High vs. low 'again':
Mandarin *you* vs. *zai* and Cantonese *-faan* vs. *-gwo*

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1 Introduction

- **Exceptional scopal behavior of 'again'-type elements**

(1) a. *Context*

鄭湫泓的哭戲合集，哭得我又相信愛情了！

《絕世千金》里鄭湫泓的哭戲真的很讓人心疼，...

'[This is] a collection of Greenly Zheng's crying scenes; [she] cried so much that I believed in love again!

Greenly Zheng's crying scenes in *Lust for Gold* are really distressing; …'

 b. 又讓我相信了愛情！

you rang wo xiangxin-le aiqing!

AGAIN let I believe-PFV love

'[She] let me again believe in love!'   *let > again > believe*

Not: '#She again let me believe in love!'   *#again > let > believe*

(Video title and description, 2019, accessed on 10/25/2022)

The exceptional scopal behavior is schematized in (2). We will show that Cantonese postverbal 'again'-type elements also display similar patterns, but in a reversed direction: Embedded 'again' may acquire exceptional wide scope.

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(2) Exceptional scopal behavior in embeddeding contexts

 a. *Preverbal 'again' in Mandarin:* ***Pronounced high, interpreted low***

[AGAIN [V_{matrix}… [$V_{embedded}$…   *scope "skipping" matrix pred., operating on embedded events*

 b. *Postverbal 'again' in Cantonese:* ***Pronounced low, interpreted high***

[V_{matrix}… [$V_{embedded}$-AGAIN…   *wide scope interpretation over matrix events*

- **Two correlations**

We observe that the availability of the scopal behavior, depsite being highly contextually dependent, is contingent on two syntactic factors, namely the choices of (i) 'again'-type elements and (ii) embedding predicates, both related to an **aspect projection** (AspP, or more specifically, outer aspect phrase).

(3) <u>Two asymmetries in the exceptional scopal behavior</u>

    a. The choice of 'again'-type elements: only for *you* and *-faan*, but not *zai* and *-gwo*
      ➔ We propose two positions of 'again': High 'again' in AspP vs. low 'again' within vP

    b. The choice of embedding predicates: only for nonfinite-clause taking predicates
      ➔ Nonfinite clauses may be as small as vP, lacking AspP to license high 'again'

- **Road map**

§2: Scopal behavior of Mandarin 'again'   §5: Cantonese postverbal 'again'

§3: High vs. low 'again'   §6: Concluding remarks

§4: Proposal

2   Scopal behavior of Mandarin 'again'

(4) *Preverbal 'again' in Mandarin:* ***Pronounced high, interpreted low***

$[$ AGAIN… $[$ V$_{\text{matrix}}$… $[$ V$_{\text{embedded}}$…   *scope "skipping" matrix pred., operating on the embedded event*

Liu (2021, 2022) and C.-T. J. Huang (2022) report that preverbal *you* 'again', when appears in the matrix clause, may take narrow scope and directly operate on the embedded predicates (e.g., 'go' in (5a)). Metaphorically, the scope of the matrix predicate 'want' is "skipped." Notably, we observe that another preverbal 'again' *zai* does not show the same skipping effects.

(5) *Context*
Yesterday, reluctant to travel but forced by his boss, Xiaoming took a business trip to Hong Kong for some work, but he did not manage to finish it before he came back. Today, …(Lin and Liu 2009: 1197, adapted)

    a. *Matrix* you *scopally "skipping" 'want'*
      (Afraid of getting fired due to his unfinished work, he wants to go to Hong Kong again to finish it.)
      小明<u>又</u>想去香港（了）。
      Xiaoming <u>you</u>   xiang [qu Xianggang (le)].   (#again > want > go, want > again > go)
      Xiaoming AGAIN want go Hong Kong PERF
      Narrow scope: 'Xiaoming wants to again go to Hong Kong.'
      Wide scope: '#Xiaoming again wants to go to Hong Kong.'

    b. *Matrix* zai *NOT scopally "skipping" 'want'*
      (It is believed that he will want to go to Hong Kong again to finish it.)

#小明會<u>再想</u>去香港。

#Xiaoming hui <u>zai</u>   <u>xiang</u> [qu Xianggang].   (#again > want > go, *want > again > go)

Xiaoming will AGAIN want   go Hong Kong

Only wide scope: '#Xiaoming will again want to go to Hong Kong.'

The scope skipping effects are also found with other predicates like *dasuan* 'intend'.

(6)   <u>Matrix 'again' scopally "skips" 'intend' in Mandarin</u>

a.   [Afraid of getting fired due to his unfinished work, he intends to go to Hong Kong again to finish it.]

小明<u>又打算</u>去香港（了）。

Xiaoming <u>you</u>   <u>dasuan</u> [qu Xianggang (le)   ].   (#again > intend > go, intend > again > go)

Xiaoming AGAIN intend   go Hong Kong PERF

Narrow scope: 'Xiaoming intends to again go to Hong Kong.'

Wide scope: '#Xiaoming again intends to go to Hong Kong.'

b.   [It is believed that he will intend to go to Hong Kong again to finish it.]

#小明會<u>再打算</u>去香港。

#Xiaoming hui <u>zai</u>   <u>dasuan</u> [qu Xianggang].   (#again > intend > go, *intend > again > go)

Xiaoming will AGAIN intend   go Hong Kong

Only wide scope: '#Xiaoming will again intend to go to Hong Kong.'

The availability of this scope skipping effect depends on the choice of matrix predicates. Only nonfinite-clause taking predicates can be "skipped."

(7)   *Context*

During the 2003 SARS outbreak, Xiaoming was so ignorant that he thought that SARS was just a flu, and he did not believe in the existence of coronavirus. After the outbreak, coronavirus was not found anywhere. In 2019, however, Xiaoming became an epidemiologist and collected a sample that contained the COVID-19 virus. Now, he does believe that there had appeared coronavirus, and it appeared again.

a.   #小明<u>又相信</u>出現了冠狀病毒。

#Xiaoming <u>you</u>   <u>xiangxin</u> [chuxian-le guanzhuangbingdu].   (*believe > again > appear)

Xiaoming AGAIN believe   appear-PFV coronavirus

Only: '#Xiaoming again believes that there appeared coronavirus.'

b.   小明<u>相信又</u>出現了冠狀病毒。

Xiaoming <u>xiangxin</u> [<u>you</u>   chuxian-le guanzhuangbingdu].   (believe > again > appear)

Xiaoming believe   AGAIN appear-PFV coronavirus

'Xiaoming believes that there again appeared coronavirus.'

'Believe' differs from 'want' and 'intend' in taking a *finite* clause (C.-T. J. Huang 2022), presumably a CP. 'Want' and 'intend' take a nonfinite clause with a smaller size (e.g., TP/WOLLP or vP). An extensive examination reveals that the narrow scope interpretation of *you* is only allowed with nonfinite clause taking predicates, listed in (8). In other words, *you* cannot "skip" across a finite clause boundary.

(8)   *Clause taking predicates*   (Liu 2022, cf. C.-T. J. Huang 2022)

    a.   *Nonfinite-clause taking predicates, which allow matrix* you*'s scope skipping effects*
        逼 *bi* 'force', 打算 *dasuan* 'intend', 計劃 *jihua* 'plan', 決定 *jueding* 'decide', 命令 *mingling* 'order', 勸 *quan* 'persuade/urge', 讓 *rang* 'let', 設法 *shefa* 'try', 停止 *tingzhi* 'stop', 提議 *tiyi* 'propose', 推薦 *tuijian* 'recommend', 威脅 *weixie* 'threat', 想 *xiang* 'want', 選擇 *xuanze* 'choose', 準備 *zhunbei* 'prepare', …

    b.   *Finite-clause taking predicates, which disallow matrix* you*'s scope skipping effects*
        发现 *faxian* 'discover', 否认 *fouren* 'deny', 告诉 *gaosu* 'tell', 怀疑 *huaiyi* 'suspect', 确认 *queren* 'confirm', 認為 *renwei* 'think', 声明 *shengming* 'declare', 說 *shuo* 'say', 相信 *xiangxin* 'believe', 知道 *zhidao* 'know', …

(9)   *Generalizations*

    a.   The exceptional scopal behavior is found only with *you* but NOT with *zai*.

    b.   The exceptional scope can only cross a <u>nonfinite</u> clause boundary but NOT a <u>finite</u> clause boundary.

