Aspect or Manner?

A Study of Reduplicated Adverbials in Mandarin Chinese

Siaw-Fong Chung
Department of English
National Chengchi University
No. 64, ZhiNan Road Section 2
Wenshan District, 11605 Taipei, Taiwan
sfchung@nccu.edu.tw

Chu-Ren Huang
Department of Chinese and Bilingual Studies
The Hong Kong Polytechnic University
AG522, Core A
Hong Hum, Hong Kong
churen.huang@polyu.edu.hk

Abstract

In this paper, we attested modifiers in Mandarin and their effects on the verbal complexes. In the past, the Aktionsart of verbs is often discussed within the verbal events. Here, we discuss how modifiers can change or modify the aspects of the verbal semantics by examining several (reduplicated) modifiers in Mandarin – [慢慢(的)V] [*mànmàn*(de)V] 'slowly'; [好好(的)V] [*hǎohǎo*(de)V] 'nicely'; and [快/趕快(的)V] [*kuài/gǎnkuài* (de)V] 'quickly'. We found that 快快 *kuàikuài* 'quickly' highlights an endpoint, 慢慢 *mànmàn* 'slowly' focuses on the iterative small segments of the activity. The results showed that these adverbials, among other linguistic units, that mark a viewpoint change, would also mark aspects – interative/stage and prospective.

1   Introduction

Verbal aspects can be marked on the verb or by adjuncts such as durational phrase and endpoints (Dowty 1977, Smith 1997). The peripheral marking of verbal aspects seems to be well motivated in languages where verbs are already richly inflected with tense and agreement, as due to the need for other elements to share the information load (see examples in (1) from Smith (1997: 18; italic added)). However, what happens in a language where verbs are known to be marked with aspect only? Would it still be necessary for peripheral marking of aspects in such languages? And if so, why?

(1) (a) *Bill knew the truth.*   (Stative)
    (b) *Suddenly Bill knew the truth.* (Achievement)
    (a') *Mary coughed.*   (Semelfactive)
    (b') *Mary coughed for an hour.*   (Activity)
    (a'') *Kim played a set of tennis on Friday.*
                                         (Accomplishment)
    (b'') *Kim always played a set if tennis on Friday.*
                                         (Habitual Stative)

Verbs in Mandarin are grammatically marked for aspects only. Aspects that are not marked by verbal complexes did not receive as much attention, other than the well-established cases involving durational phrases or measure of endpoint similar to English (Smith 1997). We observe, however, that there is an interesting collocational constraint between reduplicated adverbials and certain verbal aspects: For instance, 慢慢(的) *mànmàn(de)* 'slowly' can appear before semelfactive verbs, but not 好好(的) *hǎohǎo (de)*] 'nicely', or 快快(的) *kuàikuài (de)* 'quickly'. An example is given in (2).

(2) (a) 慢慢閃爍 *mànmàn shǎnshuò* 'to blink slowly'
    (b) ?好好閃爍 *hǎohǎo shǎnshuò* 'to blink well'
    (c) ?快快閃爍 *kuàikuài shǎnshuò* 'to blink quickly'

We will thus investigate the role of adverbials in verbal aspects in Mandarin. The modifiers investigated in this work are mostly reduplicated, but we also included two similar forms of 'quickly' (快快 *kuàikuài* and 趕快 *gǎnkuài*). Apart from

comparing the antonyms 'slowly' and 'quickly', we would also like to see the differences between 'slowly' (3a) and 'nicely' (3b), and the verbs that follow each one.

(3) (a)在 我們　能　走　之前 ， 一定
　　 zài wǒmen néng zǒu zhīqián, yīdìng
　　先　要　 **<慢慢 爬>** ， 我　認為 今天
　　xiān yào <mànmàn pá >, wǒ rènwéi jīntiān
　　我們　 只是 剛　 開始 爬行 。
　　wǒmen zhǐshì gāng kāishǐ páxíng
　　'Before we can walk, (we) must first <u>crawl slowly</u>. I think today, we are just learning how to crawl…'

　　(b) 訓勉　 學生　 們 要 聽　老師 的 話 ，
　　　 xùnmiǎn xuéshēng men yào tīng lǎoshī de huà,
　　<好好　 用功> 唸書 。
　　<hǎohǎo yònggōng >niànshū. =>
　　'to advice and encourage students so that they listen to their teachers, and <u>study hard (work hard well in studying)</u>.'

The reasons for selecting these adverbials were as follows: First, these adverbs are related in meanings. When you do something well (i.e., *hǎohǎo*), it could also entail doing it slowly (*mànmàn*), and vice-versa. At the meantime, if you want someone to do something (be it well or slowly), you wish that they would start it quickly (thus, *kuàikuài* and *gǎnkuài*). So, the quickly meaning could apply to the beginning of the action, as well as the process of it. Hence, this contradiction: A mother would ask a child to finish the food quickly by saying 趕快 吃 *gǎnkuài chī* 'eat quickly' but she meant that the child would eat slowly (慢慢 吃 *mànmàn chī* 'eat slowly') but finish, or start the next bite swiftly, referring to the speed of starting the subsequent bites. Here, we see an interesting modification of the modifiers on the events. The modifiers investigated in this work are related to one another but there are subtle differences in their implied aspect.

