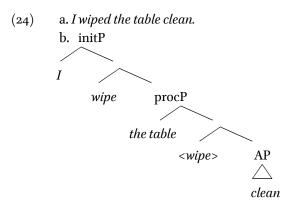
Ramchand (2008), based on Wechsler (2005a) distinguishes two different kinds of resultatives in English: 1) 'path resultatives', i.e. those formed directly from a procP head unifying homomorphically with a bounded path (either an AP property scale or a PP path), as e.g. *I wiped the table clean*, or *Michael drove the car under the bridge*; 2) 'result resultatives', i.e. those formed by means of a resP head with a static property predication in its complement, as e.g. *I ran my shoes ragged*[25].

As for 'path resultatives', Ramchand follows Wechsler (2005a), who points out that AP resultatives with a subcategorized argument in English generally involve gradable, closed scale adjectives. These adjectives seem to manifest properties similar to path PPs in the prepositional domain, e.g. *I walked to school*, or to the incremental theme object of consumption verbs, e.g. *I ate a sandwich* (see Kennedy & Levin 2002, Wechsler 2005a, Ramchand 2008). All these elements have in common the fact that the affected theme argument changes by degrees along a scale that is homomorphic to the event. Furthermore, paths have the property of being coextensive with the event, i.e. the event begins and ends where the path begins and ends; if the scale has a definite bound endpoint, the event is telic. Wechsler (2005a:14) assumes that "when the resultative's predication subject is an argument of the verb (i.e. in a control resultative), homomorphism and coextension between property scale and event are required".

Following Wechsler, and given the homomorphism requirement, Ramchand (2008) suggests that the AP of this kind of resultatives sits directly in the complement position of procP (just like incremental themes or path objects) and, thus, no intervening result is required: telicity arises because the AP is represented by a closed scale adjective. See the example in (24), from Ramchand (2008:122):

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[25] 'Result' resultatives can differ in whether the direct object is the undergoer-resultee or just the resultee.

(24) a. *I wiped the table clean.*
      b. initP
```
            initP
           /    \
          I      \
                /  \
              wipe  procP
                   /    \
              the table  \
                        /   \
                    <wipe>   AP
                            △
                          clean
```

As for the second kind of resultatives, i.e. 'result resultatives', Ramchand assumes a different structure. Wechsler (2005a) states that, when in the resultative construction the resultative predication subject is not an argument of the verb, there does not seem to be homomorphism and coextension requirement between the property scale and the event, as in the above-mentioned example *I ran my shoes ragged.* In this case, Ramchand suggests that the AP in question sits in the complement position of a result subevent projection, i.e. a full small clause mediated by the resP head itself. According to this view, it is the semantics of the resP head that creates the entailment of result. Therefore, the scalar structure of the adjective is irrelevant; the only relevant property of the adjective is its ability to refer to a static property. Given that this kind of resultatives can be built from activity verbs, which do not have a [res] feature in their lexical specification, and assuming that APs cannot independently license a specifier position (see Baker 2003) and do not have the features necessary to identify the result subevent, Ramchand assumes that English has a null *res* head with a semantics of 'property possession', where the element in the resP specifier position comes to possess the property expressed by the AP (see also Son & Svenonius 2008)[26]:

(25) a. *I ran my shoes ragged.*
      b. initP
```
        initP
       /    \
      I      \
            /   \
          run   procP
               /    \
            < I >    \
                   /    \
               < run >  resP
                       /    \
                   my shoes  \
                            /   \
                          res   AP
                           Ø    △
                               ragged
```

Ramchand further shows that 'result resultatives' may also have a selected object, like in *I hammered the metal flat*, where the verb already licenses an argument in the undergoer position (thus, we have an undergoer-resultee; see fn. 25). However, she argues that in these cases too there is evidence of extra predicational structure, since the

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[26] According to Ramchand, the *res* head is necessary for two reasons: it must license a specifier to host the resultee, and it contributes the 'leads-to' semantics that provides the result interpretation.

object acquires new entailments because of the licensing and identification of the resP in the structure[27].
Ramchand's (2008) analysis of resultative constructions is able to reconcile different approaches. For example, it is similar in spirit to other analyses based on the event structure (e.g. Rappaport Hovav & Levin 1998, 2001; see Cheng & Huang 1994 for Chinese). Moreover, this analysis has much in common with Cheng's (1997) approach based on Hale & Keyser's l-syntax (1993), where thematic roles are identified with points (NP positions) in syntactic projections, i.e. Lexical Relation Structures, defined by the lexical entries of the verbs, even though here the decomposition is made in syntax and not in a separate, pre-syntactic level, i.e. l-syntax. Moreover, Ramchand (2008) herself points out that her analysis of resultatives with result APs, which relies on the existence of some structuring principle that constructs the 'result' or 'leads-to' relation, is very close to Hoekstra's (1988, 1992) intuition that APs, in principle, could express different relationships to the event, thus something is needed in order to comply with the resultative interpretation. In Ramchand's (2008) system the resultative interpretation is due to semantic composition rules that interpret embedded subevental descriptions as the 'leads-to' relation (Ramchand 2008:124, fn. 8). Ramchand's (2008) analysis is able to put together the small clause approach (e.g. Hoekstra 1988, 1992; see Sybesma 1999 for Chinese) and the complex predicate approach (e.g. Neeleman 1994; see Huang 1992 for Chinese). Indeed, in the small clause approach the result predication is associated with additional predicational structure, which is responsible for the presence of the direct object, i.e. the subject of the small clause. However, at the same time, the first-phase decomposition represents a complex decomposed predicate, where the subevents are combined to form a single event, internally articulated (see Ramchand 2008:133).

4   Chinese resultatives: simple change *vs.* complex change

Having seen how resultatives are analyzed in Ramchand's framework, let us now turn to Chinese, focusing on the distinction between simple change and complex change resultatives discussed in § 1 and § 2, which, as we have seen, display different aspectual behavior. In particular, we have shown that only complex change resultatives allow the progressive, while simple change resultatives do not.

4.1   *The event structure of simple change resultatives*

Given the characteristics of the progressive and its interaction with actional classes illustrated in § 2, we assume that its incompatibility with simple change resultatives is due to the fact that these resultatives are obligatorily telic, i.e. the have a result projection (resP) involved. Therefore, we assume that the structure of resultatives like *dǎ-pò* 打破 'hit-break' corresponds to that of English result resultatives in (25). We assume this structure both for resultatives with a selected object (26a) and for those with an unselected object (26b); in the first example, the resultee is the undergoer of the process too, while in the second one the resultee is distinct from the undergoer.

(26)   a. 他搖醒了孩子。

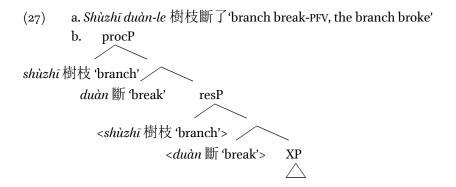| *tā*	*yáo-xǐng-le*	*háizi*
3SG.M	shake-awake-PFV	child

'He shook the child awake'

---

[27] In this sense, the distinction between the two different kinds of resultatives, i.e. path resultatives and result resultatives, is reminiscent of the parallel between 'strong' resultatives and 'weak' resultatives proposed by Washio (1997). In strong resultatives, the adjective has a completely independent semantic value from that of the verb (the lexical semantics of the verb and the lexical semantics of the adjective are completely independent), e.g. *I pounded the metal flat*, where the meaning of the verb *pound* does not entail that the object that is pounded results in a conventional state. Weak resultatives, in contrast, involve adjectives whose meanings are closely related to the lexical semantics of the verb. The lexical semantics of the verb entails that the verb object results in a conventional state which is described by the weak resultative, e.g. *I polished the metal shiny.*

b. 他跑丟了一隻鞋。

tā	*pǎo-diū-le*	*yī*	*zhī*	*xié*
3SG.M	run-lose-PFV	one	CLF	shoe

'He run and as a result he lost one of his shoes.'

But what lexicalizes the result projection head in Chinese? Do we have to postulate the existence of a null lexical item with a semantics of 'property possession' like in English? Son & Svenonius (2008) suggest that the cross-linguistic variation in the kinds of resultatives allowed among languages depends on what lexical items languages possess to license the functional projection resP, responsible for the result state entailment. Thus, in different languages, we may observe different lexical items lexicalizing the result subevent head[28]. The result elements appearing in simple change resultatives are mainly intransitive change of state (or location) verbs, like *duàn* 斷 'break', *huài* 壞 'ruin', *kāi* 開 'open', *xǐng* 醒 'wake up / be awake', *diū* 丟 'lose', *sǐ* 死 'die', *zǒu* 走 'leave', *pǎo* 跑 'run away' (but see 4.3)[29]. These verbs exhibit unaccusative syntax and, specifically, lack an external causer / agent argument (change of location verbs allowed in these compounds too display unaccusative behavior; see a.o. Huang 1991, Yang 1999, Xue 2007). Therefore, in Ramchand's framework they are tagged as [proc, res] in the lexicon, since they lack an initiator.

(27)   a. *Shùzhī duàn-le* 樹枝斷了 'branch break-PFV, the branch broke'

b.   procP

shùzhī 樹枝 'branch'

duàn 斷 'break'   resP

<*shùzhī* 樹枝 'branch'>

<*duàn* 斷 'break'>   XP

Thus, it is reasonable to assume that in Chinese it is the result element itself which can lexicalize the resP head, without resorting to a null head like in English (see example 25b).
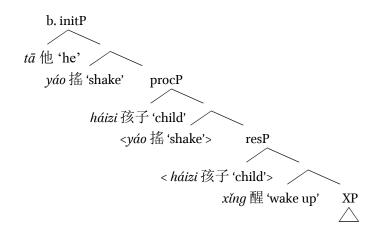
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[28] Actually, Son & Svenonius (2008) add a further layer, predP, i.e. the uppermost predicative layer for the state. According to their view, a language like Spanish (most restrictive type) does not have lexical items able to identify *res* and *pred*, and thus does not allow verbs to combine directly with adjectives to form resultatives. In contrast, a language like Japanese (less restrictive type) has a functional element that is able to lexicalize *pred* but not *res*, e.g. *-ni* に. Therefore, Japanese allows only resultatives formed with verbs that can independently lexicalize *res* (i.e. weak resultatives): any verb that licenses *res* can be used in Japanese to create a resultative construction. A language like Korean (least restrictive type) possesses a functional element, i.e. *-key* 게, which lexicalizes both *res* and *pred*, and thus can form strong resultatives. As for English, which as Korean allows strong resultatives, they assume, following Ramchand (2008), the existence of a null (phonologically empty) lexical item lexicalizing the resP head (and also the predP head). Chinese is not accounted for in their paper.

[29] Some stative verbs too can be found as V₂s, usually those denoting mental states, as *dǒng* 懂 'understand' or *huì* 会 'know'. These verbs may actually have an eventive reading. Gu (1992) highlights that verbs such as *ài* 爱 'love' or *hèn* 恨 'hate', which may only be used as individual-level predicates, cannot act as V₂s in resultative compounds, because only verbs capable of expressing change of state are allowed as V₂s in resultative verb compounds. Moreover, two unergative verbs are allowed too, i.e. *kū* 哭 'cry' and *xiào* 笑 'laugh', as e.g. *mà-kū* 罵哭 'scold-cry', *dòu-xiào* 逗笑 'amuse-laugh'. These verbs may, in the proper context, be conceived as externally caused (see Basciano 2017a-b); according to Sybesma (1999), they undergo an unaccusative shift.