3   High vs. low 'again'

3.1   Embedding

A contrast between *you* and *zai*, observed by Lin and Liu (2009), is their embeddability. Whereas *you* cannot surface in an embedded nonfinite clause, *zai* can.

(10) a.   *小明<u>可以又</u>來了。
        *Xiaoming <u>keyi</u>   [<u>you</u>   lai   le].
        Xiaoming be.permitted   AGAIN come   PERF
        Intended: 'Xiaoming has been permitted to again come.'   (Lin and Liu 2009: 1186)

    b.   小明<u>可以</u>再去臺北。
        Xiaoming <u>keyi</u>   [<u>zai</u>   qu Taibei].
        Xiaoming be.permitted   AGAIN go Taipei
        'Xiaoming is permitted to again go to Taipei.'   (Lin and Liu 2009: 1195)

(11) a.   *小明<u>想又</u>去香港。
        *Xiaoming <u>xiang</u> [<u>you</u>   qu Xianggang].
        Xiaoming want   AGAIN go Hong Kong
        Intended: 'Xiaoming wants to again go to Hong Kong.'

    b.   小明<u>想</u>再去香港。
        Xiaoming <u>xiang</u> [<u>zai</u>   qu Xianggang].
        Xiaoming want   AGAIN go Hong Kong
        'Xiaoming wants to again go to Hong Kong.'

    On the other hand, both *you* and *zai* are embeddable by finite-clause taking predicates.

(12)　a.　小明相信又出現了冠狀病毒。

　　　　　Xiaoming xiangxin you　　chuxian-le guanzhuangbingdu.

　　　　　Xiaoming believe　　AGAIN appear-PFV coronavirus

　　　　　'Xiaoming believes that there again appeared coronavirus.'

　　　b.　小明相信會再出現冠狀病毒。

　　　　　Xiaoming xiangxin hui zai　　chuxian guanzhuangbingdu.

　　　　　Xiaoming believe　　will AGAIN appear　coronavirus

　　　　　'Xiaoming believes that there again appeared coronavirus.'

(13)　*Generalizations*

　　　a.　*You* exhibits exceptional scopal behavior and canNOT surface in an embedded nonfinite clause.

　　　b.　*Zai* does NOT exhibit exceptional scopal behavior and can surface in an embedded nonfinite clause.

(14)　*Correlation 1*

　　　An 'again'-type element exhibits exceptional scopal behavior *iff*…

　　　it canNOT surface in an embedded nonfinite clause.

3.2　Compatibility with aspectual elements

You and *zai* also show a contrast with respect to their compatibility with aspectual suffixes. Only *you* but not *zai* may operate on predicates with aspectual affixes.

(15)　*Only* you *but not* zai *compatible with the aspectual suffix* -le

　　　a.　就又去了京都　　　　　　　　　　　　　　(Book name, undated, accessed on 06/23/2022)

　　　　　jiu you　　qu-le　Jingdu

　　　　　so AGAIN go-PFV Kyoto

　　　　　'so, [I] went to Kyoto again'

　　　b.　*就（會）再（已經）去了京都　　　　　　　　　　　　　　　　(cf. OK再去)

　　　　　*jiu (hui) zai　　(yijing) qu-le　Jingdu

　　　　　so　will AGAIN already go-PFV Kyoto

　　　　　Intended: 'so, [I] went to Kyoto again (already)'

　　　Note that a narrow scope reading of *zai* under -*le* is possible, as indicated by the position of the aspectual adverb 'already'.

(16)　a.　已經再去了一次

　　　　　yijing　zai　　qu-le　yi-ci

　　　　　already AGAIN go-PFV one-time

　　　　　'went once again already'

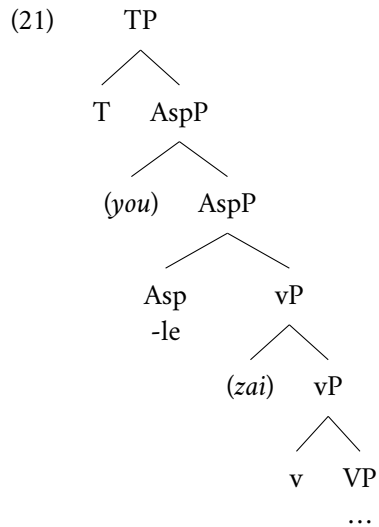　　　The progressive prefix *zai* shows a similar contrast.

(17)   a.   我家的貓又在幹怪事了   ([Book name](#), undated, accessed on 2022-6-23)

Wo   jia   de   mao   you   zai   gan   guai   shi   le.

1sg   home   poss   cat   AGAIN   PROG   do   weird   thing   PERF

'The cat in my home is doing weird things again.'

b.   *我家的貓會再在幹怪事   (cf. ^{OK}再幹)

*Wo   jia   de   mao   hui   zai   zai   gan   guai   shi

1sg   home   poss   cat   will   AGAIN   PROG   do   werid   thing

Int.: 'The cat in my home will be doing weird things again.'

(18)   *Generalizations*

a.   *You* <u>exhibits</u> exceptional scopal behavior and <u>is</u> compatible with aspectual elements.

b.   *Zai* <u>does NOT exhibit</u> exceptional scopal behavior and <u>is NOT</u> compatible with aspectual elements.

(19)   *Correlation 2*

An 'again'-type element exhibits exceptional scopal behavior *iff*…

it is compatible with aspectual elements.

4   Proposal

(20)   *Two ingredients of the proposal*

a.   There are two surface positions of 'again': **High 'again'** associates with and moves to **AspP**; **low 'again'** does not move and stays within **vP**.   (Lin and Liu [2009](#))

b.   **Nonfinite** clauses may be as small as **vP**, lacking AspP.   (C.-T. J. Huang [2022](#); Liu [2022](#))

4.1   Analysis

We suggest that both *you* and *zai* are base-generated at the vP level, but they surface in different positions (cf. Lin and Liu [2009](#)): **Only *you* but not *zai* surfaces in a higher position at the AspP level**.

(21)

```
              TP
             /  \
            T   AspP
               /   \
            (you)  AspP
                  /   \
                Asp    vP
                -le   /  \
                   (zai)  vP
                         /  \
                        v   VP
                            …
```

The association of *you* with AspP is achieved by **movement** of *you* (cf. Liu 2021, 2022).

(22)

```
                    TP
                  /    \
                DP      T'
               /  \    /  \
          Xiaoming  T  AspP
          'Xiaoming'   /   \
                     you    AspP
                    'again'  /   \
                           Asp    vP
                                 /  \
                                v    VP
                                    /   \
                               V_matrix  vP
                                xiang   /  \
                                'want' t    vP
                                           /  \
                                          qu Xianggang
                                      'go to Hong Kong'
```
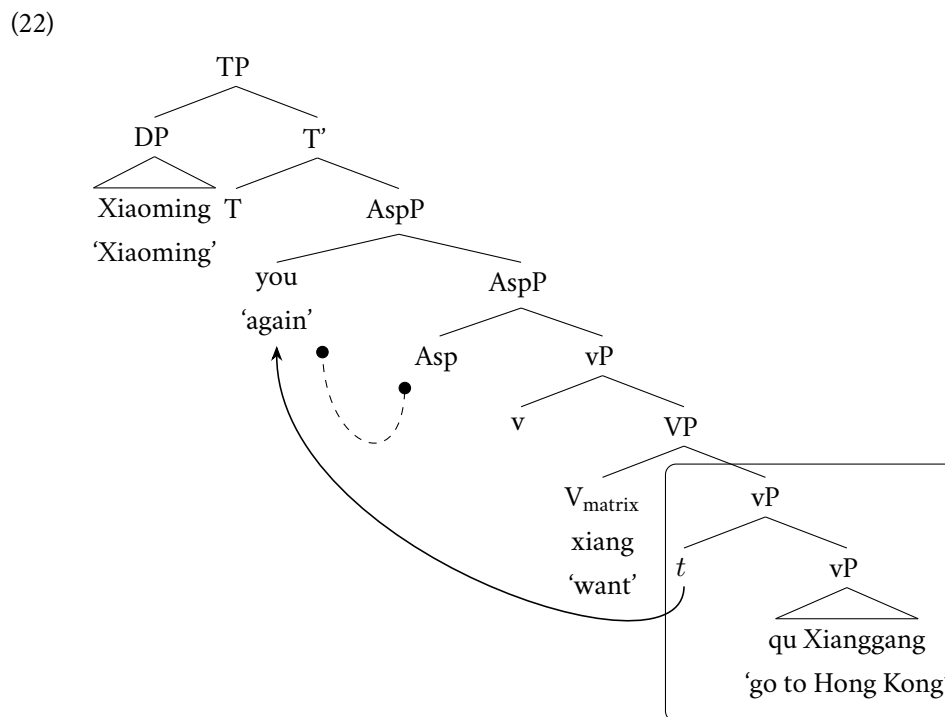
(Subject movement and head movements are omitted.)