Second, each of these modifiers modifies the verbs by providing them a characteristic, as most adjectives and adverbials do. However, in this paper, we argue that some adverbials modify the aspectual meanings of the verbs, resulting in a change that we call the implicational aspect, that is, the implied aspects of the event have changed by the addition of the modifier. Third, the implicational aspects cannot be observed if only

the terms were inspected, as in (4) below. The contextual information must be present; and hence, the importance of using a corpus-based approach in this study. In (4), for example, we use the example 爬 *pá* 'crawl', which is an activity verb that has stages, to show the aspect and meaning expected from the combination..

(4)　(a) 慢慢 *mànmàn*　　　　'Crawl slowly' (Manner)
　　(b)好好 *hǎohǎo*　　爬　'Crawl well'
　　(c)快快 *kuàikuài*　*pá*　'Quick, crawl now'
　　(d)趕快 *gǎnkuài*　　　'Quick, crawl now'

By looking at these verbal complexes, for (4a), we see only one-event of crawling. Yet, in many of our examples, we found not just a single-event but multiple-event reading in verbs modified by 慢 *mànmàn*. For (4b), the combination of 好好 爬 *hǎohǎo pá* seems a little strange without the context since crawling is itself not a well-conducted behavior, saying that to do it well is a little odd here, unless it is referring to some activities such as rock climbing (in Mandarin, the same verb is used), which comes with a good standard. Lastly, 快快 爬 *kuàikuài pá* and 趕快爬 *gǎnkuài pá* give the similar feeling as in (4b) in which a context is missing to understand these verb complexes well. Based on the above, we postulate our research questions as follows:

(a) How could a non-verb-based representation of verbal aspects be seen in a language where verbs are marked with aspects only?
(b) In what ways non-verbal peripheral markings such as adverbials in Mandarin could change the aspects of verbal complexes?
(c) How will verbal aspects/Aktionsart account for this phenomenon in Mandarin?

These three research questions will be answered using a corpus-based approach because the non-verb-based representation of verbal aspects are best represented in contexts. We also expect the types of verbs that go with each verb complex could be different in Taiwan and China, and we expect these uses to be more frequently found in Taiwan than in China. For these, we also included both Taiwan and China data.

2　Linguistic Theories

The traditional Aktionsart provided by Vendler (1957) suggested four different situation types,

namely state (*love, like*), activity (*run, swim*), accomplishment (*write a letter*), and achievement (*arrive, recognize*). The accomplishment is different from achievement from the punctuality of the action. Some verbs give an interpretation of a single event such as *cough* and *sneeze*, called semelfactive. In English and European languages, for instance, Dowty (1977) and Comrie (1976) had done a lot of research to show that verbal aspects are often marked by adjuncts and not on the verb. In Mandarin, we have Ross (1995), Huang et al. (2000), Lin (2002), Lee (2012), and Xu (2014), among many. The former used the Module-Attribute-Representation of Verbal Semantics (MARVS) (Ahrens et al. 1998; Huang et al. 2000), a model that aims to provide a framework for representing verbal semantics with a special focus on Mandarin Chinese, and the latter evaluated the situation types in Mandarin. In Chinese, since aspects are the most saliently grammatically marked verbal features, aspects that are not marked by verbal complexes did not receive as much attention. The role of non-verbal constituents such as modifiers as aspectual markers were not emphasized both in Smith (1997) and MARVS. So this study is one of the few to focus on adverbial and morphological marking of adjuncts, as possible grammatical cues for verbal aspects. We will illustrate our goals more specifically with the examples below.

We notice some changes in aspects that are not present in the original meanings of the modifiers. For example, in (5a), the increase of the oil price did not happen at a single time, but this iterative meaning, as seen in 慢慢 爬 *mànmàn pá* 'crawl slowly' in (4a) as well, is not present in the verbal complex, nor in the verbal semantics of 'crawl'. For (5b) and (5c), the lexical semantics of 急救 *jĵiù* 'to perform first aid' is a bounded stage, adopting the symbol (•^^^•) from MARVS following Huang et al. (2000), with a bullet indicating the boundary, the caret indicating part of a stage, and a slash indicating part of a process. 下 雨 *xiàyǔ* is an inchoative Process [•//////]. By adding the adverbial 'quickly', (5c) means to start raining 'soon. Whether the speed of raining is faster or slower does not change anything. What is needed is the start time of raining arrives earlier. (5b) is similar. It is possible that [快/趕快(的)V] [*kuài/gǎnkuài* (de)V] 'quickly' marks Prospective

Aspect, which was not reported as marked in Chinese So this is a possible usage of [快/趕快(的)V] [*kuài/gǎnkuài* (de)V] as an aspect marker

(5) (a) 中油　　認為，當 各 國 因 中東
　　　zhōngyóu rènwéi, dāng gè guó yīn zhōngdōng
　　戰爭　　新　增加的 存 油量　逐漸
　　　zhànzhēng xīn zēngjiā de cún yóuliáng zhújiàn
　　消耗　時，油價還 會 再 <慢慢　回升>。
　　xiāohào shí yóujià hái huì zài <mànmanhuíshēng>
　　　'CPC believed that when the stock amount of oil in every country which increased during the war in the Middle East soon decreases, the oil price will underlying gradually increase.' Iterative; slowly