(28) a. 他搖醒了孩子。

　　　tā　　　　　*yáo-xǐng-le*　　　　　*háizi*

　　　3SG.M　　　shake-awake-PFV　　　child

　　　'He shook the child awake'

b. initP

　　　tā 他 'he'

　　　　　yáo 搖 'shake'　　procP

　　　　　　　　háizi 孩子 'child'

　　　　　　　　　　　<*yáo* 搖 'shake'>　　resP

　　　　　　　　　　　　< *háizi* 孩子 'child'>

　　　　　　　　　　　　　　　xǐng 醒 'wake up'　XP

The presence of resP in the structure makes resultative compounds incompatible with the progressive aspect marker and, indeed, a resultative like the one in (28) does not allow the progressive (see § 1 and § 2).

4.2　*The event structure of complex change resultatives*

What about complex change resultatives, i.e. those allowing the progressive? The result elements appearing in this kind of resultatives are generally gradable, scalar adjectives, i.e. those lexicalizing a scale, intended as a set of ordered degrees on a particular property dimension (see Lin & Peck 2016; see also Tham 2009), like *rè* 熱 'hot', *gān* 乾 'dry', *hóng* 紅 'red', *shī* 濕 'wet'. Scalar adjectives can be further divided into open scale (e.g. *kuān* 寬 'wide', *cháng* 長 'long') and closed scale adjectives (e.g. *gān* 乾 'dry', *kōng* 空 'empty'). As we have seen in § 1, the progressive is allowed both with resultative compounds where the result element is an open scale adjective (example 1b) and with those where it is a closed scale adjective (example 1c).

Lin & Peck (2016), following Kennedy & McNally (2005:353) and Kennedy (2007:34), further distinguish Chinese adjectives in the following types, according to which end of the scale is closed:

1) lower-closed-scale adjectives, i.e. those whose standard of comparison is the minimal value on the associated scale, which does not have a maximal value, as e.g. *wān* 彎 'bent', *shī* 濕 'wet', *zāng* 髒 'dirty';

2) upper-closed-scale adjectives, i.e. those based on a scale that has a maximal value and does not have a minimal value, as e.g. *zhí* 直 'straight', *gān* 乾 'dry', *gānjìng* 乾淨 'clean';

3) totally-closed-scale adjectives, i.e. those with both lower and upper bounds, where the standard of comparison corresponds to either the minimal or maximal values of the scale, as e.g. *kōng* 空 'empty', *mǎn* 滿 'full'.

Apparently, with resultative compounds the progressive is allowed as long as the result adjective is scalar, regardless of the kind of scale involved, as shown by the following examples:

(29)   Open-scale adjectives (see also example 1b):
        a. [...]中國正在挖寬讓船隻進入的通道 [...]

Zhōngguó	*zhèngzài*	*wā-kuān*	*ràng*	*chuánzhī*	*jìnrù*	*de*	*tōngdào*
China	PROG	dig-wide	let	ship	enter	DET	channel

        'China is widening the channel to let ships enter.'[30]

        Lower-closed-scale adjectives:
        b. 這一刻，媽媽扶著爸爸，孟賽賽正在浸濕毛巾，媳婦在一旁端著熱水盆。

zhè yīkè,		*māma*	*fú-zhe*	*bàba,*	*Mèng Sàisài*	*zhèngzài*	*jìn-shī*
this moment		mother	support-DUR	father	Meng Saisai	PROG	soak-wet
máojīn,	*xífu*	*zài*	*yī-páng*		*duān-zhe*	*rè-shuǐ*	*pén*
towel	daugther.in.law	at	one-side		hold-DUR	hot-water	basin

        'In that moment, the mother was supporting the father, Meng Saisai was soaking the towel, and, at
        one side, the daughter-in-law was holding the hot water basin.'[31]
        c. [...]所以咱們正在折彎鋁板的時候[...]

suǒyǐ	*zán-men*	*zhèngzài*	*zhé-wān*	*lǚ-bǎn*	*de*
so	1-PL	PROG	break-bent	aluminium-board	DET
shíhou					
time					

        '[...]so, when we were bending the aluminium boards [...]'[32]

        Upper-closed-scale adjectives (see also examples 1c, 10a and 10b)
        d. [...] 一女子正在收拾乾淨螃蟹，另一位女子準備生火。

yī	*nǚzǐ*	*zhèngzài*	*shōushi-gānjìng*	*pángxiè,*
one	woman	PROG	tidy-clean	crab
lìngyī	*wèi*	*nǚzǐ*	*zhǔnbèi*	*shēng-huǒ*
another	CLF	woman	prepare	make-fire

        e. '[...] One woman is cleaning the crabs up, the other one is making a fire.'[33]
        在全國範圍內, 推土機正在鏟平古老的村莊。

zài	*quán-guó*	*fànwéi*	*nèi,*	*tuītǔjī*	*zhèngzài*	*chǎn-píng*
at	whole-country	scope	inside	bulldozer	PROG	shovel-flat
gǔlǎo	*de*	*cūnzhuāng*				
old	DET	village				

        'In the whole country, bulldozers are scraping old villages even.'[34]

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[30] Newspaper article: http://www.yjbg.org/top/shouxi/2015-09-17/21029.html (last access: 18/07/2017).
[31] Newspaper article: http://wemedia.ifeng.com/10135118/wemedia.shtml (last access: 22/08/2017).
[32] Newspaper article: http://www.tqdwgk.com/news/ha/20160819/961.html (last access: 22/08/2017).
[33] Newspaper article: https://www.cnread.news/content/362430.html (last access: 22/08/2017).
[34] Newspaper article: http://finance.qq.com/a/20130617/016070.htm (last access: 22/08/2017).

Totally-closed-scale adjectives

f. 伴隨全球化，西方文明正在鋪滿整個地球。

bànsuí	*quánqiúhuà,*	*xīfāng*	*wénmíng*	*zhèngzài*	*pū-mǎn*	*zhěnggè*
follow	globalization	West	civilization	PROG	spread-full	whole

dìqiú
earth

'Following globalization, Western culture is spreading over the all world.'[35]

g. 除了感到生活質量下降外，他們都恐懼有三大黑洞正在吸空自己辛辛苦苦攢下的血汗錢。

chúle	*gǎndào*	*shēnghuó*	*zhìliàng*	*xiàjiàng*	*wài,*	*tā-men*
except	feel	life	quality	decline	other	3SG.M-PL

dōu	*kǒngjù*	*yǒu*	*sān*	*dà*	*hēi-dòng*	*zhèngzài*	*xī-kōng*	*zìjǐ*
all	fear	have	three	big	dark-hole	PROG	absorbe-empty	oneself

xīnxinkǔkǔ		*cuán-xià*		*de*	*xuè-hàn-qián*
painstakingly		accumulate-down		DET	blood-sweat-money

'Besides feeling that their quality of life is deteriorating, they are afraid that three big dark holes are completely absorbing the money they painstakingly accumulated.'[36]

Apparently, given the appropriate context, the progressive is allowed with resultatives whose result constituent contradicts the result entailed by the main verb too[37]:

(30)   你家的洗衣機正在洗髒你的衣服。

nǐ	*jiā*	*de*	*xǐyījī*	*zhèngzài*	*xǐ-zāng*	*nǐ*	*de*
2SG	home	DET	washing.machine	PROG	wash-dirty	2SG	DET

yīfu
clothes

'Your washing machine is washing your clothes dirty.'[38]

I assume that this kind of resultatives do not have a result projection involved, since, as we have seen, the presence of a result layer implies telicity, which is incompatible with the progressive, but the result element sits in the complement position of the process projection, just like in English path resultatives. The main difference between the two languages, as we have seen, is that in English only closed scale adjectives are allowed, while in Chinese both open scale and closed scale adjectives are possible.

Peng (2007) observes that open scale adjectives are never allowed in English resultative constructions, while closed scale adjectives are allowed, although this is generally limited to upper-closed-scale adjectives. In particular, she points out that in control resultatives lower-closed-scale adjectives are never allowed, and that in exceptional case marking (ECM) resultatives, i.e. those with an unselected object, only few of them are allowed. This is because, according to Wechsler (2005b), the final point in English control resultatives is provided by the adjective: upper-closed-scale adjectives have an inherent maximal standard value, so that they can serve as result elements, providing a boundary to the action expressed by the main verb. In contrast, open scale adjectives,

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[35] Book notice: https://www.ljsw.io/weixin/2016-04-11/3x.html (last access: 22/08/2017).

[36] Newspaper article: http://www.chinanews.com/hb/2013/08-22/5194790.shtml (last access: 22/08/2017).

[37] As pointed out by Talmy (2000) and Chen (2008), Chinese resultatives are very productive and, differently from English, allow result elements that contradict (or even have nothing to do with) the result implied by the main verb, as e.g. *xǐ-zāng* 洗髒 'wash-dirty', *xǐ-pò* 洗破 'wash-torn' or *xǐ-zhòu* 洗皺 'wash-wrinkled'.

[38] Blog: https://sy.home.fang.com/bbs/haierjiadian~-1/497665756_497665756.htm (last access: 14/03/2019).

which project scales without a maximal degree, are not suitable to provide a final point to the event. As for lower-closed scale adjectives, they do have an inherent minimal standard value, but being too low, this is often substituted by a contextual standard; this would be the reason why they are not good endpoints for the event (Peng 2007). As we mentioned, some lower-closed-scale adjectives may appear in English ECM resultatives; according to Wechesler (2005), in ECM the final point is not provided by the adjective, and this would be the reason why they are sometimes allowed, although in a limited way (Peng 2007).

Chinese resultatives, in contrast, display a greater level of freedom (Peng 2007): any kind of scalar adjectives can freely act as result complement (but see § 4.3). According to Peng (2007), this is because of the differences between English and Chinese scalar adjectives. First of all, Peng remarks that Chinese scalar adjectives, when used as predicates, have a contrastive/comparative value (see e.g. Sybesma 1999), which in English is marked. See the following examples (Peng 2007:53):

(31)　　a. 瑪麗的頭髮短。

Mǎlì	*de*	*tóufa*	*duǎn*	
Mary	DET	hair	short	

　　　　　‘Mary's hair is shorter (than other's).’

　　　　b. 瑪麗的頭髮很/挺短。

Mǎlì	*de*	*tóufa*	*hěn/tǐng*	*duǎn*
Mary	DET	hair	very	short

　　　　　‘Mary's hair is short.’

Thus, the fact that all scalar adjectives in Chinese, including open scale adjectives (as e.g. 短 ‘short’), have a kind of inherent standard, i.e. a comparative standard, would be the reason why their use in resultatives is subject to far fewer restrictions than English. According to Peng (2007), the second reason why Chinese scalar adjectives can appear freely as result elements is that they can be used as change of state predicates, expressing a dynamic change (see § 4.3).

I assume that the scalar nature of the adjectival item provides a property scale onto which the degree of verbal change is mapped; the affected theme argument changes by degrees along this scale, which is homomorphic to the event. In other words, the adjective is a path in the complement position of procP (see 24).

(32)　　a. *wā-kuān* 挖寬 ‘dig-wide’
　　　　b. initP

Even if the adjective in the complement position implies an endpoint, as in the case of closed scale adjectives, this is monotonically reached through degrees along the scale; this would be the reason why the progressive is allowed. In complex-change resultatives containing a closed scale adjective (29b-g), telicity emerges when the minimal or maximal value on the associated scale is reached, while in complex change resultatives containing an open scale adjective (29a), telicity emerges when the contextually-dependent standard of comparison is reached.