In (5) 小明又想去香港 'Xiaoming wants to again go to Hong Kong', *you* first moves to the matrix spec-AspP. Then, it reconstructs for narrow scope, "skipping" the scope of the matrix predicate 'want'. No reconstruction is possible for *zai* due to the lack of movement. That is, *zai* is always interpreted locally.

(23) *Preverbal 'again' scopally "skipping" matrix predicates*

    a. *Movement to matrix AspP*

       [$_{TP}$ Xiaoming [$_{AspP}$ _ [$_{Asp'}$ Asp [$_{vP}$ want…[$_{vP}$ *you / zai* [$_{v'}$ go to HK
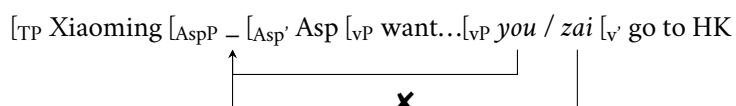
b. *Reconstruction for narrow scope*

[$_{TP}$ Xiaoming [$_{AspP}$ *you* [$_{Asp'}$ Asp [$_{vP}$ want…[$_{vP}$ _ / *zai* [$_{v'}$ go to HK

c. *Zai is interpreted locally*

[$_{TP}$ Xiaoming [$_{AspP}$ Asp [$_{vP}$ *zai* [$_{v'}$ want…[$_{vP}$ [$_{v'}$ go to HK

4.2 Aspectual projection and finiteness in Chinese

It has long been observed that aspectual suffixes take matrix scope when they are embedded in nonfinite clauses (Li 1990; Grano 2014; N. Huang 2018; C.-T. J. Huang 2022). This phenomenon is dubbed ***aspect lowering***.

(24) *Aspect lowering only possible across nonfinite clause boundaries* (C.-T. J. Huang 2022: 18–19, 32, adapted)

a. 張三（從前）勸李四戒**過**煙。 (Nonfinite clauses embedded by Huang's Type II predicates)
   Zhangsan (congqian) <u>quan</u> Lisi [jie-**guo** yan].
   Zhangsan before persuade Lisi quit-EXP cigarette
   'Zhangsan has persuaded Lisi to quit smoking (before).'
   Not: '#Zhangsan persuades Lisi to have quitted smoking (before).'

b.(#)張三說李四戒**過**煙。 (Finite clauses embedded by Huang's Type I predicates)
   (#)Zhangsan <u>shuo</u> [Lisi jie-**guo** yan].
   Zhangsan say Lisi quit-EXP cigarette
   'Zhangsan says that Lisi has quit smoking.'
   NOT: '#Zhangsan has said that Lisi quits smoking.'

Aspect lowering provides crucial evidence for the structure of nonfinite clauses. It has been proposed that nonfinite clauses **lack a local AspP (i.e., they are vPs)**. Hence, the aspectual suffixes need to be licensed by the matrix AspP through agreement, acquiring matrix scope.

(25) <u>Aspect lowering as Agree</u> (Grano 2014; N. Huang 2018; C.-T. J. Huang 2022)
   … [$_{AspP-matrix}$ Asp [$_{vP-matrix}$ v+V$_{matrix}$… [$_{vP-embedded}$ v+V-*guo* VP… (Agree)

(26) Finite clauses: **CP** (with AspP)
   Nonfinite clauses: may be as small as **vP** (without AspP)

4.3 Predictions on nonfinite clauses larger than vP

(See handout)

Non-finite clauses may be bigger than *v*P (N. Huang 2018; C.-T. J. Huang 2022). They can be as large as TPs and may host (i) complementizer *shuo*, (ii) adverb *ye* 'also', (iii) internal topics, and (iv) internal foci. Importantly, they no longer allow aspect lowering since they have a local AspP that blocks matrix Asp agreement. (The unavailability of embedded -*guo* in (27) is due to aspectual conflicts.)

(27)   Non-finite clasues larger than *v*P disallow aspect lowering (C.-T. J. Huang 2022:49-50)

a.   *Blocking by complementizer* shuo
　　*李四曾經設法[說 做**過**這道菜]
　　Lisi cengjing　　shefa shuo zuo-guo　　zhe-dao cai
　　Lisi previously try　　SHUO make-EXP this-CL　　dish
　　Int.: 'Lisi has previously tried to cook this dish.'

b.   *Adverb* ye *'also'*
　　*李四曾經設法[也 做**過**這道菜]
　　Lisi cengjing　　shefa ye　　zuo-guo　　zhe-dao cai
　　Lisi previously try　　also make-EXP this-CL　　dish
　　Int.: 'Lisi has previously tried to also cook this dish.'

c.   *Internal topics*
　　*我逼迫他[那門課 選**過**] cf. 我逼迫他[選過那門課]
　　Wo bipo ta　　na-men ke　　xuan-guo.
　　1SG force 3SG that-CL　　class choose-EXP
　　Int.: 'I have forced him to take that class.'

d.   *Internal foci*
　　*我逼迫他[每一門課 都選**過**] cf. 我逼迫他[選過每一門課]
　　Wo bipo ta　　mei-yi-men　　ke　　dou xuan-guo.
　　1SG force 3SG every-one-CL class all　　choose-EXP
　　Int.: 'I have forced him to take every class.'

Given that these larger finite clauses have AspP, we predict that they do not allow the exceptional scope behavior of *you* since the local AspP sufficiently licences high 'again'. The prediction is borne out.

(28)   Complementizer 'say' blocks *you*'s scope skipping in Mandarin
[Context: Yesterday, reluctant to travel but forced by his boss, Xiaoming took a business trip to Hong Kong for some work, but he did not manage to finish it before he came back. Today, afraid of getting fired due to his unfinished work, he wants to go to Hong Kong again to finish it.]
??小明又想 說 去香港。
??Xiaoming you　　xiang [shuo　qu Xianggang　].   (??want>again)
Xiaoming AGAIN want　　COMP　go Hong Kong
Int. narrow scope: 'Xiaoming wants to again go to Hong Kong.'

(29)   'Also' blocks *you*'s scope skipping in Mandarin
[Context: The day before yesterday, Xiaoming and Xiaohong's boss forced Xiaohong to go to Hong Kong. Yesterday, the boss forced Xiaoming to go to Hong Kong. Today, the boss forced Xiaohong but not Xiaoming to go to Hong Kong. However, secretly admiring Xiaohong, Xiaoming wants to go to Hong Kong today.]

??小明又想 也 去香港。

??Xiaoming <u>you</u>   <u>xiang</u> [[<u>ye</u>] qu Xianggang].   (??want>again)

Xiaoming AGAIN want   ALSO go Hong Kong

Int. narrow scope: 'Xiaoming wants to again go to Hong Kong as well.'

(30)   [Context: 本科時，他以前被逼修了每一門課。上了PhD，…]

　　a.   小明<u>又想</u>[修每一門課]。

　　b. ??小明<u>又想</u>[每一門課 都修]。

Elements	Size	Asp lowering?	*You* scope skipping?
Complementizer *shuo*	CP/TP	NO	NO
'also' *ye*	TP	NO	NO
Internal topics/foci	TP	NO	NO
No above elements	vP	YES	YES

Table 1: The size of nonfinite clauses and blocking effects

5   Postverbal 'again' in Cantonese and the split-aspect approach

Apart from the counterparts of the two 'again' adverbs (又 *jau* and 再 *zoi*), Cantonese additionally has two postverbal elements of 'again': verbal suffixes *-faan* in (31) and *-gwo* in (32) (≠ experiential *-gwo*):

(31)   Verbal suffix *-faan*: repetitive/resumption/restitutive

　　(Zhan 1958; Cheung 1972; Chang 1996; Tang 2001; Fong 2007; Peng 2010)

　　我哋喺**翻**嗰處見面   (repetitive, Peng 2010:96)

　　Ngodei hai-**faan** gosyu ginmin

　　1SG   at-AGAIN there   meet

　　'Let's meet there again.'