(b) 俞大維　到 軍　醫院 時，發現 痛哭
　　yúdàwéi dào jūn yīyuàn shí　fāxiàn tòngkū
　　呻吟　　的 產婦　王文治，　立即 指示
　　shēnyín de chǎnfù wángwénzhì, lìjí　zhǐshì
　　　<快快 急救>
　　　<*kuàikuài jĵiù* >
　　　'When Dawei Yu arrived at the military hospital and saw the pregnant lady Wenzhi Wang moaning in pain, he instructed (the staff) to quickly perform first aid'

(c) 王乾同　　　說，他 的 祈雨 行動　不 是
　　　wángqiántóng shuō, tā de qíyǔ xíngdòng bù shì
　　「作秀」，而是 祈望 老天　<趕快
　　　zuòxiù　　érshì　qíwàng lǎotiān <gǎnkuài
　　下雨>，　幫助　　農民 。
　　xià yǔ > bāngzhù nóngmín.
　　　'Qiantong Wang said that his praying for rain wasn't making a show, but it was to hope the sky would quickly rain in order to help the farmers (who were in need of rain to farm).'

This phenomenon, the non-verb-based representation of meaning, has not been fully explored. So far, a full research has yet to be found that could account for the possible explanation relating to aspects that are not marked by verbal complexes but by the modifiers. In this paper, we hope to address this issue.

3　Methodology

In order to search for the patterns of the (reduplicated) modifiers in both Taiwan and China use, the Corpus Query Language (CQL) was used to search for matching strings of (a) [慢慢(的)V] [*mànmàn(de)*V] 'slowly'; (b) [好 好 (的)V] [*hǎohǎo(de)*V] 'nicely', and (c) [快/趕快(的)V]

[*kuài/gǎnkuài(de)*V] 'quickly', in the Gigaword Corpus 2.0 through the Sketch Engine.[1] Two sub-corpora were selected, namely the Central News Agency (CNA) for Taiwan data, and the Xinhua News Agency (XIN) for China data. The followings are two examples of commands used for the search.

(6)(a) [word="慢慢"][tag="V.*"]

   (b) [word="慢慢"][word="的"][tag="V.*"]

The search research are shown in Table 1 below:

(7) (a) [慢慢(的)V]/[*mànmàn(de)*V] 'slowly'
     (abbreviated as 'MM(de)V')
  (b) [好好(的)V]/[*hǎohǎo(de)*V] 'nicely'
     (abbreviated as 'HH(de)V')
  (c) [快/趕快(的)V]/[*kuài/gǎnkuài(de)*V] 'quickly'
     ('KK(de)V' and 'GK(de)V')

[+V]	CNA (455,526,209)		XIN (250,124,230)	
	Tokens (% of concordance)	Per mil.	Tokens (% of concordance)	Per mil.
MM	3,352(0.00074%)	7.36	973 (0.00039%)	3.89
HH	8474 (0.0019%)	18.6	2090 (0.00084%)	8.36
KK	110 (0.000024%)	0.24	55 (0.000022%)	0.22
GK	3,534 (0.00078%)	7.76	475 (0.00019%)	1.9
MMde	158 (0.000035%)	0.35	3 (0.0000012%)	0.01
HHde	538 (0.00012%)	1.18	5 (0.000002%)	0.02
KKde	2 (0.00000044%)	<0.01	0(0%)	0

Table 1: The Search Results in CNA and XIN

From the results in Table 1, we could see that HHV 'nicely' in the CNA had the highest frequency among all of the constructions (18.6 per million). The Taiwan use was higher than in all patterns. We then retrieved all the types of verbs (Vs) that appeared with each pattern. The system only allowed the download of the first 1,000 types, and that means some of the hapaxes were not retrieved if they appeared at the bottom of the list below 1,000. We then analyzed the shared patterns of the CNA and XIN data, i.e., the shared verbs (Vs) of the CNA and XIN data.

4 Results

Each of the keywords will be discussed separately below.

4.1 [慢慢(的)V][*mànmàn(de)*V] 'slowly'

In Table 1, we show the frequency per 100 million (instead of per million as shown in Table 1). We also provide the rank of the respective list by highlighting the top five.

Word	CNA 100 mil (rank)	XIN per 100 mil (rank)
恢復 *huīfù* 'to recover'	**0.19977 (1)**	**0.08396 (2)**
形成 *xíngchéng* 'to form'	**0.10976 (2)**	0.02799 (9)
消失 *xiāoshī* 'to disappear'	**0.09659 (3)**	0.02799 (10)
改變 *gǎibiàn* 'to change'	**0.08342 (4)**	0.01199 (33)
建立 *jiànlì* 'to set up'	**0.08342 (5)**	0.00400 (112)
回升 *huíshēng* 'to rebound'	0.08122 (6)	0.02799 (11)
減少 *jiǎnshǎo* 'to reduce'	0.07683 (7)	0.00400 (113)
調整 *tiáozhěng* 'to adjust'	0.07683 (8)	0.00400 (114)
瞭解 *liǎojiě* 'to understand'	0.06805 (9)	0.01199 (34)
有 *yǒu* 'to possess'	0.06147 (10)	**0.04798 (5)**
增加 *zēngjiā* 'to increase'	0.05927 (11)	0.00800 (57)
好轉 *hǎozhuǎn* 'to become better'	0.05708 (12)	0.02799 (12)
解決 *jiějué* 'to resolve'	0.05269 (13)	0.01199 (35)
走向 *zǒuxiàng* 'to walk towards'	0.05049 (14)	0.03198 (8)
適應 *shìyìng* 'to adapt'	0.04830 (18)	**0.08796 (1)**
進入 *jìnrù* 'to enter'	0.04171 (21)	**0.05197 (4)**
好起來 *hàoqǐlái* 'to become better'	0.01098 (70)	**0.06397 (3)**

Table 2: The shared patterns of 'MMV'

From Table 2, we can see that the rank of the top five XIN verbs was greatly different from the CNA list. One could see that the top five verbs of the CNA were found within the 112th verb of the XIN. Conversely, the top five in XIN were found within the 70th verb of the CNA. We used this to compare if the two lists differed greatly.