Peng (2011) highlights that, since open scale adjectives do not have an inherent endpoint, their standard depends on the context: either the property expressed by the adjective reaches a conventional standard, or it exceeds the original property of the object (comparative standard) or the expectations of the speaker. For example, in *tā jiǎn-duǎn-le tóufa* 他剪短了頭髮 '3SG.M cut-short-PFV hair, he cut his hair', *duǎn* 短 has a comparative standard, i.e. the hair is shorter than it was at the beginning. Differently, in *máoyī zhī-duǎn-le* 毛衣織短了 'sweater knit-short-PFV, the sweater was knitted short', there is a creation verb, thus it is not the case that the object undergoes a change of state, since the object did not exist in the first place, thus no comparative standard can be reached; what is implied is that the properties of the object exceed the expected value of the speaker, i.e. the sweater is shorter than expected.

It must be noted that with these verbs, telicity can arise also by adding a bounded measure of change (see Hay, Kennedy & Levin 1999), just like in degree achievements (see § 2.1) [39]:

(33)   a. 我一口氣挖了大約有五分鐘，通道被我挖寬了大概有一米多。

wǒ	*yīkǒuqì*		*wā-le*	*dàyuē*	*yǒu*	*wǔ*	*fēnzhōng,*		
1SG	without.break		dig-PFV	about	have	five	minute		
tōngdào	*bèi*	*wǒ*	*wā-kuān-le*	*dàgài*	*yǒu*	*yī*	*mǐ*	*duō*	
passage	PASS	1SG	dig-wide-PFV	about	have	one	meter	much	

'I dug without a break for about five minutes, I widened the passage about one meter by digging (the passage was widened by me).' [40]

b. 大叔掄著鋤頭, 二話不說, 又挖深了五公分。

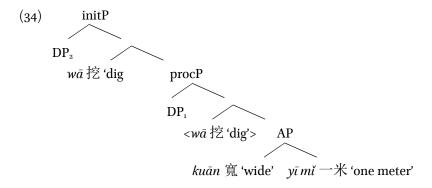| *dàshū*	*lūn-zhe*	*chútou*	*èrhuàbùshuō*	*yòu*	*wā-shēn-le*
uncle	brandish-DUR	hoe	immediately	again	dig-deep-PFV
wǔ	*gōngfēn*				
five	centimeter				

'Uncle, brandishing the hoe, immediately deepened [it] again five centimeters (by digging)' [41]

Thus, telicity may arise contextually or by adding an explicit bounded measure of change. I therefore assume that the result AP is formed by an adjectival head and a complement position that may be filled implicitly by the property scale or explicitly by a bounded measure of change:

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[39] Peng (2011) observes that in resultatives where V$_i$ is not a creation verb, an open scale adjective can act by itself as the result element, without necessarily resorting to the perfective marker or to a bounded measure of change, since it posesses a comparative standard, as we mentioned above: e.g. *wǒ xiǎng bǎ tóufa jiǎn-duǎn* 我想把頭髮剪短 '1SG want OBJ hair cut-short, I want to cut my hair'. In contrast, when V$_i$ is a creation verb, as in *zhī-duǎn* 織短 'knit-short', the object does not exist before the action takes place, thus the adjective does not have a comparative standard; the standard is fixed according to the expectations of the speaker, as we have seen. In this case, Peng observes that it is not possible to use an open scale adjective as a result complement by itself, but rather it must be followed by the perfective marker or by a bounded measure of change, as e.g. *yīdiǎn* 一點 'a bit' or *yīxiē* 一些 'a little'.

[40] An Online Database on Verb-Resultative Construction in Contemporary Chinese: http://ccl.pku.edu.cn/vc/default.asp (last access: 12/07/2017).
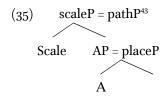
[41] Newspaper article: http://zjnews.zjol.com.cn/05zjnews/system/2012/03/12/018258006.shtml (last access: 12/07/2017).

(34)
```
              initP
             /   \
          DP₂     \
        wā 挖 'dig   procP
                   /   \
                DP₁     \
              <wā 挖 'dig'>   AP
                          /      \
                    kuān 寬 'wide'   yī mǐ 一米 'one meter'
```

Note that for the sake of simplicity, I have put AP in the path position, i.e. the procP complement position. However, I assume that the structure of scalar adjectives itself is syntactically encoded; thus, as verbs, adjectives too possess a set of category labels which permits their insertion in the syntactic structure.

According to Wellwood (2015), non-gradable adjectives, which express quantities that either exist or not, are formally parallel to (singular) count nouns and telic predicates, while gradable adjectives, which express quantities that there may be more or less of, are parallel to mass nouns and atelic predicates. Both types of adjectives express predicates of states, but gradable adjectives, differently from non-gradable ones, predicate of ordered states, i.e. they associate directly with sets of ordered degrees or scales. As far as gradable adjectives are concerned, Paradis (2001) argues that gradability is associated with the category of boundedness: open scale adjectives are unbounded, while closed scale ones are bounded. In this sense, the concept of boundedness is cross-categorial, since it characterizes verbs, nouns and adjectives (see Alexiadou 2010). Alexiadou highlights that it has been argued that boundedness may be best represented by decomposing these categories into more primitive parts. Some categories primarily associated with the locus of boundedness are: plural represented in NumberP in the syntax, grammatical or outer aspect, represented by AspectP in the syntax, and *Aktionsart* or lexical aspect (Alexiadou 2010), for which it has been argued that verbal predicates can be decomposed into several layers (e.g. Borer 2005, Ramchand 2008). As for adjectives, Alexiadou (2010) proposes that they can be decomposed into scaleP and propertyP: open scale adjectives instantiate only scaleP, while total adjectives instantiate both categories, and non-gradable adjectives are propertyP. On this basis she makes a parallel between open scale adjectives and activity verbs, and closed scale adjectives and accomplishments. As for the functional category introducing boundedness in the adjectival domain, Alexiadou proposes, following Corver (1990), that it is degP; degree is realized as a functional projection in the extended projection of the adjective.

Fábregas & Marín (2018), following insights form Hale & Keyser (2002) and Mateu (2002), assume that adjectives are built using primitives that originally belong to the prepositional domain. In particular, they argue that in some languages, like Spanish, adjectives in the positive degree project as pathP, i.e. the scalar structure is syntactically encoded: these languages use pathP to syntactically encode the series of ordered values associated to the adjective's semantics (Fábregas & Marín 2018:112)[42]:

(35)   scaleP = pathP[43]
```
        /    \
    Scale    AP = placeP
                /    \
               A
```

In other words, Fábregas & Marín interpret scales as a type of path; as spatial paths, they involve an ordered set of points and an orientation (positive or negative). In the same way as other kinds of path scales, they can be unbounded (open) or bounded (closed). Therefore, according to Fábregas & Marín, languages projecting the scalar properties of the adjective in syntax project a pathP denoting the scale, which takes the AP as its complement, defined as a placeP.

Fábregas & Marín (2018) highlight that pathP, which defines a trajectory, is not compatible with resP, which is a stative projection, while it is perfectly compatible with procP, which encodes the dynamic progression of the event; often the trajectory defined by pathP is used to co-define the *Aktionsart* of the predicate.

Therefore, if we assume, following the analysis proposed by Fábregas & Marín (2018) for Spanish adjectives, that Chinese scalar adjectives project a pathP, the structure proposed in (32) is not only semantically, but also syntactically motivated. Being paths, they do not necessarily make the event telic; this would be the reason why resultatives containing scalar adjectives are more compatible with the progressive aspect.

One question which remains open is what are the exact syntactic labels which characterize scalar adjectives and, also, how to syntactically codify different types of scales (see the discussion in Fábregas & Marín 2018); in other words, what is the exact syntactic decomposition of scalar adjectives denoting different kinds of scales? How are the set of values in the scale encoded? These issues require further investigation, but I hope that data on Chinese adjectives and their behavior in resultatives will contribute to the debate on the complex issue of the syntax of adjectives.

Going back to the analysis I proposed for Chinese complex change resultatives, i.e. those compatible with the progressive, I want to add that, by adopting this approach, contrasts like those presented in (18)-(19), § 2.4, repeated here for the sake of convenience (36 and 38), are well explained considering the features of the two elements composing the resultative compound.

(36)   a. 他正在慢慢地把那根鐵絲拉直。

tā	*zhèngzài*	*màn-màn-de*	*bǎ*	*nà*	*gēn*	*tiě-sī*
3SG.M	PROG	slow-slow-ADV	OBJ	that	CLF	iron-wire

lā-zhí
pull-straight
'He is slowly straightening that iron wire.'

b. *他正在慢慢地把那根鐵絲拉斷。

tā	*zhèngzài*	*màn-màn-de*	*bǎ*	*nà*	*gēn*	*tiě-sī*
3SG.M	PROG	slow-slow-ADV	OBJ	that	CLF	iron-wire

lā-duàn
pull-break
'He is slowly breaking that iron wire.'

In (36), V₁ is an activity, and thus its features are [init, proc]. V₂ in (36a) is a scalar adjective, sitting in the procP complement position, which provides a scale (path) along which the action gradually proceeds towards the state named by the adjective. The progressive is allowed precisely because the event structure lacks a [res] feature (37a), which is characteristic of instantaneous change of state predicates (achievements). In contrast, in (36b) the result element does not possess scalar properties, but is an intransitive change of state verb, characterized by the features [proc, res], as we have seen (27). It lexicalizes the resP layer and thus the progressive is not allowed (37b).

(37)   a. *lā-zhí* 拉直 'pull-straight'

```
                    initP
                   /    \
              DP₂       /  \
            lā 拉 'pull'    procP
                         /     \
                      DP₁      /  \
                    < lā 拉 'pull'>  AP
                                    △
                              zhí 直 'straight'
```
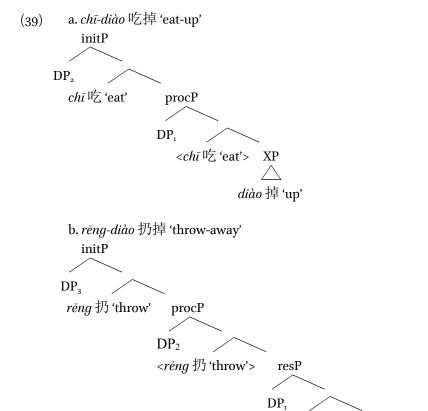
b. *lā-duàn* 拉斷 'pull-break'

```
                    initP
                   /    \
              DP₃       /  \
            lā 拉 'pull'    procP
                         /     \
                      DP₂      /  \
                    < lā 拉 'pull'>  resP
                                   /    \
                                DP₁     /  \
                          duàn 斷 'break'   XP
                                           △
```

Examples (38a) and (38b) differ for the kind of V₁ involved:

(38)   a. 他正在慢慢地吃掉那個蘋果。

tā	*zhèngzài*	*màn-màn-de*	*chī-diào*	*nà*	*ge*	*píngguǒ*
3SG.M	PROG	slow-slow-ADV	eat-up	that	CLF	apple

'He is slowly eating that apple up.'

b. *他正在慢慢地扔掉那個蘋果。

tā	*zhèngzài*	*màn-màn-de*	*rēng-diào*	*nà*	*ge*	*píngguǒ*
3SG.M	PROG	slow-slow-ADV	throw-away	that	CLF	apple

'He is slowly throwing that apple away.'