(32)   Verbal suffix *-gwo*: repetitive with "fixing" undesirable outcomes of previous events

　　(Cheung 1972; Chang 1996; Chen and Li 2006; Yan 2009)

　　唔該你寫**過**佢啦！   (Cheung 2007:156)

　　Mhoi nei se-**gwo**   keoi laa1!

　　please 2SG write-AGAIN 3SG SFP

　　'Please re-write it.'

They both presume a related event has occured before, with different specifications on the relation between the previous and present events.[1]

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1. *-Faan* also has resumption and restitutive/counter-direction uses, as illustrated below. Note that we do not discuss *-faan*'s modal usage 'attaining ideal state', which does not presuppose a past event (cf. Tang 2001).

We observe a similar exceptional scope behavior in *-faan*. Strikingly, the availability of is, again, subject to two syntactic factors: (i) the position of 'again' and (ii) the size of embedded clauses. We show that our proposal carries over to postverbal 'again' elements, which display an even closer resemblance to aspect lowering.

Moreover, the Cantonese patterns also offer novel evidence for the split-aspect analysis, enabling a cartographic representation of high and low 'again' elements.

5.1   Scopal behavior of postverbal *-faan* and *-gwo* in Cantonese

The exceptional scope behavior involves wide scope of an embedded postverbal 'again' across a clause boundary. That is, 'again' can be pronounced low but interpreted high. This is an mirror image to preverbal 'again' adverbs, which may be pronounced high and interpreted low.

(34)   Postverbal 'again': **Pronounced low, interpreted high**

$$[\text{V}_{\text{matrix}}\ldots[\ldots\text{V}_{\text{embedded}}\text{-AGAIN}\ldots \qquad \text{(Wide scope interpretation over matrix events)}$$

When the postverbal *-faan* and *-gwo* attach to embedded predicates, only *-faan* may take scope over 'want', as shown in (35a). The embedded predicate denotes an event that cannot be repeated (i.e. killing the boss), favoring the plausible wide scope reading of repeated (or resumed) desire. In contrast, *-gwo* cannot take scope over 'want' (=(35b)). Only the infelicitous narrow scope reading 'killing the boss again' is available.

(35)   Embedded 'again' takes wide scope over 'want' in Cantonese
[Context: When Ming was a gangster, he always wanted to murder his maniac boss, though he never tried to. He no longer wanted so after he left the gang. Today, he met his boss on the street, who insulted and slapped him. Ming is so angry that he wants to kill him again.]

a.   阿明(又)想(#又/#再)隊冧翻佢大佬

Aaming (jau)   soeng [(#jau/#zoi) deoilam-**faan** keoi daailou]   (again>want, #want>again)

Ming   AGAIN want   AGAIN   kill-AGAIN   3SG boss

Narrow scope: '#Ming wants to again kill his boss.'

Wide scope: 'Ming again wants to kill his boss.'

b. #阿明(又)想(#又/#再)隊冧過佢大佬

#Aaming (jau)   soeng [(#jau/#zoi) deoilam-**gwo** keoi daailou]   (*again>want, #want>again)

Ming   AGAIN want   AGAIN   kill-AGAIN   3SG boss

Only narrow scope: '#Ming wants to again kill his boss.'

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(33)   a.   你做翻你嘅嘢，我睇翻我嘅書   (resumption, Zhan 1958:121)
Nei zou-**faan** nei ge je,   ngo tai-**faan**   ngo ge   syu
2SG do-AGAIN 2SG MOD thing 1SG read-AGAIN 1SG MOD book
'You (continue) do(ing) your thing, I (continue) read(ing) my book.'

b.   執翻支筆畀我   (restitutive/counter-direction, adapted from Zhan 1958:121)
Zap-**faan**   zi bat bei ngo
pick.up-AGAIN CL pen to 1SG
'Pick up the pen (that fell on the floor) for me.'

Note that the matrix predicate 'want' cannot take *-faan* or *-gwo*. One may wonder whether such exceptional scopal behavior is a morphological repair for predicates that cannot take verbal suffixes.

(36) 阿明想(**翻/*過**)隊冧佢大佬

Aaming <u>soeng</u>(***-faan/*-gwo**) deoilam keoi daailou

Ming   want-AGAIN   kill   3SG   boss

Int.: 'Ming again wants to kill his boss.'

However, (37) and (38) show that wide scope *-faan* is also found with predicates that may take verbal suffixes, such as *hyun* 'persuade/urge'. *-Gwo* again lacks such wide scope reading.

(37) [Context: I used to urge Ming to apply for PhD. Yet, he kept igoring me and even became mad at me, so I just gave up. Today, our teacher and I see that the government has additional funding for PhD studies,…]

a. 所以我又勸**翻**阿明報PhD。

Soji ngo jau <u>hyun</u>-**faan**   Aaming [bou   PhD].   (again>persuade)

so   1SG AGAIN persuade-AGAIN Ming   apply PhD

Wide scope: 'So I again urge Ming to apply for PhD.'

b. 所以老師叫我再勸**過**阿明報PhD。

Soji lousi   giu ngo zoi <u>hyun</u>-**gwo**   Aaming [bou   PhD].   (again>persuade)

so   teacher ask 1SG AGAIN persuade-AGAIN Ming   apply PhD

Wide scope: 'So our teacher asks me to again urge Ming to apply for PhD.'

(38) <u>Embedded 'again' takes wide scope over 'persuade' in Cantonese</u>

[Context: Same context with (37)]

a. 所以我又勸阿明報**翻**PhD。   (again>persuade, #persuade>again)

Soji ngo jau <u>hyun</u>   Aaming [bou-**faan**   PhD].

so   1SG AGAIN persuade Ming   apply-AGAIN PhD

Narrow scope: '#So I urge Ming to re-apply for PhD.'

Wide scope: 'So I again urge Ming to apply for PhD.'

b. #所以老師叫我再勸阿明報**過**PhD。   (*again>persuade, #persuade>again)

#Soji lousi   giu ngo zoi <u>hyun</u>   Aaming [bou-**gwo**   PhD].

so   teacher ask 1SG AGAIN persuade Ming   apply-AGAIN PhD

Only narrow scope: '#So our teacher asks me to urge Ming to re-apply for PhD.'

When *-faan* takes wide scope, it can only attach to either the matrix or embedded predicate, but not both. Doubling of *-faan* would result in a split scope reading, e.g. "again > persuade > again > apply" in (39b).

(39) a. [Context: Same context with (37)]

*…所以我又勸**翻**佢報**翻**PhD。

*Soji ngo jau <u>hyun</u>-**faan**   Aaming [bou-**faan**   PhD].

so   1SG AGAIN persuade-AGAIN Ming   apply-AGAIN PhD

Int. wide scope: 'So I again persuade Ming to apply for PhD.'

b. [Context: Ming had applied for PhD for once but he failed. I urged him to re-apply but he just
   ignored me. Today, I see that the government has additional funding for PhD studies,…]
   我又勸翻阿明再報翻PhD。   (again>persuade>again>apply)
   Soji ngo jau   hyun-**faan**   Aaming [zoi   bou-**faan**   PhD].
   so   1SG AGAIN persuade-AGAIN Ming   AGAIN apply-AGAIN PhD
   Split scope: 'So I again urge Ming to re-apply for PhD.'

Interestingly, the wide scope reading of embedded *-faan* disappears with predicates like 'believe' in (40).
The wide scope reading can only be obtained by attaching *-faan* to the matrix 'believe'.

(40)   Embedded 'again' cannot take wide scope over 'believe' in Cantonese
   [Context: Ming quit being a Christian years ago. Today, he had a traffic accident, and heard God's voice
   when he was badly injured. He once again believes that God exists.]

   a. #阿明(又)信(#又/#再)有翻神
      #Aaming (jau) seon [(#jau/#zoi) jau-**faan**   san]   (*again>believe, #believe>again)
      Ming   AGAIN believe AGAIN   have-AGAIN God
      Only narrow scope: '#Ming believes that there is again God.'

   b. 阿明(又)信翻有神
      Aaming (jau) seon-**faan** [jau   san]   (again>believe)
      Ming   AGAIN believe-AGAIN have God
      Wide scope: 'Ming believes again that there is God.'