From the list of verbs, we can see that most of the verbs denote events with a stage, represented with (^^^^), often dynamic, atelic and durative. Xu (2014: 17), using MARVS, said that events with stages are "[n]ot found in Chinese" but the inchoative stage (•^^^) and bounded stage (•^^^•) are.With MM, most of the verbs in this list have inchoative stage (•^^^) (適應 *shìyìng* 'to adapt', 恢復 *huīfù* 'to recover', 形成 *xíngchéng* 'become',

改變 *gǎibiàn* 'to change', 建立 *jiànlì* 'to set up', 好起來 *hàoqǐlái* 'to become better'). By adding 慢慢 *mànmàn* 'slowly' to these verbs, we created the iterative sub-events that were not present by the verbs alone – that is to adapt, to recover, to become, etc, are stages accomplished through iterative events.

From the examples below, we could see that some uses of these have the original meaning, i.e., slowly, nicely, and quickly, while some others have different implied meanings. The examples in (8) show an iterative/stage reading (other than taking a longer duration). (8a), in particular, should be clear. Recall watching space or sci-fi films, 慢慢移 *mànman yí* 'move slowly', actually means (at least in human perception) a series of very slow stops-and-gos, not just moving slowly. Similarly, (8b) has a repeated meanings – many different times.

(8) (a) 然後， 機械臂 把　太空人 和 儀器 設備
ránhòu　jīxièbì bǎ tàikōngrén hàn yíqì shèbèi
<慢慢 移>　 向 哈伯　望遠鏡 。
<*mànman yí*> *xiàng hābó wàngyuǎnjìng*
'Then, the mechanical arm took the astronaut and the mechanical device and <u>moved slowly</u> toward the Hubble Space Telescope' | slowly; one-time |

(b) 因此 將來 林小弟弟 需 定期 返 院
yīncǐ jiānglái línxiǎodìdì xū dìngqí fǎn yuan
接受 心理 評估 和 輔導，讓 他
jiēshòu xīnlǐ pínggū hàn fǔdǎo, ràng tā
<慢慢 接觸>　 小 狗，克服 心理 障礙 。
<*mànman jiēchù*> *xiǎo gǒu kèfú xīnlǐ zhàngài.*
'Therefore, in the future Lin Little Brother will need to return to the hospital to accept psychological evaluation and counselling, to enabling him to slowly accept dogs, to overcome mental difficulty.' | Iterative at many times |

Compared to 慢慢 *mànmàn* 'slowly', 慢慢的 *mànmàn de* 'slowly' has only three instances in XIN (慢慢的熏陶/增長/好起來). As for CNA, we found 158 instances. By comparing 慢慢 *mànmàn* and 慢慢的 *mànmàn de*, we found the following list of words that were only used with the latter. It was found that 慢慢的 *mànmàn de* also collocates with accomplishment verbs, which are dynamic telic and durative, but some stative verbs were also found (害怕 *hàipà* 'to fear', 模糊 *móhú* 'to become blurry'). For these stative verbs, which are

often atelic and durative, 慢慢的 *mànmàn de* also provides a starting point for this state, thus a (•____), often static, atelic and durative, with the stative event represented with a straight underline. For the others, most of the events are of the inchoative stage (•^^^) (發病 *fā bìng* 'to become sick' ; 感染 *gǎnrǎn* 'to be infected'; 腐化 *fǔhuà* 'to decompose or to corrupt'); and stage (•^^^•) (餵食 *wèishí* 'to feed'; 演 *yǎn* 'to act (in a play) or to pretend') or an endpoint marked by 到 *dào* 'reach' and 出 *chū* 'out' 化 *huà* '-ism'. With MMde, these expressions include iterative sub-events.

代替 *dàitì* 'to replace'	害怕 *hàipà* 'to fear'	開[飛機]到 *kāi(fēijī)dào* 'to fly (the plane) and reach a certain place'	模糊 *móhú* 'to become blurry'
民主化 *mínzhǔhuà* 'democratize'	捏塑 *niēsuò* 'to knead'	傳到 *chuándào* 'to reach till'	餵食 *wèishí* 'to feed'
成功 *chénggōng* 'to succeed'	破壞 *pòhuài* 'to destroy'	感染 *gǎnrǎn* 'to be infected'	闖出 *chuǎngchū* 'to fight and get the outcome'
找出 *zhǎochū* 'to find out'	帶引 *dàiyǐn* 'to lead'	演 *yǎn* 'to act (in a play) or to pretend'	攘奪 *rǎngduó* 'to rob'
波及 *pōjí* 'to affect'	淪為 *lúnwéi* 'to reduce and become'	腐化 *fǔhuà* 'to decompose or to corrupt'	流到 *liúdào* 'to flow to a certain plain'
活 *huó* 'to live'	發病 *fābìng* 'to become ill'	輸 *shū* 'to lose'	進來 *jìnlái* 'to enter'
			擊敗 *jíbài* 'to beat'

Table 3: List of Verbs found with MMde only

(9) (a) 人民 會　**<慢慢　的 害怕>**　 與 身邊
rénmín huì < mànmàn de hàipà >　yǔ shēnbiān
的 人　談話，會 考慮 與 什麼　人 談話
de rén tánhuà　huì kǎolù yǔ shénme rén tánhuà

'People will <u>become fearful slowly</u> to talk to the people around them, and will consider whom they should talk to.'