As we have seen in § 2.4, in (38a) we have as V₁ an accomplishment, more specifically a consumption verb, which is an [init, proc] verb with a path object. I assume that the phase complement *diào* 掉 'up, off, away' occupies the complement position of procP, providing an endpoint; however, it acts as a sort of scale along which the consumption process proceeds. This would be the reason why the progressive is allowed. In contrast, (38b) displays an achievement, i.e. an [init, proc, res] verb, which is thus telic. In this case, the phase complement *diào* 掉 would sit in the complement position of resP, confirming the result state expressed by V₁. Since (38a) does not involve a result layer, it is compatible with the progressive, differently from (38b):

(39)   a. *chī-diào* 吃掉 'eat-up'

```
              initP
             /    \
          DP₂      \
        chī 吃 'eat'  procP
                    /    \
                 DP₁      \
              <chī 吃 'eat'>  XP
                            /\
                         diào 掉 'up'
```

b. *rēng-diào* 扔掉 'throw-away'

```
              initP
             /    \
          DP₃      \
       rēng 扔 'throw'  procP
                      /    \
                   DP₂      \
              <rēng 扔 'throw'>  resP
                              /    \
                           DP₁      \
                     <rēng 扔 'throw'>  XP
                                      /\
                                   diào 掉 'away'
```

As we have mentioned in § 2.4, an in-depth analysis of phase complements, of their functions and features is needed in order to gain a better picture of contrasts like those in (38). This exceeds the scope of the present paper and thus I leave the issue open for further research.

4.3   *Resultatives with unselected objects*

The structure proposed for complex change resultatives implies that resultative verbs must have a selected object, since the object must be the undergoer of the process. The presence of an unselected object requires a result projection, which allows the holder of the result state to be a different entity from the undergoer of the process, leading to the structure proposed in (28) for simple change resultatives (see example 42 below). Adjectival items discussed so far too may appear in this kind of resultatives, as e.g.:

(40)   a. 他哭濕了手帕。

tā	*kū-shī-le*	*shǒupà*
3SG.M	cry-wet-PFV	handkerchief

'He cried and as a result the handkerchief got wet.'

b. 他們吃窮了張三。 (Sybesma 2017:188)

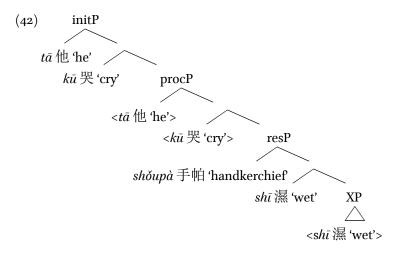| *tā-men*	*chī-qióng-le*	*Zhāng Sān*
3SG.M-PL	eat-poor-PFV	Zhang San

'They ate Zhang San poor.' (i.e., they [e.g., a big group of his friends] ate so much that it resulted in Zhang San becoming poor)

The question is what lexicalizes the resP head in this case. One hypothesis is to assume that, just like English, Chinese too has a null lexical item with a semantics of property possession, and that the adjective sits in the complement position of the result projection. However, it must be noted that these items, besides their ordinary use as stative predicates, can also be used as dynamic predicates (see e.g. Sybesma 1997, Liu 2010, Zhang 2006, Tham 2009, 2013, Peck, Lin & Sun 2013), expressing a change of state, as shown in the examples below:

(41) a. 衣服髒了
     yīfu   *zāng-le*
     clothes   dirty-PFV
     'The clothes got dirty'
   b. 碗盤剛乾, 你又要用了。 (Tham 2009:5)
     wǎnpán   *gāng*   *gān*   *nǐ*   *yòu*   *yào*   *yòng*   *le*
     dishes   just   dry   2SG   again   want   use   PERF
     'The dishes have just dried and you want to use them again.'
   c. 他會胖。 (Sybesma 1997:230)
     tā   *huì*   *pàng*
     3SG.M   can   fat
     'He can become fat.'

Therefore, these items, besides possessing adjectival features, would possess verbal features as well; as such, in principle they are able to lexicalize the resP head (but see the discussion below). The structure of (40a) would then be as follows:

(42)
```
              initP
             /    \
    tā 他 'he'      \
        kū 哭 'cry'   procP
                    /    \
           <tā 他 'he'>    \
               <kū 哭 'cry'>   resP
                            /    \
         shǒupà 手帕 'handkerchief'  \
                         shī 濕 'wet'   XP
                                      /\
                                 <shī 濕 'wet'>
```

The presence of a result projection seems to be also confirmed by the fact that the progressive is apparently not allowed:

(43) *他正在哭濕手帕。
    tā   *zhèngzài*   *kū-shī*   *shǒupà*
    3SG.M   PROG   cry-wet   handkerchief
    'He is crying the handkerchief wet.'

However, Peng (2007: 51) points out that open scale adjectives cannot appear in ECM resultatives, e.g.:

(44) a.*織毛衣織短了兩根針。

        zhī   máoyī zhī-duǎn-le   liǎng   gēn   zhēn

        knit sweater knit-short-PFV   two   CLF   needle

        'He shortened two needles by knitting the sweater.'

    b.織毛衣織斷了兩根針。

        zhī   máoyī zhī-duàn-le   liǎng   gēn   zhēn

        knit sweater knit-broken-PFV two   CLF   needle

        'He broke two needles by knitting the sweater.'

Note that the verb *zhī-duǎn* 織短 can be used with a selected object, like *máoyī zhī-duǎn-le* 毛衣織短了 'sweater knit-short-PFV, the sweater was knitted short', as mentioned in the previous section.

According to Peng (2007:54), open scale adjectives cannot appear in ECM resultatives due to the structure of this kind of resultatives and the characteristics of open scale adjectives. Control and ECM resultatives differ as to whether the resultee is an argument of the main verb or not. In control resultatives the resultee is the argument of the main verb; the change of state process proceeds simultaneously with the action expressed by the main verb. For example, in *xǐ-gānjìng yīfu* 洗乾淨衣服 'wash-clean clothes, wash the clothes clean', *yīfu* 衣服 'clothes' is the patient of *xǐ* 洗 'wash', thus the action of washing and the change of state of becoming clean proceed simultaneously. In contrast, in ECM resultatives, the resultee is not an argument of the main verb, thus the main action and the change of state undergone by the resultee do not necessarily proceed simultaneously. For example, in *chàng-yǎ-le sǎngzi* 唱啞了嗓子 'sing-hoarse-PFV throat, sing the throat hoarse', *sǎngzi* 嗓子 'throat' is not the patient of *chàng* 唱 'sing', therefore the progression of the main action 'sing' is not necessarily simultaneous with the realization of the change of state 'be hoarse': it is possible that you sing for a whole day, but your throat is not hoarse at all, and only on the second day it becomes hoarse. According to Peng, when an open scale adjective appears in a resultative, the change of state undergone by the resultee can only be simultaneous with the action expressed by the main verb. Open scale adjectives do not have a standard value, but represent a continuous, open gradual measure. When these adjectives act as predicates, they contain a comparative standard, as we have seen; however, this comparative standard may be located at any point on the scale. According to Peng, this means that, when they act as result complements, the process of realization of the state must develop along with the action expressed by the main verb. Thus, for example, in *kēng wā-shēn-le* 坑挖深了 'hole dig-deep-PFV, the hole has been dug deep', the action of digging and the process of realization of being deep must be simultaneous. It is not possible that during the process of excavating the hole does not undergo any change: when the process expressed by the main verb ends, the result state emerges. In contrast, according to Peng, since closed scale adjectives have *per se* a fixed endpoint, it is not necessary that the two processes take place simultaneously.

In the syntactic framework we are adopting here, this seems to suggest that while closed scale adjectives also possess a [res] verbal feature ([proc, res, A[44]]), open scale adjectives do not (they would just be specified as [proc], i.e. as [proc, A])[45], and thus they are not allowed in resultatives with an unselected object, where the result element is the head of the result projection.

---

[44] For the sake of simplicity, here we use A as a generic label for adjectival features.

[45] This could be possibly related to the kind of scale of the base adjective. For example, Fábregas & Marín (2018), based on the behavior of different kinds of adjectives with comparison PPs in Spanish, speculate that scales should possibly be treated as complex syntactic objects where the minimal and maximal values characterizing closed scale adjectives like *lleno* 'full' or *borracho* 'drunk' (absolute adjectives in their terms) are treated as distinct projections. Drawing a parallel with Ramchand's (2008) decomposition of the verbal phrase, they state that the set of values in the scale would correspond to procP, the maximal value would be similar to initP, and the minimal value would correspond to resP.
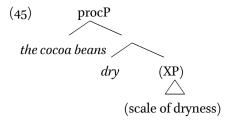
4.4   *Interim summary*

To sum up, resultatives allowing the progressive (complex change) are characterized by having as V_1 an [init, proc] verb, and as the result element mainly a scalar adjective acting as a path in the complement position of procP. The event structure of this kind of verbs lacks a result layer (which implies telicity), and is thus compatible with the progressive aspect at the viewpoint level. Resultatives not allowing the progressive (simple change), in contrast, are characterized by a result element with a [res] feature, able to lexicalize the resP head; the presence of a result layer implies telicity, which is incompatible with the progressive. The presence of a result layer also allows to have a resultee distinct from the undergoer of the action, which is the case in ECM resultatives; these resultatives are, then, obligatorily telic and are thus incompatible with the progressive, even when the result element possesses scalar features.

Thus, to sum up, the three-layer structure at the event-building domain allowed us to capture more subtle differences between event types and to syntactically account for the aspectual restrictions ascribed to the lexical semantic level in previous analyses.

4.5   *Degree achievements vs. complex change resultatives*

As we have seen in § 2 and § 4, Chinese complex change resultatives share many of the properties of English degree achievements. But are they structurally alike?

Ramchand (2008:89-91) proposes an account of degree achievement verbs taking into consideration different aspects of the various proposals made in the literature. Specifically, she starts from the observation of three of the main characteristics traditionally attributed to degree achievement verbs: 1) they are ambiguous between a telic and an atelic reading; 2) they are usually alternating in transitivity; 3) they are often deadjectival. Drawing on Hale, Kennedy & Levin's (1999) work, Ramchand argues that degree achievement verbs are a special kind of process verbs for which the degree of verbal change is mapped onto a property scale of some sort, related to the meaning of the adjectival base. Therefore, these verbs can be considered as [proc] verbs with a single undergoer role, as shown in example (45), which represents the structure of a sentence like *the cocoa beans dried in the sun for hours* (Ramchand 2008:89-91).

(45)

Note that, differently from Hale, Kennedy & Levin (1999), Ramchand does not distinguish between deadjectival verbs based on open scale adjectives and those based on closed scale adjectives; accordingly, all deadjectival verbs are analyzed, aspectually, as processes. Telicity can arise when the adjectival path is (syntactically or contextually) bounded: "The complement position is filled implicitly by the property scale denoted by the corresponding adjective. If that property scale is contextually bounded, then the verb will be telic" (Ramchand 2008:90):

(46)   The tailor lengthened the trousers in just twenty minutes.

We have also seen in the previous section that telicity may arise by adding bounded measures of change (see Hay, Kennedy & Levin 1999). Thus, it is reasonable to assume that the complement position may be filled by an explicit bounded measure of change too:

(47)   The road will be widened one meter on either side.

However, according to Ramchand (2008:91), degree achievements, much like semelfactives, have an optional telic punctual reading too, and thus she assumes an optional [res] feature in their lexical specification[46]:

(48)   The gap widened (suddenly).

Almost all degree achievements have a transitive version and, according to Ramchand, this is due to the fact that they are [proc] verbs, and are thus input to the structure-building processes that in her account create derived causatives by adding an extra causative layer (initP) on the top of the intransitive procP structures. As a matter of fact, Ramchand assumes that in causative-inchoative alternations, the direction of the derivation is from inchoative to causative, i.e. the intransitive version is basic (*contra* e.g. Levin & Rappaport Hovav 1995, Reinhart 2002, Chierchia 2004 [1989]).