The sensitivity to finiteness is exactly what we have seen for the scope skipping effects of *you*. the wide
scope interpretation of *-faan* is only allowed with non-finite clause taking predicates, listed in (41).

(41)   Clause taking predicates in Cantonese and wide scope *-faan*

   a. *Non-finite-clause taking predicates allow embedded* -faan *to take wide scope*
      逼 *bik* 'force', 勸 *hyun* 'persuade/urge', 叫 *giu* 'ask', 請 *ceng* 'invite', 派 *paai* 'send', 想 *soeng* 'want', 打算
      daasyun 'intend', 計劃 *gaiwaak* 'plan', 準備 *zeonbei* 'prepare', 開始 *hoici* 'start', 可以 *hoji* 'may', 敢 *gam*
      'dare', 肯 *hang* 'be willing', …

   b. *Finite-clause taking predicates disallow embedded* -faan *to take wide scope*
      認為 *jingwai* 'consider', 相信 *soengseon* 'believe', 記得 *geidak* 'remember', 講 *gong* 'say', 宣佈 *syunbou*
      'declare', 可能 *honang* 'be possible',…

5.2   High vs. low postverbal 'again' under a split-aspect approach

(See handout.)

Given the parallel of Cantonese postverbal 'again' to Mandarin 'again', we anticipate an analysis that also
draws on high vs. low positions. However, *-faan* and *-gwo* can both be embedded (as in the many examples in
the last section). They also both cannot follow aspecutal suffixes, such as perfective *zo*:

(42)   Both *-faan* and *-gwo* are incompatible with aspecutal suffixes

    a.   又**睇(*翻)咗(*翻)**呢本書   (≠ directional complement *-faan*)

        jau   **tai(*-faan)-zo(*-faan)** ni   bun syu

        AGAIN read-AGAIN-PFV-AGAIN this CL   book

        Int.: 'has read this book again'

    b.   再**睇(^{??}過)咗(*過)**呢本書多一次

        zoi   **tai(^{??}-gwo)-zo(*-gwo)** ni   bun syu   dojatci

        AGAIN read-AGAIN-PFV-AGAIN this CL   book one.more.time

        Int.: 'has read this book one more time again'

Nevertheless, we witness a difference: while *-gwo* **preceding** *zo* is degarded in (42b), there are attested cases in natural occuring data. On the other hand, *-faan* can never precede *zo*. The contrast is suggestive of a lower position of *-gwo* than *-faan*.

(43)   *-Gwo* preceding aspectual suffixes

    a.   重新**寫過咗**《拜仁頌》嘅第三段歌詞   (Wikipedia, 2013-8-26)

        cungsan **se-gwo-zo**   *Baaijanzung*   ge daisaam dyun goci

        AGAIN   write-AGAIN-PFV Bayernhymne GE third   line   lyrics

        're-wrote the third line of *Bayernhymne*'s lyrics'

    b.   Auntie 個電視壞咗，   (Social media, 2018-8-26)

        買過咗隻甘幾吋LG帶Time Machine錄影功能嘅。

        Auntie go dinsi waai-zo, **maai-gwo-zo** zek jaagei   cyun LG daai Time Machine

        auntie CL TV   break-PFV buy-AGAIN-PFV CL   around.20 inch LG with time machine

           lukjing gungnang ge.

           record function GE

        'Auntie's TV is broken. She bought another one, which is around 20 inches and has the Time Machine recording function.'

We further observe an asymmetry of their compatibility with ***phase complements*** (PCs). PCs refer to the phase/stage of an action (Chao 1968:446-450), such as 好 *hou2/hǎo* in 鎖好 *so2-hou2/suǒ-hǎo* 'locked properly', 著 *zoek6/zháo* in 瞓著/睡著 *fan3-zoek6/shuì-zháo* 'slept', etc. (See Appendix 7 for lists of PCs in Cantonese and Mandarin and tests to distinguish them from other postverbal elements.)[2]

We observe that only *-faan* is able to follow with PCs, but not *-gwo*.

---

2. PCs may follow resultative verbal complement (RVCs) and should be distinguished from them. The ordering further suggests that PCs are structurally higher than RVCs.

(44)   Phase complements following RVCs

    a.   後尾我哋同康華終於**打開到**話題，發現原來佢好funny同nice。   (News, 2022-1-22) [C]

        haumei   ngodei tung Hong Waa zungjyu **daa-hoi-dou** waatai, faatjin   jyunloi keoi hou funny tung

        afterwards 1PL   with Akina Hong eventually hit-open-ACHV topic   discover actually 3SG very funny and

          nice.

          nice

        'We eventually opened up the topic with Akina Hong, and found that she is really funny and nice.'

(45)   Only *-faan* but not *-gwo* is compatible with PCs

    a. 喺美國學跳舞最大嘅得著，   ([Blog](), undated, accessed on 2022-6-22)

        唔係話學到一隻好勁嘅舞，或者上到一個好出名嘅老師堂，

        而係**搵到翻**個份「初衷」。

hai	Meigwok	hok	tiumou	zeoidaai	ge	dakzoek, (…)	ji	hai	**wan-dou-faan**	go	fan
go	U.S.	learn	dance	biggest	MOD	gain		rather	be	find-ACHV-AGAIN	that	CL

          "cocung".

          original.goal

      'The biggest thing I obtained from learning dancing in the U.S. is (…) rather that I found my original goal again.'

    b. *我去美國學跳舞，係為咗**{搵到過/搵過到}**個份「初衷」

       *ngo heoi Meigwok hok tiumou, hai waizo **{wan-dou-gwo/ wan-gwo-dou}** go fan

       1SG go U.S. learn dance be for find-ACHV-AGAIN find-AGAIN-ACHV that CL

         "cocung"

         original.goal

      Int.: 'The goal I learn dancing in the U.S. is to find my original goal again.'

    c.^{OK}…**搵過**個份「初衷」

      ^{OK}… **wan-gwo** go fan "cocung"

         find-AGAIN that CL original.goal

      '…to find my original goal again.'

    To give one more example:

(46)   a. 有時太大聲自己會醒一醒又**瞓著翻**   ([Forum](), 2020-18-28)

       jausi   taai daaiseng zigei wui seng-jat-seng jau   **fan-zoek-faan**

       sometimes too loud   self   will wake.up.a.bit AGAIN sleep-ACHV-AGAIN

       'Sometimes (his snoring) is too load and wakes him up; then he would fall asleep again.'

    b. *半夜扎醒想再**瞓著過**   (cf. ^{OK}再**瞓過**)

      *bunje   zaatseng soeng zoi   **fan-zoek-gwo**

      midnight wake.up want AGAIN sleep-ACHV-AGAIN

      Int.: '(I) has accidentally woke up at midnight and wants to sleep again.'

    Note that the ungrammaticality of *-gwo* should not be attributed to some constraints on syllabicity or morphological structure of the verb, since *-gwo*, just like *-faan*, can occur after resultative verbal complements (RVCs):

---

    b. 怎麼把手機**弄壞掉**而且看不出來是人為的？   ([Forum](), 2021-12-26) [M]

      Zenme ba shouji   nong-huai-diao   erqie kan-bu-chulai shi renweide?

      how   BA cell.phone make-broken-ACHV and see-not-out   COP man.made

      'How do you break a cell phone without letting people know that it was you?'

(47)   Both *-faan* and *-gwo* are compatible with RVCs

    a.   可唔可叫你老公**放大翻**d 相嘅size 到1024 x 768。   ([Forum](), 2008-8-27)

       ho-m-ho   giu nei lougung **fong-daai-faan** di   soeng ge   size dou   1024x78.

       may-not-may ask 2sg husband zoom-big-AGAIN cl.pl photo MOD to   1024x78

       'Can you ask your husband to enlarge the size of the photos to 1024x768 again?'

    b.   真係可以再**放大過**呢啲位置   ([Video](), 2020-12-27)

       zanhai hoji zoi   **fong-daai-gwo** ni   di waizi

       really   may AGAIN zoom-big-AGAIN this cl position

       'We really can re-enlarge these positions.'

The ordering of *-faan* and *-gwo* with other post-verbal elements is summarized below.