(b) 如 驚弓之鳥 ， 起初 接近 時 還 會
rú jīnggōngzhīniǎo qǐchū jiējìn shí hái huì
出 爪 傷人 ， 經過 <**慢慢 的**
chū zhǎo shāngrén jīngguò < *mànmàn de*
餵食>「溝通」， 才 化解 敵意 。
wèishí > gōutōng cái huàjiě díyì
'Like the horrified bird, at first they would use their claw to hurt people; after [we] <u>slowly fed</u> them and to communicate, the hostile feeling disappeared.'

(c) 部分 的 僑社 ， 國家 認同 已經
bùfèn de qiáoshè guójiā rèntóng yǐjīng
<**慢慢 的 模糊**>
<*mànmàn de móhú* >
'In most of the Overseas Chinese Association, their identity of nationalism has <u>gradually become blurry</u>.'

The examples in (9) in fact all refer to iterative events. (9a) and (9c) are similar to the processing of 'withering' 凋謝 *diāo xiè* . That is, people going through several iterative of gradual emotion change till they are truly afraid (9a); or several iterative of belief shifts that ends in losing the identity. In (9b) the iteration consists of many times of careful (and likely gradually closer) feeding.

4.2 [好好(的)V][*hǎohǎo(de)*V] 'nicely'

For the second pair, [好好(的)V]/[*hǎohǎo(de)*V] 'nicely', we found the results below.

Word	CNA per 100 mil (rank)	XIN per 100 mil (rank)
檢討 *jiǎntǎo* 'to review'	**75.956 (1)**	2.799 (43)
休息 xiūxí 'to rest'	**73.98 (2)**	**43.179 (3)**
照顧 *zhàogù* 'to take care of'	**61.248 (3)**	8.796 (10)
思考 *sīkǎo* 'to think'	**54.443 (4)**	2.799 (44)
處理 *chǔlǐ* 'to deal with'	**52.686 (5)**	1.199 (84)
利用 lìyòng 'to make use of'	50.711 (6)	6.797 (13)
把握 *bǎwò* 'to grasp'	50.711 (7)	6.797 (14)
做 *zuò* 'to do'	44.125 (8)	1.999 (56)

談 *tán* 'to discuss'	35.124 (9)	2.399 (50)
努力 *nǔlì* 'to work hard'	34.246 (10)	1.999 (57)
溝通 *gōutōng* 'to communicate'	33.368 (11)	0.4 (137)
珍惜 *zhēnxí* 'to aprreciate'	29.417 (12)	17.191 (6)
考慮 *kǎolǜ* 'to consider'	27.221 (13)	7.596 (11)
規劃 *guīhuà* 'to plan'	26.563 (14)	1.199 (85)
經營 *jīngyíng* 'to operate'	25.904 (15)	1.599 (71)
表現 *biǎoxiàn* 'to perform'	22.172 (16)	3.598 (36)
學習 *xuéxí* 'to learn'	21.294 (17)	**181.51 (1)**
讀書 *dúshū* 'to study'	13.391 (28)	**19.19 (5)**
看看 *kànkàn* 'to watch'	6.586 (49)	13.593 (7)
幹 *gàn* 'to do'	2.854 (78)	**65.967 (2)**
練 *liàn* 'to train'	1.756 (103)	11.194 (9)
總結 *zǒngjié* 'to summarize'	0.439 (197)	**37.182 (4)**
改造 *gǎizào* 'to transform'	0.439 (169)	11.994 (8)

Table 4: The shared patterns of 'HHV'

Comparing to the previous Table 3, we can see that the top five verbs of CNA were found within the 84th verb of the XIN, while the top five in XIN being found within the 197th verb of the CNA, indicating their similarity was still low.

As for the verb types, most of the verbs are of activity verbs (談 *tán* 'to discuss'; 幹 *gàn* 'to do') or with the event being either a state (____) (休息 *xiūxí* 'to rest', 思考 *sīkǎo* 'to think', 學習 *xuéxí* 'to learn', 讀書 *dúshū* 'to study', and) or a stage (•^^^•) (檢討 *jiǎntǎo* 'to review', 照顧 *zhàogù* 'to take care of'; 處理 *chǔlǐ* 'to deal with', 總結 *zǒngjié* 'to summarize', etc.), in which HH means 'well' but with an advice or directive meaning. For HH, the meaning comes from evaluation judgement, thus it brings to focus to the endpoint – in (10a) 好好做人 *hǎohǎo zuòrén* 'to behave oneself well [to live in a proper way]' means that it hopes the endpoint will achieve this goal. That is, for HH to be true, the endpoint must have a result state that is consistent with expected result of the verb, for instance 好好休息 *hǎohǎo xiūxí* 'rest well' means that it is expected that the subject is well rested at the endpoint of activity.