Turning to Chinese, complex change resultatives, as we have seen, share many properties with degree achievements, due to the scalar nature of the result element involved. For these verbs I assumed the structure in (32), where I proposed that the procP head is lexicalized by an action verb, specifying the action leading to the gradual change of state expressed by the adjective, which in turn sits in the complement position of the process projection. In principle, though, a different account of the structure of these verbs seems to be possible too. As we have seen in § 4.3, adjectival items found as result elements in resultative compounds that allow the progressive have an eventive reading too, thus we have assumed that they possess verbal features along with adjectival ones. They seem to act as intransitive change of state verbs, expressing a gradual change of state, much like degree achievements:

(49)   a. 山的夾縫漸漸寬了[...]

       shān   *de*   *jiāféng*   *jiànjiàn*   *kuān-le*

       mountain   DET   crack   gradually   wide-PFV

       'The gap between the mountains gradually widened [...]'[47]

      b.淚水漸漸乾了。

       lèishuǐ   *jiànjiàn*   *gān-le*

       tear   gradually   dry-PFV

       'The tears dried gradually.'[48]

      c. 最好能繼續瘦下去, 一直瘦到在躺倒病床上爬不起來[...]

       zuìhǎo   *néng*   *jìxù*   *shòu*   *xiàqu*[49] *yīzhí*   *shòu-dào*   *zài*

       best   can   continue   thin   go.on   continuously   thin-arrive   at

       tǎng-dǎo   *bìngchuáng*   *shàng*   *pá-bù-qǐlai*

       lie-fall.down   hospital.bed   on   climb-not-get.up

       'It would be better to go on slimming, until not being able to get up from the hospital bed [...]'[50]

---

[46] The two telic senses assumed by Ramchand basically correspond to Kearn's (2007) accomplishment and achievement readings (see § 2.3.1).

[47] PKU corpus, periodical publications, *Rénmín rìbào* 人民日报, May 1995 (last access: 19/07/2017).

[48] PKU corpus, Modern literature, translation, *Gélántè chuánzhǎng de nǚ'ér* 格兰特船长的女儿 (last access: 19/07/2017).

[49] Even though *xiàqu* 下去 is not a fully-fledged aspect marker, it conveys an aspectual meaning, more precisely continuative meaning (see Xiao & McEnery 2004:227-228).

[50] Newspaper article: http://people.com.cn/BIG5/shenghuo/77/121/20020411/706861.html (last access: 14/07/2017).

Thus, they do not seem to be obligatorily telic; telicity may emerge contextually or by adding a bounded measure of change, like in degree achievements:

(50)   a. 治理後，衚衕寬了兩米多。

zhìlǐ	hòu	hútòng	kuān-le	liǎng	mǐ	duō
renovate	after	lane	wide-PFV	two	meter	more

‘After renovation, the *hutong* widened about two meters (became two meters wider).’ [51]

b. 因此我來這裡之後胖了三公斤。

yīncǐ	wǒ	lái	zhèli	zhīhòu	pàng-le	sān	gōngjīn
therefore	1SG	come	here	after	fat-PFV	three	kilo

‘Therefore, after getting here, I got three kilos fatter.’ [52]

Therefore, a lexical item like *kuān* 寬 ‘wide’ in its verbal change of state use could be represented as follows:

(51)   procP

       /\

  DP₁   /\

   kuān 寬 ‘wide’ XP

             /\

      (*liǎng mǐ duō* 兩米多 ‘about two meters’)

In addition, as we have seen in § 4.3, closed scale adjectives would also have a [res] feature, thus they can be used as punctual verbs, while open scale adjectives do not, and this would be the reason why only closed scale resultatives are allowed in ECM resultatives.

However, differently from degree achievements in English, these items can never be used transitively. Actually, as we have mentioned (§ 2.4), Modern Chinese does not have lexical causatives (with a few exceptions). Change of state verbs, thus, are normally only intransitive; in order to obtain their transitive variant, a complex verb is generally needed (for an overview, see Basciano 2017a). Typically, the causative variant is expressed by a resultative compound, where the action leading to the result state is lexicalized and made explicit by the first verb: e.g. *duàn* 斷 ‘break’ > *guā-duàn* 刮斷 ‘blow-break’, *yā-duàn* 壓斷 ‘press-break’, *kǎn-duàn* 砍斷 ‘chop-break’, etc. Another possibility is to add a phonetically realized causative light verb in front of the change of state verb in order to build its causative variant, as e.g. *dǎ* 打 ‘beat, strike, hit’, *nòng* 弄 ‘make, handle’, *gǎo* 搞 ‘do’ (see e.g. Feng 2003, Zhu 2005, Xie 2008, Basciano 2013). These verbs often do not have full/lexical content, differently from the first verb in resultative compounds, but are bleached/light verbs, with a general causative meaning (see § 2.4), whose function is to form the transitive version of change of state verbs, as in *nòng-pò* 弄破 ‘make-break, break’, *nòng-àn* 弄暗 ‘make-dark, darken’, *gǎo-huài* 搞壞 ‘do-bad, ruin, destroy, break’.
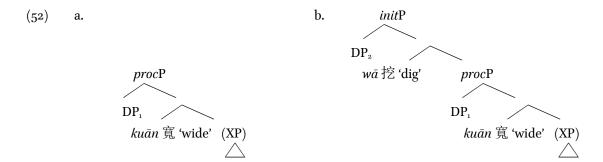
Therefore, we could hypothesize that a verb like *wā-kuān* 挖寬 ‘dig-wide’ is formed by adding an extra (causative) layer on the top of the intransitive change of state verb *kuān* 寬 ‘wide’. This can be thus seen as a causativization strategy building causatives from inchoative verbs[53]. Therefore, a resultative like *wā-kuān* 挖寬 ‘dig-wide’ could be analyzed as follows (52b):
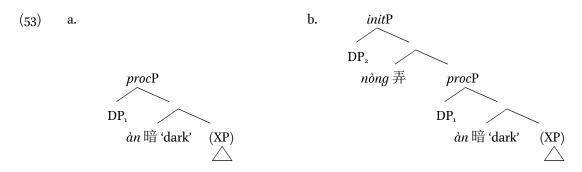
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[51] Newspaper article: http://bjwb.bjd.com.cn/html/2017-04/19/content_127031.htm (last access: 14/07/2017).

[52] PKU corpus, Modern literature, translation, *Nuówēi de sēnlín* 挪威的森林 (last access: 19/07/2017).

[53] As we have mentioned, Ramchand (2008) assumes that in the English causative/inchoative alternation, the direction is from inchoative to causative. The process of causativization is the result of automatic structure building, which forms transitive verbs from verbs that do not contain an [init] specification in their lexical entry. This is allowed by the presence in the English lexical inventory of a default null *init* head, i.e. a null lexical item specified just for an [init] feature. For example, English alternating verbs like *melt* and *break* are listed as [proc]

(52) a.   b.   *init*P
                                                         ╱╲
                                                      DP₂   ╱╲
         *proc*P   *wā* 挖 'dig'   *proc*P
        ╱╲   ╱╲
     DP₁   ╱╲   DP₁   ╱╲
       kuān 寬 'wide' (XP)   *kuān* 寬 'wide' (XP)
                    △   △

This would be more evident for those verbs formed by means of a phonetically realized causative light verb. As a matter of fact, light verbs do not express a particular action, and thus are devoid of lexical content, having just a general causative meaning. Given these characteristics, Basciano (2013) assumes that they are elements involved in the causative/inchoative alternation, having a causativizing function: they form causative verbs from verbs lacking an [init] feature in their lexical entries, and are only specified as having an [init] feature in the lexicon[54]. Therefore, the structure of the complex verb would be as follows (53b):

(53) a.   b.   *init*P
                                                         ╱╲
                                                      DP₂   ╱╲
         *proc*P   *nòng* 弄   *proc*P
        ╱╲   ╱╲
     DP₁   ╱╲   DP₁   ╱╲
       àn 暗 'dark' (XP)   *àn* 暗 'dark' (XP)
                  △   △

This would be the structure of a verb like *dǎ-pò* 打破 'hit-broken, break' (abstract) in sentences like the one in (11b), § 2.4, where we have pointed out that *dǎ* 打 is not used with its lexical meaning but is rather a phonetically realized causative light verb.

However, one problem with this account is that the intransitive variant of these verbs (see examples 41, 49, 50) is incompatible with the progressive marker, differently from the corresponding complex causative verbs[55]:

(54) a. *水正在（慢慢）乾。

shuǐ	*zhèngzài*	(*mànmàn*)	*gān*
water	PROG	slow	dry

       'The water is drying (slowly).'

    b. *缺口正在寬。

quēkǒu	*zhèngzài*	*kuān*
gap	PROG	wide

       'The gap is widening.'

---

and [proc, res], respectively. The transitive version would be built by introducing a layer on top of their structure due to the null *init* head, which has the semantics of general causation. In Chinese resultatives, in contrast, the initP head is lexicalized by a full verb.

[54] Following Ramchand's (2008) account of the causative alternation (see fn. 3), Basciano (2013) proposes that phonetically realized causative light verbs in Chinese have the same function as the null causative head in English. As a matter of fact, complex verbs with a causative light verb just express the resultant state, leaving the causing event unspecified: different actions can bring about the resultant state.

[55] I am grateful to Waltraud Paul (p.c.) for pointing out this issue.

c. *他正在高。

tā	*zhèngzài*	*gāo*
3SG.M	PROG	tall

'He is becoming tall.'

This is not expected if we consider that they both express a process leading to a gradual change of state, only differing for causativity. Also, it is unclear by means of what mechanism the [proc] feature of a full lexical verb would remain unassociated in the structure. These issues require further investigation in order to be assessed. Thus, for the moment, I maintain the structure in (32) for Chinese resultatives allowing the progressive, i.e. complex change resultatives.

Therefore, while sharing many properties, complex change resultatives and degree achievements also display some differences: in particular, in complex change resultatives the process is lexicalized by an action verb, which specifies the action leading to the gradual change of state. Accordingly, the adjective, specifying the change of state, sits in the complement position of procP. In English degree achievements, in contrast, the change of state verb lexicalizes the procP head and the complement position is filled by the scale derived from the corresponding adjective.

In any case, what is important to stress for the aims of this paper is the absence of a result layer in complex change resultatives, which structurally sets them apart from simple change resultatives. As we have seen, the presence of a result layer in the event structure of simple change resultatives makes them obligatorily telic. The different aspectual behavior of the two classes of resultatives, then, has been justified here on a structural basis.

4.6   *Further remarks: more on degree achievements*

There is a group of complex verbs, formed with *jiā* 加 'add, increase' as V₁ and an adjectival item as V₂, which seem to approach more closely degree achievements, as e.g.:

(55)   *jiā-kuān* 加寬   'increase-wide, widen'
        jiā-shēn 加深   'increase-deep, deepen'
        jiā-qiáng 加强   'increase-strong, strengthen'

These verbs are basically atelic, as shown by their ability to appear with the progressive and with 'for X time' expressions[56]:

(56)   a. [...] 洗淨後在微波爐中加熱 2 分鐘，翻動後再加熱一分鐘 [...]

xǐ-jìng		*hòu*	*zài*	*wēibōlú*	*zhōng*	*jiā-rè*
wash-clean		after	at	microwave	middle	increase-hot

liǎng	*fēnzhōng*	*fāndòng*	*hòu*	*zài*	*jiā-rè*	*yī*	*fēnzhōng*
two	minute	turn.over	after	again	add-hot	one	minute

'[...]After washing it, heat it in the microwave for two minutes, then turn it over and heat it again for one minute [...]'

---

b. [...] 現在，我國正在加快建立社會主義市場經濟新體制 [...]

xiànzài	*wǒguó*	*zhèngzài*	*jiā-kuài*	*jiànlì*
now	China	PROG	add-fast	establish

shèhuìzhǔyì	*shìchǎng-jīngjì*	*xīn*	*tīzhì*
socialism	market-economy	new	system

'[...] At the moment, China is speeding up the establishment of the new system of socialist market economy [...]'