(48)   a.   RVC < PC < {Asp-suffix, *-faan*}

    b.   RVC < {PC, *-gwo*} < Asp-suffix

We can locate the position of *-faan* and *-gwo* under a split-aspect approach, where the clausal spine has more than one aspectual projections (Gu [1995]; Tsai [2008]; Huang, Li, and Li [2009]; Sybesma [2017]; Lu, Lipták, and Sybesma [2019]; Lee and Pan [2021]). PCs are analyzed as are regarded as an inner aspect layer, lower than the outer aspect layer hosted by aspecutal suffixes. Crucially, the inner aspect projection is within vP (Tsai [2008]; Sybesma [2017]; Lu, Lipták, and Sybesma [2019]). RVCs can be treated as either in the VP, or part of the verb.

(49)   …[$_\text{AspP-outer}$ Asp-suffix [$_{v\text{P}}$…[$_\text{AspP-inner}$ PCs [$_\text{VP}$ RVCs…

Since *-faan* may follow PCs, and is incompatible with aspectual suffixes in both orders (i.e. they are in complementary distribution), it is reasonable to put *-faan* on the head of outer aspect. *-Gwo*, on the other hand, cannot co-occur with PCs yet may precede aspectual suffixes, suggesting that it is at the inner aspect level.

(50)   Locating postverbal 'again' under the split-aspect analysis

    …[$_\text{AspP-outer}$ {**-faan**/Asp-suffix} [$_{v\text{P}}$…[$_\text{AspP-inner}$ {**-gwo**/PCs} [$_\text{VP}$ RVCs…

It is important to note that the positions only reflect the syntactically assoicated positions, but not necessarily the base-generated positions. Under the lexicalist hypothesis, suffix-like elements form a word with the verbal stem before entering syntax (**??**). In other words, suffixes are base-generated at V. They associate with aspect heads by agreement or LF movement.

5.3   Completing the picture

5.3.1   Analysis of wide scope *-faan* in Cantonese

We propose that in Cantonese, both *-faan* and *-gwo* are base-generated in the vP layer, as part of V under the lexicalist hypothesis. *-Faan*, just like aspectual suffixes, agrees with the outer aspect head outside vP. *-Gwo*, in contrast, only agrees with the inner aspect head inside vP.

(51)   Postverbal 'again' in Cantonese: agreement

… [$_{\text{AspP-outer}}$ Asp-outer… [$_{v\text{P}}$… [$_{\text{AspP-inner}}$ Asp-inner… [$_{\text{VP}}$ *-faan / -gwo*…

-Faan agrees with matrix Asp to take wide scope over 'want' in (35) 阿明想隊冧翻佢大佬 'Ming again wants to kill his boss'. Such agreement is not available for *-gwo*, leading to the lack of wide scope readings.

(52)   Postverbal 'again' taking wide scope through agreement
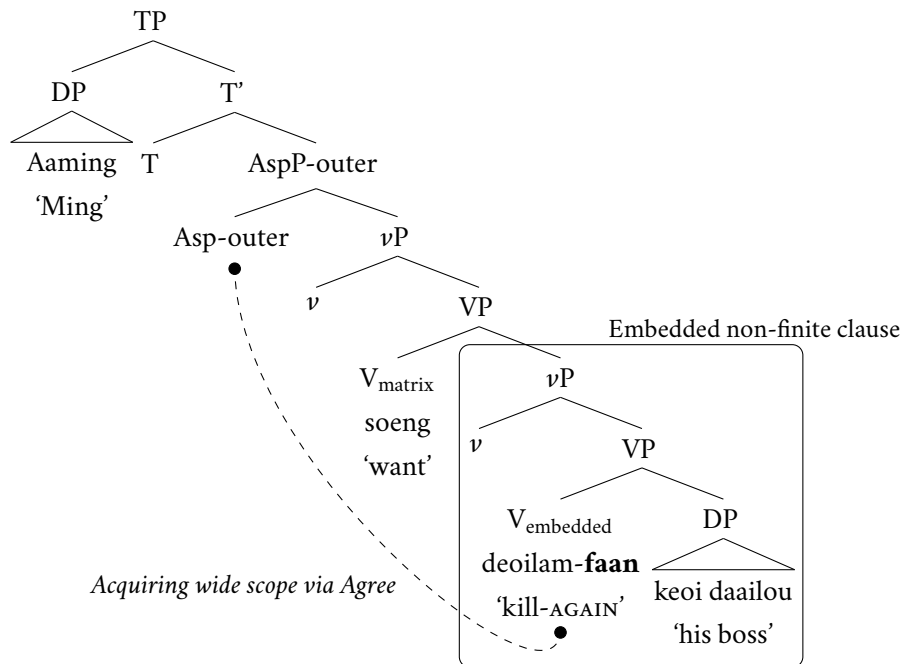
The Agree relation is comparable to the one in aspect lowering:

(53)   Aspect lowering as Agree (Grano 2014; N. Huang 2018; C.-T. J. Huang 2022)

…[$_{\text{AspP-matrix}}$ Asp [$_{v\text{P-matrix}}$ v+Control verb…[$_{v\text{P-embedded}}$ v+V-suffix VP…   (Agree)

Note that the analysis has two predictions, one on *-faan*, another one on aspect lowering.

(54)   Two predictions

    a.   No agreement of *-faan* with matrix outer aspect when the non-finite clause is a TP, just like aspectual suffixes

        ➜ The wide scope reading of *-faan* does not arise when the embedded non-finite clauses contain TP-level elements

    b.   PCs do not have agreement with matrix inner aspect, just like *-gwo*

        ➜ No aspect lowering with PCs even in *v*P non-finite clauses

The first prediction is borne out:

(55)   Complementizer 'say' blocks wide scope *-faan* in Cantonese

    [Context: I used to urge Ming to apply for PhD. Yet, he kept igoring me and even became mad at me, so I

just gave up. Today, our teacher and I see that the government has additional funding for PhD studies,…]

??所以我又勸阿明 話 報翻PhD。

??	Soji	ngo	jau	hyun	Aaming	[waa	bou-**faan**	PhD].	(??again>persuade)
	so	1SG	AGAIN	persuade	Ming	COMP	apply-AGAIN	PhD	

Int. wide scope: 'So I again urge Ming to apply for PhD.'

(56)   'Also' blocks wide scope *-faan* in Cantonese

[Context: same as (55), and I also hear that Aafan has applied for PhD today,…]

??所以我又勸阿明 都 報翻PhD。

??	Soji	ngo	jau	hyun	Aaming	[dou	bou-**faan**	PhD].	(??again>persuade)
	so	1SG	AGAIN	persuade	Ming	also	apply-AGAIN	PhD	

Int. wide scope: 'So I again urge Ming to also apply for PhD.'

(57)   [Context: 阿明以前係反人類主義，想隊冧晒世界上每一個人。本身佢已經正常翻，但今日又發病，…]

a.   阿明又想[隊冧翻每一個人]。

b. ??阿明又想[每一個人 都隊冧翻]。

Elements	Size	Asp lowering?	*You* scope skipping?	Wide scope *-faan?*
Complementizer *shuo/waa*	CP/TP	NO	NO	NO
'also' *ye/dou*	TP	NO	NO	NO
Internal topics/foci	TP	NO	NO	NO
No above elements	*v*P	YES	YES	YES

Table 2: The size of non-finite clauses and blocking effects

The second prediction is also borne out. While aspectual suffixes allow aspect lowering (e.g. Mandarin *-le*, *-zhe*, *-guo*, Grano 2014), we found that phase complements systemically lack aspect lowering, as shown by the occurrence of matrix progressive aspect.

(58)   Phase complements lack aspect lowering

a.   我喺度逼(緊)佢鎖**{好/*過}**呢道門   (PCs vs. experiential *-gwo*) [C]

ngo haidou bik(-gan)   keoi **so-{hou/*gwo}** ni   dou mun

1SG PROG   force-PROG 3SG lock-CMPLT/EXP this CL   door

'I'm forcing him to lock the door properly.'

b.   我在勸他賣**{掉/*過}**這本書   (PCs vs. experiential *-guo*) [M]

Wo zai   quan   ta   mai-diao-guo   zhe-ben shu.

1SG PROG persuade 3SG sell-ACHV/*EXP this-CL   book

'I am persuading him to sell/*have sold this book.'

The lack of aspect lowering follows from the low position of PCs: they are below *v*P and do not agree with a higher AspP outside the non-finite clauses.