Most of these verbs could be used with 一下 *yí xià* 'once' to mean the one-time semelfactive situations (10b). The top HHV 一下 *yí xià* 'once' in the CNA were 休息 *xiūxí* 'to rest', 輕鬆

qīngsōng 'to relax', 思考 *sīkǎo* 'to think', 考慮 *kǎolù* 'to consider', 放鬆 *fàngsōng* 'to relax', 反省 *fǎnxǐng* 'to reflect', and 檢討 *jiǎntǎo* 'to review', a list quite similar to the one above.

(10) (a) 今後 必須 注意 自己 的 儀表 容態 ， 要
   jīnhòu bìxū zhùyì zìjǐ de yíbiǎo róngtài, yào
  小心 謹慎 <好好 做人> ，不可 犯錯
  xiǎoxīn jǐnshèn <hǎohǎo zuòrén >, bùkě fàncuò
  ，要珍惜 自己 的 生命 一直 到 老，
  yào zhēnxī zìjǐ de shēngmìng yīzhí dào lǎo
  'From now one, (you) need to be alert of your look, be cautious in conduct [to live in a proper way], not to make mistakes, and need to appreciate your life until you are old.' To achieve the well status of V; implied continuous

 (b) 一 名 精疲力竭 的 消防 隊員 說：「 我
  yī míng jīngpílìjié de xiāofáng duìyuán shuō: wǒ
  不要 吃飯 ， 我 只 想 趕快 回家 ， 洗 個
  bùyào chīfàn, wǒ zhǐ xiǎng gǎnkuài huí jiā, xǐ gè
  熱水澡 ， 躺 在 自己 的 床上
  rè shuǐ zǎo, tǎng zài zìjǐ de chuángshàng
  <好好 睡 一 覺> 。
  <hǎohǎo shuì yī jué >
  'An exhausted firefighter said, "we don't want to eat, we just want to quickly go home, take a hot bath, and lie on our bed and sleep a good sleep.' To achieve the well status of V, implied one-time

 (c) 任何 人 只要 覺得 有 必要 ，都 可
  rènhé rén zhǐyào juédé yǒu bìyào dōu kě
  向 住家 附近 消防隊 或 公園
  xiàng zhùjiā fùjìn xiāofángduì huò gōngyuán
  管理員 借用 噴水帽 ， 縮小
  guǎnlǐyuán jièyòng pēnshuǐmào, suōxiǎo
  噴水量 ， <好好 涼爽 一下> 。
  pēnshuǐliàng, <hǎohǎo liángshuǎng yīxià >.
  'Anyone whenever you feel there is a need, (you) could go the fire station nearby or the administrator in the part to borrow the spray cap, turn to the smaller volume, and enjoy the cooling feeling once.'

In (10c) 好好 涼爽 一下 *hǎohǎo liángshuǎng yīxià* means that the subject is expected to enjoy a cool at the endpoint of the activity. This also explains why 壞壞(的) *huàihuài (de)* 'badly' is not attested. As the antonym of 好好(的) *hǎohǎo (de)*, it means that the expected result is not obtained, which is non-telic, non-resultative statement [without endpoint] hence a focus aspect is not possible.

Note that negation is Neg (不 *bù*) +好好(的) *hǎohǎo (de)* and not 壞壞(的) *huàihuài (de)* 'badly'.

As for HHdeV, there were 528 instances in the CNA but only 5 in the XIN. The top list in the CNA were 做 *zuò* 'to do', 談 *tán* 'to discuss', 檢討 *jiǎntǎo* 'to review', 休息 *xiūxí* 'to rest', 思考 *sīkǎo* 'to think', 珍惜 *zhēnxí* 'to appreciate', 考慮 *kǎolù* 'to consider',反省 *fǎnxǐng* 'to reflect', and they shared similar features with the HHV pattern, and they all can be modified by 一 下 *yíxià* 'once'.

4.3 [快/趕快(的)V] [*kuài/gǎnkuài(de)*V]

As for [快/趕快(的)V] [*kuài/gǎnkuài(de)*V], the following results were obtained. Table 5 shows those of KKV and Table 6 shows those of GKV. KKdeV and GKdeV have no instance found in XIN, while KKdeV has only two instances found in CNA.

Word	CNA per 100 mil (rank)	XIN per 100 mil (rank)
成長 *chéngzhǎng* 'to grow'	0.439 (1)	1.199 (2)
走出 *zǒuchū* 'to walk out from'	0.439 (2)	0.8 (3)
長大 *zhǎngdà* 'to grow up'	2.634 (3)	5.597 (1)
救 *jiù* 'to save'	0.22 (4)	0.4 (4)
跑 *pǎo* 'to run'	0.22 (4)	0.4 (4)
覺醒 *juéxǐng* 'to be awaken'	0.22 (4)	0.4 (4)

Table 5: The shared patterns of 'KKV'

For [快快(的)V], [*kuàikuài(de)*V], the verbs in Table 5 were the only shared verbs in the two sets. We could see that most of the verbs have an endpoint (成 長 *chéngzhǎng* 'to grow', 走 出 *zǒuchū* 'to walk out from', 長大 *zhǎngdà* 'to grow up', 覺醒 *juéxǐng* 'to be awaken', 救 *jiù* 'to save') but one of them is an activity verb (跑 *pǎo* 'to run') with a stage, but with 快快 *kuàikuài*, it marks the starting point of the stage, thus, making (•^^^). In (11), we see that *kuàikuài* marks the imminent telic point (to reach the end sooner, or start sooner) of the verb 'to decide' (11a) and 'to end' (11b) by trying to make it telic and focusing on its wished inchoative stage.