Furthermore, these verbs allow the durative aspect marker too:

(57)　這一切都加深著加重著他們相依為命的感覺[...]

zhè	*yīqiè*	*dōu*	*jiā-shēn-zhe*	*jiā-zhòng-zhe*	*tā-men*
this	all	all	increase-deep-DUR	increase-heavy-DUR	3SG.M-PL

xiāngyīwéimìng		*de*	*gǎnjué*
depend.on.each.other.for.survival		DET	feeling

'All this is deepening and making heavier the feeling of depending on each other for life'[57]

Similarly to degree achievements and complex change resultatives, with these verbs telicity may emerge contextually or by adding a bounded measure of change[58]:

(58)　a. [...]每門加寬 30 至 50 釐米 [...]

měi	*mén*	*jiā-kuān*	*sānshí*	*zhì*	*wǔshí*	*límǐ*
each	door	increase-wide	thirty	to	fifty	centimeter

'[...] Each door has been widened thirty to fifty centimeters [...]'

b. [...] 可加長到 3900MM 左右 [...]

kě	*jiā-cháng*	*dào*	*sānqiānjiǔbǎi*	*mm*	*zuǒyòu*
can	increase-long	up.to	3900	mm	more.or.less

'[...] can be lengthened up to 3900 mm more or less [...]'

From the point of view of meaning, *jiā* 加 does not seem to represent a particular action bringing about a result state, unlike other resultative compounds: in a sentence like *tāmen jiā-kuān-le lùmiàn* 他們加寬了路面 'they increase-wide-PFV road.surface, they widened the road', the meaning is not 'they increase the road and as a result the road widened' but rather 'they increased the width of the road' (see also Steffen Chung 2006:196). Thus, they seem to generically express the increasing event leading to the gradual change of state characteristic of degree achievements.

Hay, Kennedy & Levin (1999:132) claim that degree achievement verbs are events that describe the change underwent by an object with respect to the gradable property introduced by the base adjective. They introduce a function INCREASE (which they assume to be conveyed in English by the suffix *-en* or by a ∅ morpheme), which takes a gradable adjectival meaning and returns a description of an event involving some property undergoing a change in its degree.

According to Hay, Kennedy and Levin (1999:132), the logical representation of these verbs would be as follows:

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[57] PKU corpus, periodical publications, *Zuòjiā wénzhāi* 作家文摘, 1997 (last access: 19/07/2017).

[58] Examples from PKU corpus: periodical publications, *Rénmín rìbào* 人民日报, January 1993 (58a); periodical publications, *Niánbàokān jīngxuǎn* 年报刊精选 11, 1994 (58b) (last access: 19/07/2017).

(59) $[[\text{INCREASE} (\emptyset) (x) (d) (e)]] = 1$ iff $\emptyset (x) (\text{SPO} (e)) + d = \emptyset (x) (\text{EPO} (e))$

"INCREASE $(\emptyset) (x) (d)$ is true of an event e just in case the degree to which x is $\emptyset$ at the beginning of the event plus d equals the degree to which x is $\emptyset$ at the end of the event; i.e., just in case x increases in $\emptyset$-ness by d. This measure of change corresponds to what we have called the difference value."

An illustration of this analysis is represented in (60b), which is the logical representation of the sentence in (60a) (see Hay, Kennedy & Levin 1999:132):

(60)   a. Kim lengthened the rope
        b. $\exists e, d$ [increase (*long* (*rope*)) $(d) (e)$]

According to the logical representation in (60b), the sentence *Kim lengthened the rope* is true if the length of the rope at the end of the increasing event equals its length at the beginning plus some unspecified degree of length. Hay, Kennedy & Levin (1999) assume that the logical representation in (60) is the one underlying both transitive and intransitive degree achievement verbs. Obviously, the two kinds of forms differ for the presence or absence of a causative component. However, they observe that the exact analysis of the causative is not central to what they intend to represent. Furthermore, they are not sure whether, in the analysis of the causative alternation represented by intransitive/transitive pairs (*the soup cooled* vs. *I cooled the soup*), the causative component should be included in both the transitive and the intransitive forms (e.g. Levin and Rappaport Hovav 1995) or only in the transitive one (e.g. Hale and Keyser 1986, Hoekstra 1992 and 2004, Ramchand 2008). Therefore, they put aside this question and, for the sake of simplicity, omit the external argument and the causative component from the logical representation.

In the Chinese complex verbs we are considering in this section, *jiā* 加 seems to be the spell-out of one of the relevant parts of the logical representation, i.e. the increasing event. Therefore, following Hay, Kennedy & Levin's (1999) proposal, the representation of the event expressed by the sentence in (61a) would be as in (61b):

(61)   a. 我們加寬了路面

wǒ-men	*jiā-kuān-le*	*lùmiàn*
1SG-PL	increase-wide-PFV	road.surface

        'We widened the road surface'
        b. ∃ e, d [*jiā* 加 'increase' (*kuān* 寬 'wide' (*lùmiàn* 路面 'road surface')) (d) (e)]

However, in Mandarin Chinese the verb *jiā* 加 also represents the causative component. Therefore, it may be hypothesized that *jiā* 加 'increase' acts as a sort of light verb: it would be the spell-out both of the increasing event in the logical representation and of the causative component.

It must be noted, though, that the use of *jiā* 加 'increase' is subject to further restrictions: it cannot be found with closed scale adjectives, as e.g. **jiā-gān* 加乾 'increase-dry', **jiā-shī* 加濕 'increase-wet', **jiā-píng* 加平 'increase-flat' (cf. *nòng-gān* 弄乾 'make-dry, to dry', *nòng-shī* 弄濕 'make-wet, to wet', *nòng-píng* 弄平 'make-flat, flatten')[59].

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[59] The light verb 弄 *nòng* 'make' may seemingly combine quite freely with adjectives. Even when *nòng* 弄 'make' and *jiā* 加 'increase' can be both added to the same adjectival item, they seem to convey a difference in meaning. Rothstein (2008) points out that a verb like *cool* means 'undergo a decrease in temperature' (see also Hay, Kennedy & Levin 1999), and not 'get a value in the cool range'. In contrast, *become cool* means 'get to have a temperature value in the (contextually determined) cool range', without specifying the direction of change: e.g. *When I took the soup out of the fridge it was so cold that it burned my mouth, but after some time at room temperature, it had become pleasantly cool/*it had cooled* (Rothstein 2008:192). Following Rothstein's (2008) claim, I wonder whether there is a difference between complex deadjectival verbs formed with *jiā* 加 'increase', on the one hand, and those formed with *nòng* 弄 'make', on the other hand. Accordingly, while verbs formed with *jiā* 加 'increase' would specify the direction of change, meaning 'cause an increasing in a

Also, *jiā* 加 'increase' cannot be added freely to any open scale adjective. Hay, Kennedy & Levin (1999) characterize the gradual change involved in degree achievement verbs as an increase in the degree to which an object possesses a gradable property (see also Kennedy and Levin 2002). Kennedy & Levin (2002) note that verbs like *shorten* could be seen as involving a decrease in some property, i.e. a decreasing change that involves an increase in negative properties. Nevertheless, they assume that a change in the degree to which an object possesses some (gradable) property should involve an increase, either of a positive or of a negative degree. However, in Chinese, transitive deadjectival verbs expressing a decrease in some property (increase in negative properties) require a V$_1$ that marks the negative direction of the change in degree, like *jiǎn* 減 'decrease, subtract' and *suō* 缩 'shrink', as in the examples in (62), from Steffen Chung (2006:197-198) [60]:

(62)   *jiǎn-duǎn* 減短   'decrease-short, shorten'
        jiǎn-xiǎo 減小   'decrease-small, reduce in size (make smaller)'
        suō-duǎn 縮短   'shrink-short, shorten'
        suō-xiǎo 縮小   'shrink-small, reduce, narrow (make smaller)'

Therefore, complex deadjectival verbs formed with *jiā* 加 form a closed (possibly lexicalized) class of verbs, since *jiā* 加 can be added only to a specific class of adjectives. Their event structure closely resembles that of degree achievements, and the root *jiā* 加 in these complex verbs seems to spell-out both the causative component and the increasing event characterizing degree achievements, i.e. it overtly expresses an increase in some property. Further research is needed to get a better understanding of these verbs and of their aspectual behavior, in particular in relation to other kinds of resultatives. We leave this issue for future work.

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5   Conclusions

In this paper, based on actual language data, I provided an in-depth description of the features characterizing the two different kinds of so-called resultative compounds singled out in the literature as simple change and complex change resultatives on the basis of their difference in compatibility with imperfective markers, also highlighting some shortcomings of previous accounts. I showed that in complex change resultatives, i.e. those compatible with the progressive, 1) V$_1$ can never be telic, 2) the result element must have scalar properties, and 3) both open

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certain property', without specifying a value, verbs formed with *nòng* 弄 'make' would specify a value in the property range, without specifying the direction, meaning 'cause to have the value X in the property range'. If this is the case, then a verb like *jiā-rè* 加熱 'increase-hot, heat, warm' means 'cause an increase in temperature', while *nòng-rè* 弄熱 means 'make hot', i.e. 'cause to have a temperature value in the hot range'. Further investigation and data are needed in order to gain a better understanding of this issue.

[60] Steffen Chung (2006) observes that *jiǎn* 減 'decrease, subtract' and *suō* 縮 'shrink' may be used in quite different contexts, often depending on the specific semantic context or environment. Note that there does not seem to be any particular requirement on the kind of subjects which can occur with complex verbs containing these V$_1$s: not only agents, but also other kinds of causes seem to be able to appear as subjects. See the following examples, which show non-agentive causers:

a. 冷戰大大減小了安理會的作用。

| *lěng-zhàn* | *dàdà* | *jiǎn-xiǎo-le* | *ānlǐhuì* | *de* | *zuòyòng* |
| cold-war | greatly | decrease-small-PFV | Security.Council | DET | function |

 'The Cold War greatly reduced the role of the United Nations Security Council.'

(PKU corpus, translated texts, practical writing, *Quánqiú tōngshǐ* 全球通史; last access: 28/12/2018).

b. 酒精會嚴重縮短壽命。

| *jiǔjīng* | *huì* | *yánzhòng* | *suō-duǎn* | *shòumìng* |
| alcohol | can | serious | shrink-short | life |

'Alcohol can seriously shorten life.'

(Dictionary example:

http://ce.linedict.com/dict.html#/cnen/example?query=%E9%85%92%E7%B2%BE%E4%BC%9A%E4%B8%A5%E9%87%8D%E7%B

C%A9%E7%9F%AD%E5%AF%BF%E5%91%BD%E3%80%82; last access: 17/07/2017)

scale and closed scaled adjectives are allowed. In addition, the object must be selected; ECM resultatives are never compatible with the progressive. I also showed that these differences are due to structural reasons: the two kinds of resultatives at issue are characterized by different event structures, determined by the features of both the main verb and the result element. It is precisely the different event structures characterizing these two kinds of resultatives that determine their different behavior at the viewpoint aspect level. I adopted the constructionist framework put forth by Ramchand (2008) and I offered a syntactic account for the two types of compounds, arguing that only one of them, namely simple change resultatives, is formed by *real* resultatives, involving a result layer in their eventive structure, which blocks the use of the progressive: the presence of a result layer makes the event obligatorily telic, and telicity is incompatible with the progressive. I have further assumed that in this kind of resultatives it is V_2 itself that lexicalizes the result projection head, without resorting to null lexical heads, differently from what Ramchand proposes for English resultatives.