5.3.2   The cartography of 'again'

We have seen that both postverbal 'again' and preverbal 'again' show the high vs. low distinction. Under the split aspect approach, we can recast distinction as outer vs. inner aspect distinction: high 'again' *you* and *-faan* assoicate with outer aspect, and *zai* and *-gwo* with inner aspect.

However, there is a caution regarding the postverbal vs. preverbal difference. While the postverbal suffixes are heads, the preverbal adverbs are either adjuncts or specifiers (in Cinque 1999's cartographic approach). We then expect while the postverbal suffixes would compete for the same head with outer/inner aspect heads, preverbal adverbs would not. Concretely, we predict: (i) for high 'again', *you* is compatible with outer aspect suffixes but -faan do not; (ii) for low 'again', *zai* is compatible with PCs but -gwo do not. The first prediction is borne out, as we have already seen in the previous sections, repeated below:

(59)   Only *you* but not *-faan* is compatible with aspectual suffixes (outer aspect)

    a.   就<u>又</u>去了京都   (Book name, undated, accessed on 06/23/2022)
        jiu   you   qu-le   Jingdu
        SO   AGAIN   go-PFV   Kyoto
        'so, [I] went to Kyoto again'

    b.   又**睇(*翻)咗(*翻)**呢本書   ($\neq$ directional complement *-faan*)
        jau   **tai(*-faan)-zo(*-faan)**   ni   bun   syu
        AGAIN   read-AGAIN-PFV-AGAIN   this   CL   book
        Int.: 'has read this book again'

The second prediction is also borne out. Only *zai* but not *-gwo* is comptabile with PCs:

(60)   Only *zai* but not *-gwo* is compatible with phase complements (inner aspect)

    a.   但這只會曝露我還是那個仍會**再賣掉**Minecraft的混蛋而已。   (News, 2015-8-31)
        Dan   zhe   zhi   hui   baolu   wo   hai   shi   na-ge   reng   hui   zai   mai-diao   Minecraft   de
        but   this   only   will   show   1SG   still   COP   that-CL   still   will   AGAIN   sell-ACHV   Minecraft   DE
           hundan   eryi.
           jerk   only
        'But this will just show that I'm still that jerk who will sell Minecraft anyway.'

    b.   *半夜扎醒想再**瞓著過**   (cf. [OK]再**瞓過**)
        *bunje   zaatseng   soeng   zoi   **fan-zoek-gwo**
        midnight   wake.up   want   AGAIN   sleep-ACHV-AGAIN
   Int.: '(I) has accidentally woke up at midnight and wants to sleep again.'

The patterns above, summarised in Table 3, fall out nicely under the split-aspect approach, and enables a cartographic representation of 'again' elements in outer vs. inner aspect level in (61)-(62).

'again'	Assoicated positions	Aspectual suffixes	Phase complements	RVCs
-faan	Asp^0-outer	NO	YES	YES
-gwo	Asp^0-inner	NO	NO	YES
you	Spec AspP-outer	YES	YES	YES
zai	Spec AspP-inner	NO	YES	YES

Table 3: Ability of 'again' to operate on other postverbal elements

(61) Locating 'again' under the split-aspect analysis

…[AspP-outer **you** [Asp'-outer {**-faan**/Asp suffixes} [$_{v}$P…[AspP-inner **zai** [Asp'-inner {**-gwo**/PCs} [VP RVCs…

(62) The cartography of 'again' elements in Chinese (associated positions)
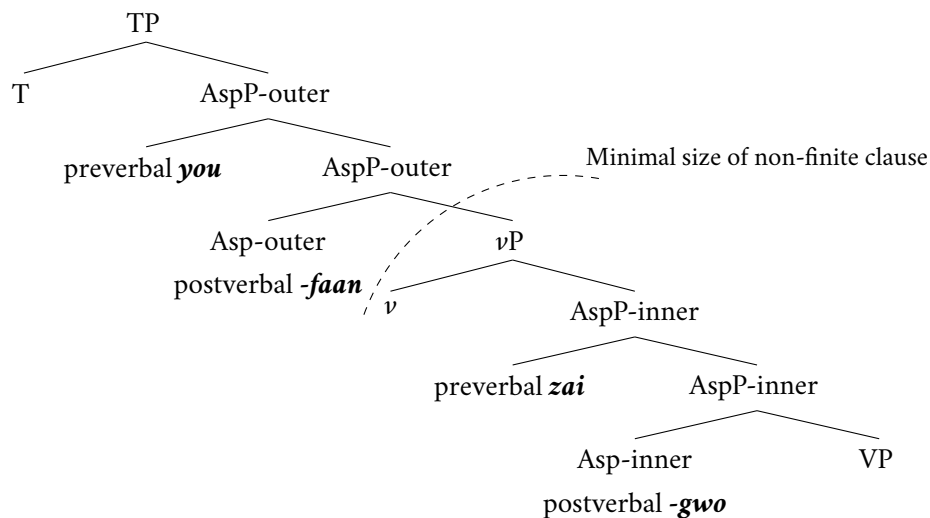
6 Concluding remarks

(63) Take home messages

a. There are two positions for 'again':
    high 'again' above the vP level (at outer aspect) vs.
    low 'again' below vP level (at inner aspect)
    ➜ Attested for preverbal *you* vs. *zai* in Mandarin and postverbal *-faan* vs. *-gwo* in Cantonese

b. The two positions provide a unified explanation for differences of 'again' in:
    ➜ Exceptional scopal behavior across **nonfinite** clause boundaries
    ➜ Ability to operate on **outer aspect** and **inner aspect**

7   Appendiex: Phase complements in Cantonese and Mandarin

The term "phase complements" (PCs) is first introduced by Chao (1968). PCs refer to postverbal elements expressing "the phase of an action in the first verbs rather than some result in the action or goal " (p.446, Sect. 6.6.3). While they often share similar grammatical properties with resultative verbal complements (RVCs), their semantic contribution is aspectual.

- **Cantonese**

The list of phase complements in Cantonese is given below. (a-h) denote the endpoint of events with varying meanings such as event achievement, completion, successful perception, etc. (i-j) also make reference to endpoints, but they encode an additional salient 'in advance' meaning. (k) mainly expresses an adversative meaning with a requirement on achieved events. (l-m) concern the internal intervals of events and convey continuation.

(64)   Phase complements in Cantonese
(Cheung 1972, 2007:113-115, Matthews and Yip 1994:210-221, Tang 2015:71-89)

    a.   著 *zoek6* 'be on target', e.g. 瞓著 *fan3-zoek6* 'slept'

    b.   到 *dou2* 'arrive', e.g. 搵到 *wan2-dou2* 'found' (cf. J. Huang 2021)

    c.   見 *gin3* 'see (vs. look)', e.g. 聽見 *teng1-gin3* 'hear (vs. listen)'

    d.   好 *hou2* 'good', e.g. 做好 *zou6-hou2* 'being done'

    e.   掂 *dim6* 'all right', e.g. 搞掂 *gaau2-dim6* 'finished, settled'

    f.   完 *jyun4* 'finish', e.g. 食完 *sik6-jyun4* 'finished eating'

    g.   成 *seng4* 'succeed', e.g. 約成 *joek3-seng4* 'succeeded in making an appointment'

    h.   起 *hei2* 'finish, ready, (lit.) lift', e.g. 畫起 *waak6-hei2* 'finished drawing'

    i.   落 *lok6* 'finish (a long time ago), (lit.) fall', e.g. 教落 *zyu2-lok6* 'taught way back then'

    j.   定 *ding6* 'in advance', e.g. 煮定 *zyu2-ding6* 'cooked in advance' (cf. Wong 2018)

    k.   親 *can1* 'adversative', e.g. '' (with achievement requirements, cf. Sio 2020)

    l.   住 *zyu6* 'hold', e.g. 冚住 *kam2-zyu6* 'cover still'

    m.   實 *sat6* 'firm', e.g. 望實 *mong6-sat6* 'keep looking'

Note that they may not be labelled as "phase complements" in the original sources. Tang 2015, for example, treats *lok6*, *ding6*, *can1*, *zyu6* and *sat6* as verbal suffixes.

    In the following, we examine their grammatical properties through three tests: (i) suffixation of genuine aspecutal affixes like perfective 咗 *-zo*; (ii) following an RVC; (iii) 得/唔 *-dak/m-* 'able/not' infixation. The results of the three tests are summarized below in Table 4 (examples below the table).