(11) (a) 也 聽到 很多 基層 黨員 的
   yě tīngdào hěnduō jīcéng dǎngyuán de

聲音 ，希望　**<快快　決定>**　市長
shēngyīn, xīwàng<kuàikuài júdìng > shìzhǎng
參選人 ，
cānxuǎnrén
'(We) also heard the voice of many grassroots party members. (We) hope the candidate for major will be decided soon.'

(b)「 假如 FBI 還 不 **<快快 終止>**
jiǎrú FBI hái bù <kuài kuài zhōngzhǐ >
調查 行動 」， 駭客 將 以 電子 技術
diàochá xíngdòng hài kè jiāng yǐ diànzǐ jìshù
全面　　摧毀 這 個「 連結 伺服 」Internet
quánmiàn cuīhuǐ zhè gè liánjié sìfú
上　　所有　網頁的 超級 電腦 。
shàng suǒyǒu wǎngyè de chāojí diànnǎo.
'If FBI still do not <u>quickly end</u> the investigation operation, hackers will use electronic technology to completely destroy all the supercomputers of the websites in this Internet server connection.'

As for [趕快 V][*gǎnkuài*V], the top five of the CNA verbs were not the same as those of the XIN. As indicated in Table 1 previously, the instances found in XIN were far more fewer than those in the CNA. From the list of verbs for GKV, we found that they are mostly accomplishment verbs, which are dynamic telic and durative, as in the MMV lists. This is reasonable as GKV is the opposite of MMV (but not KKV). It is interesting that with the addition of *gǎnkuài*, these verbs, like those in MMV, also turn into inchoative stage (•^^^), where the original endpoint has become uncertain.

Word	CNA per 100 mil (rank)	XIN per 100 mil (rank)
解決 *jiějué* 'to resolve'	**16.025 (1)**	0.4 (55)
做 *zuò* 'to do'	**15.367 (2)**	1.599 (16)
就醫 *jiùyī* 'to see doctor'	**12.074 (3)**	0.4 (56)
回家 *huíjiā* 'to go home'	**11.854 (4)**	2.799 (10)
恢復 *huīfù* 'to recover'	**11.196 (5)**	0.4 (57)
到 *dào* 'to reach'	10.537 (6)	**3.598 (2)**
離開 *líkāi* 'to leave'	10.098 (7)	**6.397 (1)**
結束 *jiéshù* 'to finish'	9.659 (8)	1.199 (24)
回來 *huílái* 'to return'	7.683 (9)	**3.598 (3)**
成立 *chénglì* 'to establish'	7.244 (10)	1.199 (25)
回到 *huídào* 'to return to'	7.025 (11)	**3.198 (5)**
走 *zǒu* 'to walk'	2.854 (20)	**3.198 (5)**
做好 *zuòhǎo* 'to do well'	2.854 (21)	0.4 (60)

行動 *xíngdòng* 'to act'	2.634 (22)	**3.198 (5)**
回去 *huíqù* 'to return'	1.976 (33)	**3.598 (4)**
救 *jiù* 'to save'	1.976 (35)	**3.198 (5)**
改 *gǎi* 'to change'	1.537 (45)	**3.198 (5)**

Table 6: The shared patterns of 'GKV'

(12) 希望　　尚未　辦理 戶口　校正　的
xīwàng shàngwèi bànlǐ hùkǒu jiàozhèng de
民眾 ，　　**<趕快 辦理>** ，　以免 受罰 。
mínzhòng, <gǎnkuài bànlǐ > yǐmiǎn shòufá.
'(We) hope that the citizens who have not corrected the household <u>register</u> corrections should <u>quickly done</u> so, so that you will not be penalized.'

Like *kuàikuài*, *gǎnkuài* has a similar function in changing the atelic aspect of the verb to a telic one by providing either an immediate start point (as in 快 走 *kuài zǒu* 'leave now!', marking an inchoative start point), or an earlier (expected) endpoint (as in 趕快 恢復 *gǎnkuài huīfù* 'recover soon', marking an earlier endpoint for the completion of the recovery) (The verb 恢復 *huīfù* 'recover' itself does not necessarily mark the endpoint of completion). Therefore, it is possible that [快/趕快(的)V] [*[kuài/gǎnkuài*(de)V] the prospect aspect in Mandarin. It is something new about Mandarin aspect that was not discussed previously.

5   Discussion

We will now discuss some other peripheral elements of the verbs. For these verbal complexes we found, most of them were preceded by modal markers such as 希望 *xīwàng* 'wish', 有必要 *yǒu bìyào* 'has a necessity', 應該 *yīnggāi* 'should', 如果不 *rúguǒ bù* 'if not', and 需要 *xúyào* 'need', all of which indicate the matters not being resolved and were hoped to be resolved soon.

(13) (a) 他 **希望　能夠　<趕快　解決>** 兩
tā xīwàng nénggòu <gǎnkuài jiějué > liǎng
方的 爭議 。
fāng de zhēngyì
'He <u>wished</u> to be able to <u>quickly resolve</u> the conflict between the two sides'

(b) 此 事 有 必要 費 時間 來 **<慢慢**
cǐ shì yǒu bìyào fèi shíjiān lái < mànmàn
解決>
jiějué >
'This matter (we) <u>must</u> spend time to <u>resolve with it slowly</u>.'