The fine-grained three-layer structure, thus, allowed us to capture more subtle differences between event types and enabled us to provide a syntactic account for the different aspectual properties of different kinds of compounds, which have been set apart on a structural basis rather than on a lexical semantic level. This analysis offers a fresh structural account of the semantics of different resultative compounds and of their aspectual properties, since it provides a syntactic account for the aspectual restrictions exclusively ascribed to the lexical semantic level in previous analyses. Indeed, the approach adopted for the analysis is generative-(neo)constructionist and assumes that syntactic layers have meaning since they are systematically constructed as part of a generative system, the syntactic form, with predictable meaning correlates. In this view, the semantics of event structure and the participants to the event are built up compositionally and not explicitly stated in the lexical entries of verbs.

It would be also worth exploring whether the differences observed between English and Chinese, more specifically the greater freedom of combination and variety of Chinese resultatives, are due to differences in their lexical inventory, as e.g. the fact that adjectival items seem to possess verbal features too in Chinese: given that the fundamental building blocks of eventive meaning are assumed to be the same for all languages, the variation should concern only the kind of lexical items available in their lexical inventory, which determine differences in the way of expressing the very same structures (see Ramchand 2008, Ramchand & Svenonius 2008, Son & Svenonius 2008).

Many issues deserve a deeper analysis. Further research is needed in order to gain a better understanding of the syntactic decomposition of adjectives and of verbs expressing a gradual change of state (degree achievements) in Chinese. In particular, further exploration on the behavior of adjectival items acting as intransitive change of state verbs, and on their lexical features and eventive structure, is needed, as well as an assessment of the hypothesis that the intransitive and the complex (causative) variants are derived one from the other through structure building, especially in the case of complex verbs formed with a light verb. Also, further research is needed to gain a better understanding of the properties of the progressive and durative aspect markers, and their interaction with the event structure of verbs expressing a gradual change of state. I hope that this contribution can pave the way to new reflections on these much-debated topics.

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References

Abusch, Dorit. 1986. Verbs of Change, Causation and Time. *CSLI Report* N 86-50. Centre for the Study of Language and Information (CSLI), Stanford University.

Alexiadou, Artemis. 2010. Reduplication and doubling contrasted: Implications for the structure of the DP and the AP. *Linguística – Revista de Estudos Linguísticos da Universidade do Porto* 5. 9-25.

Baker, Mark C. 2003. *Verbs, Nouns, and Adjectives: Their Universal Grammar*. Cambridge: Cambridge University Press.

Basciano, Bianca. 2013. Causative light verbs in Mandarin Chinese (and beyond). In Montermini, Fabio & Hathout, Nabil & Tseng, Jesse (eds.), *Morphology in Toulouse. Selected Proceedings of Décembrettes 7*, 57-89. Munich: Lincom Europa.

Basciano, Bianca. 2017a. Causative constructions. In Sybesma, Rint & Behr, Wolfgang & Gu, Yueguo & Handel, Zev & Huang, C.-T. James & Myers, James (eds.), *Encyclopedia of Chinese Language and Linguistics*, vol. 1, 345-352. Leiden: Brill.

Basciano, Bianca. 2017b. Resultatives. In Sybesma, Rint & Behr, Wolfgang & Gu, Yueguo & Handel, Zev & Huang, C.-T. James & Myers, James (eds.), *Encyclopedia of Chinese Language and Linguistics*, vol. 3, 571-582. Leiden: Brill.

Basciano, Bianca & Melloni, Chiara. 2017. Event delimitation in Mandarin: The case of diminishing reduplication. *Italian Journal of Linguistics* 29(1). 147-170.

Bertinetto, Pier Marco & Squartini, Mario. 1995. An attempt at defining the class of "gradual completion verbs". In Bertinetto, Pier Marco & Bianchi, Valentina & Higginbotham, James & Squartini, Mario (eds.), *Temporal Reference, Aspect and Actionality*, Vol. 1: *Semantic and syntactic perspectives*, 11-26. Torino: Rosenberg and Sellier.

Borer, Hagit. 1994. The projection of arguments. In Benedicto, Elena (ed.), *University of Massachusetts Occasional Papers in Linguistics 17*, 19–47. Amherst, MA.

Borer, Hagit. 2005. *In Name Only. Structuring Sense*, Vol. I. Oxford: Oxford University Press.

Chen, Jidong. 2008. *The Acquisition of Verb Compounding in Mandarin Chinese*. Amsterdam: Vrije Universiteit. (Doctoral dissertation).

Chen, Ping (陈平). 1988. Lún Xiàndài Hànyǔ shíjiān xìtǒng de sān yuán jiégòu (论现代汉语时间系统的三元结构) [On the tripartite organization of the temporal system in Modern Chinese]. *Zhōngguó yǔwén* (中国语文) 6. 401-422.

Cheng, Lisa L.-S. & Huang, James C.-T. 1994. On the Argument Structure of Resultative Compounds. In Matthew Y. Chen & Ovid J.-L. Tzeng (eds.), *In Honour of William S-Y. Wang: Interdisciplinary Studies on Language and Language Change*, 187-221. Taipei: Pyramid Press.

Chierchia, Gennaro. 2004 [1989]. A semantics for unaccusatives and its syntactic consequences. In Alexiadou, Artemis & Anagnostopoulou, Elena & Everaert, Martin (eds.), *The Unaccusative Puzzle*: *Explorations of the Syntax-Lexicon Interface*, 22-59. Oxford: Oxford University Press.

Corver, Norbert. 1990. *The syntax of left branch constructions*. Tilburg: University of Tilburg. (Doctoral dissertation).

den Dikken, Marcel. 2010. On the Functional Structure of Locative and Directional PPs. In Cinque, Guglielmo & Rizzi, Luigi (eds.), *The Cartography of Syntactic Structures* 6, 74–116. Oxford: Oxford University Press.

Ding, Yongshou (丁永寿). 2010. *A Complete Guide to Teaching Chinese as a Second Language – Duìwài Hànyǔ jiàoxué cānkǎo* (对外汉语教学参考). Beijing: Beijing Language and Culture University Press.

Dong, Xiufang (董秀芳). 2007. Cóng cíhuìhuà de jiǎodù kàn zhānhéshì dòngbǔ jiégòu de xìngzhì (从词汇化的角度看粘合式动补结构的性质) [The properties of the resultative constructions from the perspective of lexicalization]. *Yǔyán kēxué* (语言科学) 6(1). 40- 47.

Fábregas, Antonio & Marín, Rafael. 2018. Spanish adjectives are PathPs. In Berns, Janine & Jacobs, Haike & Nouveau, Dominique (eds.), *Romance Languages and Linguistic Theory 13. Selected papers from 'Going Romance' 29, Nijmegen*, 111-126. Amsterdam: John Benjamins.

Feng, Shengli (冯胜利). 2005. Qīng dòngcí yíwèi yǔ gǔjīn Hànyǔ de dòng-bīn guānxi (轻动词移位与古今汉语的动宾关系) [Light verb movement and the verb-object relationship in Old and Modern Chinese]. *Yǔyán kēxué* (语言科学) 4(1). 3-16.

Goldberg, Adele. 1995. *Constructions: A Construction Grammar Approach to Argument Structure*. Chicago: Chicago University Press.

Gu, Yang. 1992. *The Syntax of Resultative and Causative Compounds in Chinese*. Ithaca, New York: Cornell University. (Doctoral dissertation).

Guo, Rui (郭锐). 1993. Hànyǔ dòngcí de guòchéng jiégòu (汉语动词的过程结构) [The event structure of Chinese verbs]. *Zhōngguó yǔwén* (中国语文) 6. 410-419.

Hale, Kenneth & Keyser, Samuel J. 1986. Some Transitivity Alternations in English. *Lexicon Project Working Papers* 7. Cambridge, MA: MIT Center for Cognitive Science.

Hale, Kenneth & Keyser, Samuel J. 1993. On argument structure and the lexical expression of syntactic relations. In Hale, Kenneth & Keyser, Samuel J. (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 51–109. Cambridge, MA: MIT Press.

Hale, Kenneth & Keyser, Samuel J. 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge, MA: MIT Press.

Hay, Jennifer & Kennedy, Christopher & Levin, Beth. 1999. Scalar structure underlies telicity in "degree achievements". In Mathews, Tanya & Strolovitch, Demon (eds.), *SALT IX*, 127–144. CLC Publications: Ithaca.

Hoekstra, Teun. 1988. Small clause results. *Lingua* 74. 101-139.

Hoekstra, Teun. 1992. Aspect and Theta Theory. In Roca, Iggy M. (ed.), *Thematic Structures: Its Role in Grammar*, 145-174. Berlin: Mouton de Gruyter.

Hoekstra, Teun. 2004. Small clauses everywhere. In Sybesma, Rint P.E. & Barbiers, Sjef & den Dikken, Marcel & Doetjes, Jenny & Postma, Gertjan & Vanden Wyngaerd, Guido (eds.), *Arguments and structure: Studies on the architecture of the sentence*, 319-389. Berlin: Mouton de Gruyter.

Huang, Zhengde (黄正德). 1991. Zhōngwén de liǎng zhǒng jíwù dòngcí hé liǎng zhǒng bùjíwù dòngcí (中文的兩種及物動詞和兩種不及物動詞) [Two kinds of transitive verbs and intransitive verbs in Chinese]. In *Dì èr jiè shìjiè wénjiàoxué yánjiū huìyì lùnwénjí* (第二屆世界華文教學研究會議論文集) [Proceedings of the 2nd World Congress of Chinese Language Studies], 39-59. Taibei: Shijie Huawen Chubanshe.

Huang, James C.-T. 1992. Complex predicates in control. In Larson, Richard K. & Iatridou, Sabine & Lahiri, Utpal, & Higginbotham, James (eds.), *Control and grammar*, 109-147. Dordrecht: Kluwer.

Huang, James C.-T. 1997. On lexical structure and syntactic projection. *Chinese Language and Linguistics* 3. 45-89.

Jackendoff, Ray. 1990. *Semantic Structures*. Cambridge, MA: MIT Press.

Jackendoff, Ray. 1991. Parts and boundaries. *Cognition* 41. 9-45.

Jackendoff, Ray. 1996. The proper treatment of measuring out, telicity, and perhaps even quantification in English. *Natural Language and Linguistic Theory* 14. 305–354.

Kearns, Kate. 2007. Telic Senses of Deadjectival Verbs. *Lingua* 117. 26–66.

Kennedy, Christopher & Levin, Beth. 2002. Telicity Corresponds to Degree of Change. (Handout, *Topics in the grammar of scalar expressions*, Los Angeles: UCLA, January 2002, http://semantics.uchicago.edu/kennedy/docs/telicity.pdf, accessed 18 July 2017)

Kennedy, Christopher & McNally, Louise. 2005. Scale structure and the semantic typology of gradable predicates. *Language* 81(2). 345-381.

Kennedy, Christopher. 2007. Vagueness and grammar: the semantics of relative and absolute gradable adjectives. *Linguistics and Philosophy* 30(1). 1–45.

Klein, Wolfgang & Li, Ping & Hendriks, Henriette. 2000. Aspect and assertion in Mandarin Chinese. *Natural Language & Linguistic Theory* 18. 723-770.

Levin, Beth & Rappaport Hovav, Malka. 1995. *Unaccusativity: At the Syntax-lexical Semantics Interface*. Cambridge, MA: MIT Press.

Li, Audrey Y.-H. 1999. Plurality in a classifier language. *Journal of East Asian Linguistics* 8. 75–99.

Li, Yafei. 1988. Chinese resultative constructions and the UTAH. In Packard, Jerome (ed.), *New approaches to word formation in Chinese*, 285–310. Berlin: Mouton de Gruyter.

Liao, Wei-wen. 2004. *The Architecture of Aspect and Duration*. Hsinchu, Taiwan: Tsing Hua University. (MA dissertation).