(c) 垃圾 和 交通 兩 項 重大 難題，
lèsè hàn jiāotōng liǎng xiàng zhòngdà nántí
如 **能夠** **<好好 解決>** ，可 說是
rú nénggòu <hǎohǎo jiějué >, kě shuō shì
施政 已 成功 了 一半
shīzhèng yǐ chénggōng le yībàn
'Garbage and transportation are two difficult issues, if they <u>could be resolved in a good way</u>, the administration could be said to be half successful.'

(e) 四十二 歲 的 陳守慶 感謝 高雄
sìshíèr suì de chénshǒuqìng gǎnxiè gāoxióng
醫學院 的 照顧，讓 他 重生，
yīxuéyuàn de zhàogù, ràng tā chóngshēng
他 **希望** 身體 **<趕快 恢復>** ，
tā xīwàng shēntǐ <gǎnkuài huīfù>
重回 工作 崗位。
chónghuí gōngzuò gǎngwèi
'The 42-year old Shouqing Chen thanked the treatment he received at the Medical College of Kaohsiung, which enabled him to be re-born. He <u>hoped</u> that his body could <u>quickly recover</u> so that he could return to work.'

(f) 過去 幾 年 台灣 的民間 投資 欠缺
guòqù jǐ nián táiwān de mínjiān tóuzī qiànquē
活力，今年 **可望** **<慢慢 恢復>** 。
huólì jīnnián kě wàng <mànmàn huīfù >
'In the past years, the local investment in Taiwan lacked rigorousness. This year [we] <u>hope</u> that it will <u>slowly recover</u>.'

(g) 要 注重 營養， 才 能 < 好好
yào zhùzhòng yíngyǎng cáinéng <hǎohǎo
恢復> 。
huīfù >
'(One must) take care of nutrition, only then (s/he) <u>will</u> <u>recover fully</u>.'

In (3b/13f) and (13c/13g), we can see 慢慢 *mànmàn* has a meaning now that is quite close deliberately so it should collocate with 好好 *hǎohǎo*, and also share very similar context with it. But 趕快 *gǎnkuài* in (13a) should not. 趕快 解決 *gǎnkuài jiějué* 'quickly solve something' is similar to (12) in which an earlier starting point is wished, whereas 慢慢 解決 *mànmàn jiějué* 'to solve something slowly' and 好好 解決 *hǎohǎo jiějué* 'to solve something well' focus not just on the manner of verb, but also provide an iterative aspect

in both cases – the action to solve is not a single-event but a multiple one.

6 Conclusions and Limitations

Smith (1997: xiii) analyzed verbal aspects as viewpoint focus:

> The aspectual meaning of a sentence conveys information of two kinds: a situation is presented from a particular perspective, or viewpoint; and the situation is indirectly classified as a state or an event of a certain type.

For Smith (1997), *John and Mary built a rock garden last summer* and *John and Marry were building a rock garden last summer* are of the same event, but with different aspectual viewpoints. The viewpoints "present all or part of the event".

On the other hand, MARVS theories (Huang et al. 2000) provided a system of representation to account for viewpoint focus by lexical encoding complex eventive structure for verbs. The viewpoint theory of lexical encoding allows situations in a sentence to bring to focus particular sub-parts of the event structure, i.e. one situation may focus on the beginning endpoint and the sentence will have inchoative aspect, and another with the same verb may focus on the end point, and it will be perfective, etc.

Our analysis of reduplicated adverbials in this paper supports this viewpoint focus theory of aspectual systems. That is, adverbials, among other linguistic units, that mark a viewpoint change, would also mark aspects. We have shown in this paper that 快快 *kuàikuài* 'quickly' highlights an imminent telic point; 慢慢 *mànmàn* 'slowly' focuses on the iterative small segments of the activity. (A sooner telic point for withering is not plausible because of the nature of the verb.)

(14) (a) 慢走 *mànzǒu* 'take your time, don't hurry (to leave)'
   (b) 慢慢走 *mànmàn zǒu* 'take care, walk slowly (step by step)'
   (c) 慢慢凋謝 *mànmàn diāoxiè* 'it takes small intervals of times and each interval brings the event closer to the goal'
   (d) *快快凋謝 *kuàikuài diāoxiè* '?to wither quickly'

Our account calls for reexamination of the aspects in Mandarin. A wide potential of an aspectual can be found with the use of peripheral marking in

Mandarin. For the reduplicated adverbials in Mandarin, we are faced with the challenge of having the ambiguity of manner (e.g., the literal 'slowly') and aspectual readings (e.g., the iterative/stage reading) available at the same time. We also found a prospective aspect in Mandarin 'quickly' adverbials. These adverbials mark the imminent telic point, i.e., to reach the end sooner, or start sooner. This finding deserves further investigation for prospective aspect is seldom discussed in Mandarin.

Interestingly, too, our findings also calls for reexamination of the durative aspect marker 正在 *zhèngzài*. These markers are typically considered as part of the verbal complex due to their typical vicinity to the verb, regardless of their linguistic status as adverbs. Our account suggests that it should be simply another example of adverbials changing viewpoint focus, hence marks aspects.

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