Lin, Jingxia & Peck, Jeeyoung. 2010. Classification of Mandarin Chinese Simple Adjectives: A Scale-Based Analysis of Their Quantitative Denotations. *Language and Linguistics* 17(6). 827–855.

Lin, Tzong-Hong Jonah. 2001. *Light Verb Syntax and the Theory of Phrase Structure*. Irvine, CA: University of California. (Doctoral dissertation).

Liu, Chen-Sheng Luther (2010). The positive morpheme in Chinese and the adjectival structure. *Lingua* 120: 1010-1056.

Loar, Jian Kang (2018). *Learn to Use Chinese Aspect Particles.* London-New York: Routledge.

Lu, Qinghe (陆庆和). 2006. *Shíyòng duìwài Hànyǔ jiàoxué yǔfǎ* (实用对外汉语教学语法) [*A practical grammar for teaching Chinese as a foreign language*]. Beijing: Beijing Daxue Chubanshe.

Lü, Shuxiang (吕叔湘). 1980. *Xiàndài Hànyǔ bābǎi cí* (现代汉语八百词) [*Eight hundred words of Modern Chinese*]. Beijing: Shangwu Yinshuguan Chubanshe.

Marín, Rafael & Mcnally, Louise. 2011. Inchoativity, change of state, and telicity: evidence from Spanish reflexive psychological verbs. *Natural Language and Linguistic Theory* 29. 467-502.

Mateu, Jaume. 2002. *Argument Structure. Relational Construal at the Syntax-Semantics Interface*. Barcelona: Universitat Autònoma de Barcelona. (Doctoral dissertation).

McClure, William T. 1995. *Syntactic Projections of the Semantics of Aspect*. Ithaca: Cornell University. (Doctoral dissertation).

Neeleman, Ad. 1994. *Complex predicates*. Utrecht: Utrecht University. (Doctoral dissertation).

Paradis, Carita. 2001. Adjectives and boundedness. *Cognitive Linguistics* 12(1). 247–271.

Peck, Jeeyoung & Lin, Jingxia & Sun, Chaofen. 2013. Aspectual Classification of Mandarin Chinese Verbs: A Perspective of Scale Structure. *Language and Linguistics* 14(4). 663-700.

Peng, Guozhen (彭国珍). 2007. Yīng-Hàn jiéguǒ bǔyǔ jiégòu zhōng bǔyǔ xíngróngcí de chāyì (英汉结果补语结构中补语形容词的差异) [The differences in the selectional constraints on adjectives between English and Chinese resultatives]. *Yǔyán jiàoxué yǔ yánjiū* (语言教学与研究) 3. 48-55.

Peng, Guozhen (彭国珍). 2011. Hànyǔ kāifàng děngjí xíngróngcí de yǔyì tèzhēng duì jùfǎ biǎoxiàn de yǐngxiǎng (汉语开放等级形容词的语义特征对句法表现的影响) [The semantic features of open scale gradable adjectives and their influence on Mandarin syntax]. *Zhèjiāng Gōngyè Dàxué xuébào* (浙江工业大学学报) 10(2). 236-240.

Piñón, Christopher (1997). Achievements in an event semantics. In Lawson, Aaron & Cho, Eun (eds.), *Proceedings from Semantics and Linguistic Theory VII* (SALT VII), 276–293. Ithaca, New York: CLC Publications.

Ramchand, Gillian C. 1997. *Aspect and Predication: The Semantics of Argument Structure*. Oxford: Clarendon Press.

Ramchand, Gillian C. 2008. *Verb Meaning and the Lexicon: A First-Phase Syntax*. Cambridge: Cambridge University Press.

Ramchand, Gillian C. & Svenonius, Peter. 2008. Mapping a parochial lexicon onto a universal semantics. In Biberauer, Theresa (ed.), *The limits of syntactic variation*, 219-245. Amsterdam: John Benjamins.

Rappaport Hovav, Malka & Levin, Beth. 1998. Building verb meanings. In Butt, Miriam & Geuder, Wilhem (eds.), *The Projection of Arguments: Lexical and Compositional Factors*, 97-134. Stanford, CA: CSLI Publications.

Rappaport Hovav, Malka & Levin, Beth. 2001. An Event Structure Account of English Resultatives. *Language* 77: 766-797.

Reinhart, Tanya 2002. The Theta System: An Overview. *Theoretical Linguistics* 28: 229-290.

Rothstein, Susan. 2004. *Structuring Events: An Essay on the Semantics of Lexical Aspect*. Oxford: Blackwell.

Rothstein, Susan. 2008. Two puzzles for a theory of lexical aspect: semelfactives and degree achievements. In Dölling, Johannes & Heyde-Zybatow, Tatjana & Schäfer, Martin (eds.), *Event structures in linguistic form and interpretation*, 175-198. Berlin: Walter de Gruyter.

Smith, Carlota. 1997 [1991]. *The Parameter of Aspect*. Dordrecht: Kluwer Academic Publishers.

Soh, Hooi Ling & Kuo, Jenny Yi-Chun. 2005. Perfective Aspect and Accomplishment Situations in Mandarin Chinese. In van Hout, Angeliek & de Swart, Henriette & Verkuyl, Henk (eds.), *Perspectives on Aspect*, 199–216. Dordrecht: Springer.

Son, Minjeong & Svenonius, Peter. 2008. Microparameters of cross-linguistic variation: Directed motion and resultatives. In Abner, Natasha & Bishop, Jason (eds.), *Proceedings of the 27th West Coast Conference on Formal Linguistics*, 388-396. Somerville, MA: Cascadilla

Steffen Chung, Karen. 2006. *Mandarin Compound Verbs*. Taipei: Crane Publishing.

Svenonius, Peter. 2010. Spatial P in English. In Cinque, Guglielmo & Rizzi, Luigi (eds.), *The Cartography of Syntactic Structures* 6, 127–160. Oxford: Oxford University Press.

Sybesma, Rint P.E. 1997. Why Chinese verb-*le* is a resultative predicate. *Journal of East Asian Linguistics* 6(3). 215-261.

Sybesma, Rint P.E. 1999. *The Mandarin VP*. Dordrecht: Kluwer.

Sybesma, Rint P.E. 2017. Aspect, Inner. In Sybesma, Rint & Behr, Wolfgang & Gu, Yueguo & Handel, Zev & Huang, C.-T. James & Myers, James (eds.), *Encyclopedia of Chinese Language and Linguistics*, vol. 1, 186-193. Leiden: Brill.

Tai, James. 1984. Verbs and Times in Chinese: Vendler's Four Categories. In Testen, David & Mishra, Veena & Drogo, Joseph (eds.), *Papers from the Parasession on Lexical Semantics of the Chicago Linguistic Society*, 289–296.

Talmy, Leonard. 2000. *Toward a Cognitive semantics: Typology and process in concept structuring*. Cambridge, MA: MIT press.

Tenny, Carol. 2000. Core Events and Adverbial Modification. In Tenny, Carol & Pustejovsky, James (eds.), *Events as Grammatical Objects*, 285-334. Standford, CA: CSLI Publications.

Tham, Shiao-Wei. 2009. Building resultatives in Mandarin (from the result). (Paper presented at *Tenth Stanford Semantic Fest*, Standford: Stanford University, 14 March 2009, http://www.wellesley.edu/sites/default/files/assets/departments/eall/files/stham-semfest10.pdf, accessed 19 July 2017).

Tham, Shiao-Wei. 2013. Change of state verbs and result state adjectives in Mandarin Chinese. *Journal of Linguistics* 49(3). 647-701.

Travis, Lisa. 2000. Event structure in syntax. In Tenny, Carol & Pustejovsky, James (eds.), *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, 145–185. Stanford, CA: CSLI Publications.

Travis, Lisa. 2010. *Inner aspect: the articulation of VP*. Dordrecht: Springer.

Tsai, Wei-Tien Dylan. 2001. Tense anchoring in Chinese. *Lingua* 118. 675-686.

Tsao, Feng-Fu. 2004. Semantics and Syntax of Verbal and Adjectival Reduplication in Mandarin and Taiwanese Southern Min. In Chappell, Hilary (ed.), *Sinitic grammar: Synchronic and diachronic perspectives*, 285–308. Oxford: Oxford University Press.

Wang, Yuan (王媛). 2011. Xiàndài Hànyǔ dòngjiéshì de jìnxíngtǐ (现代汉语动结式的进行体) [The progressive of RVCs in Mandarin Chinese]. *Yǔyán kēxué* (语言科学) 10(1). 70-82.

Washio, Ryuichi. 1997. Resultatives, compositionality and language variation. *Journal of East Asian Linguistics* 6. 1-49.

Wechsler, Stephen. 1997. Resultative predicates and control. In Blight, Ralph C. & Moosally, Michelle (eds.), *Texas Linguistic Forum 38: The syntax and semantics of predication*, 307-321. Austin: University of Texas Department of Linguistics.

Wechsler, Stephen. 2005a. Resultatives under the 'event-argument homomorphism' model of telicity. In Erteschik-Shir, Nomi & Rappoport, Tova (eds.), *The Syntax of Aspect*, 255–273. Oxford: Oxford University Press.

Wechsler, Stephen. 2005b. Weighing in on scales: A reply to Goldberg and Jackendoff. *Language* 81(2). 465-473.

Wellwood, Alexis. 2015. On the semantics of comparison across categories. *Linguistics and Philosophy* 38(1). 67-101.

Xiao, Richard & McEnery, Richard. 2004. *Aspect in Mandarin Chinese: A Corpus-based Study*. Amsterdam: John Benjamins.

Xie, Zhengming (解正明). 2008. *Qīng dòngcí jiǎshuō yǔ cídiǎn shìyì* (轻动词假说与词典释义) [The light verb hypothesis and dictionary definitions]. *Císhū yánjiū* (辞书研究) 4. 30-44.

Xu, Dan. 2006. *Typological Change in Chinese Syntax*. Oxford: Oxford University Press.

Xue, Changming. 2007. *L2 Acquisition of Chinese Unaccusative Verbs by English-speaking Learners*. Beijing: Kexue Chubanshe.

Yang, Suying (杨素英). 1999. Cóng fēibīngé dòngcí xiànxiàng kàn yǔyì yǔ jùfǎ jiégòu zhījiān de guānxi (从非宾格动词现象看语义与句法结构之间的关系) [The unaccusativity phenomenon: A study on the relationship between semantics and syntax]. *Dāngdài yǔyánxué* (当代语言学) 1. 30-43.

Yong, Shin.1997. The grammatical functions of verb complements in Mandarin Chinese. *Linguistics* 35. 1-24.

Zhang, Guoxian (张国宪). 2006. *Xiàndài Hànyǔ xíngróngcí* (现代汉语形容词) [*Modern Chinese adjectives*]. Beijing: Shangwu Yinshuguan Chubanse.

Zhu, Xingfan (朱行帆). 2005. Qīng dòngcí hé Hànyǔ bùjíwù dòngcí dài bīnyǔ xiànxiàng (轻动词和汉语不及物动词带宾语现象) [Light verbs and the phenomenon of Chinese intransitive verbs bearing an object]. *Xiàndài wàiyǔ* (现代外语) 28(3). 221-231.

Dictionaries

Hànyǔ dòngcí yòngfǎ cídiǎn (汉语动词用法词典) [*A usage dictionary of Chinese verbs*]. 1999. Beijing: Shangwu Yinshuguan Chubanshe.

Hànyǔ xíngróngcí yòngfǎ cídiǎn 汉语形容词用法词典 [*A usage dictionary of Chinese adjectives*]. 2003. Beijing: Shangwu Yinshuguan Chubanshe.

Xiàndài Hànyǔ cídiǎn 现代汉语词典 - *The Contemporary Chinese Dictionary* (Chinese-English edition). 2002. Beijing: Foreign Language Teaching and Research Press.