    We take the first test as the crucial diagnostics for distinguishing PCs from (canonical) aspectual suffixes. All the PCs can be suffixed by the perfective 咗 *-zo*. Note that this test does not provide evidence for the

Phase complements	*-zo* suffixing	*-dak/m-* infixing	following RVCs
zoek6, gin3, hou2, dim6, seng4, can1, sat6	YES	YES	NO
lok6, hei2	YES	NO	NO
dou2, jyun4, zyu6	YES	YES	YES
ding6	YES	NO	YES

Table 4: Grammatical properties of phase complements in Cantonese

morphological status (i.e. whether PCs are suffixes), since suffix stacking is possible in Cantonese (Tang 2015). Instead, this test shows that PCs are lower than *-zo* in the structure (and thus closer to the root by Mirror Principle, Baker 1985).

(65) 咗 *-zo* 'PFV' suffixation

 a. 佢瞓著咗 (Cheung 2007:114)

   'He has slept.'

 b. 阿明攞到咗一個offer (J. Huang 2021:4)

   'Ming got an offer.'

 c. 佢係夢見咗自己係一隻蝴蝶嗎？ (Video caption, 2021-2-10)

   'Did he dream that he became a butterfly?'

 d. 以為做好咗心理準備 (Social Media, 2021-6-23)

   'Did he dream that he became a butterfly?'

 e. 單case我搞掂咗㗎嘞。 (Words.hk)

   'I have finished this case.'

 f. 食完咗飯好耐嘍！ (Cheung 2007:149)

   '(I) have finished my meal for quite some time.'

 g. 又係一個傾下傾下又傾成咗嘅Project啦 (Social media, 2020-10-8)

   'Just another (business) project that we managed to strike over time.'

 h. 我幅畫終於畫起咗 (Social Media, 2016-3-17)

   'My painting is finally done.'

 i. 我返工之前已經發好咗d通粉(...),又煮落咗湯底 (Blog, 2009-7-12)

   'Before going to work, I have already put the macaroni into water and cooked the soup base.'

 j. 同埋好夠熱，唔會好似煮定咗好耐 (Food guide, 2022-4-27)

   'It's also hot enough and doesn't look like being prepared a long time ago.'

 k. 你嚇親咗佢 (Matthews and Yip 1994:228)

   'You scared her.'

l. 肋骨插住咗個肺   ([News](), 2020-2-6)

    'a rib punctured the lung and got stucked.'

m. 難以置信咁望實咗自己部手機   ([Creative writing](), 2021-12-26)

    '(He) stares at his phone unbelievably.'

The second test is 得/唔 -*dak/m*- 'able/not' infixation, which is a typical property displayed by RVCs. Note that the test only provides suggestive but not deciding evdience for the morphological status of PCs, since some suffixes like -*saai* can also take -*dak/m*- 'able/not' infixation.

(66) 得/唔 -*dak/m*- 'able/not' infixation

a. 佢瞓{得/唔}著

    'He can(not) sleep.'

b. 有時都攞唔到，好似今日咁多人，就未必攞得到   ([Video caption](), 2021-2-10)

    'Ming got an offer.'

c. 睇{得/唔}見 (but compare: ?聽{得/唔}見, ??夢{得/唔}見)

    'can(not) see (vs. ?hear/??dream)'

d. *做{得/唔}好心理準備 (vs. descriptive complement 乜都做唔好)

    Int.: 'can(not) be ready mentally' (vs. cannot perform well for everything)

e. 搞{得/唔}掂

    'can(not) settle'

f. 食{得/唔}完

    'can(not) finish eating'

g. 我估今晚去得成   (Matthews and Yip [1994](){:221)

    'I think we'll manage to go tonight'

h. *畫{得/唔}起幅畫 (vs. directional complement 拎{得/唔}起)

    Int.: 'can(not) finish the drawing' (vs. can(not) pick up)

i. *煮{得/唔}落湯底 (vs. directional complement 食{得/唔}落)

    Int.: 'can(not) cook the soup base in advance' (vs. can(not) eat)

j. *煮{得/唔}定餐飯 (vs. resultative complement 坐{得/唔}定)

    Int.: 'can(not) cook the meal in advance' (vs. can(not) sit firmly)

k. 香港啲公司到呢個年代仲以為可以冚得住啲消息   ([Video caption](), 2021-2-10)

    (but compare: *聽{得/唔}住音樂)

    'How could the Hong Kong companies think that they can cover up the news nowadays?' (cf. *can(not) keep hearing music)

l. 撳{得/唔}實 (but compare: *望{得/唔}實個女仔)

    'can(not) hold still' (cf. *can(not) keep staring at the girl)

The third test is whether the PCs may follow a RVC. This test effectively distinguishes PCs from RVCs since RVC stacking is not possible in Cantonese.

(67)   Following RVCs

  a. *瞓冧著
      Int.: 'slept deeply'

  b. 後尾我哋同康華終於**打開到**話題，發現原來佢好funny同nice。   ([News](#), 2022-1-22)
      'We eventually opened up the topic with Akina Hong, and found that she is really funny and nice.'

  c. *睇清{得/唔}見
      Int.: 'saw clearly'

  d. ??省靚好個招牌
      Int.: 'made the fame better'

  e. *搞清楚掂
      Int.: 'made it clear'

  f. 蒸熟完就可以攪碎   ([Food guide](#), 2014-7-18)
      'after finished steaming it, you can break them into pieces'

  g. *book爆成呢間餐廳
      Int.: 'made this restaurant fully booked'

  h. *寫靚起幅字
      Int.: 'finished the calligraphy artwork'

  i. *煲滾落個湯底
      Int.: 'boil the soup base in advance'

  j. 拆走定個書架   (Tang [2015](#):78)
      'removed the book shelf in advance'

  k. 門仲打開住   ([Creative writing](#),2021.2.11)
      'The door is wide-opened.'

  l. *撳平實張紙
      Int.: 'held and flattened the paper'

• **Mandarin**

Examples of PCs in Mandarin are given below. (a-g) refer to the endpoint of events, expressing meanings of event achievement, completion, successful perception, etc. (h-i) make reference to the internal intervals of events and express continuation.

(68)   Phase complements in Mandarin
        (Chao [1968](#):446-450, Li and Thompson [1981](#):65-66, Sybesma [2017](#); Lu, Lipták, and Sybesma [2019](#))

a. 著 *zháo* 'be on target', e.g. 找著 *zhǎo-zháo* 'found'

b. 到 *dào* 'arrive', e.g. 買到 *mǎi-dào* 'bought'

c. 掉 *diào* '', e.g. 賣掉 *mài-diào* 'sold'

d. 成 *chéng* 'succeed', e.g. 看成(電影) *kàn-chéng (diàn yǐng)* 'succeeded in seeing movies'

e. 好 *hǎo* 'good', e.g. 鎖好 *suǒ-hǎo* 'locked properly'

f. 完 *wán* 'finish', e.g. 吃完 *chī-wán* 'finished eating'

g. 見 *jiàn* 'see (vs. look)', e.g. 聽見 *tīng-jiàn* 'hear (vs. listen)'

h. 住 *zhù* 'hold', e.g. 站住 *zhàn-zhù* 'stand still'

i. 著 *zhe* 'IPFV', e.g. 坐著 *zuo-zhe* 'sit still' (verbs with degree of attachement, Tsai 2008)

PCs are regarded as a middle aspect layer in Sybesma (2017) and Lu, Lipták, and Sybesma (2019). The top layer is occupied by the aspectual suffix *-le*, and the lowest layer is occupied by resultative verbal complements (RVCs). The three aspect layers are all in between *v*P and VP.

(69) [$_{v}$P…[$_{\text{AspP3-Realization}}$ *-le* [$_{\text{AspP2}}$ PCs [$_{\text{AspP1-Telicity}}$ RVCs [$_{\text{VP}}$…

(70) Relative order of phase complements with other postverbal elements

a. *PCs < le* (Sybesma 2017:303)

我們賣**掉了**房子。

wǒmen mài-**diào-le** fángzi.

1PL sell-off-ASP house

'We finally sold the house.'

b. *RVCs < PCs < le* (Lu, Lipták, and Sybesma 2019:303)

他把我的運動鞋跑**壞掉了**

tā bǎ wǒ-de yùndòngxié pǎo-**huài-diào-le**

3SG BA 1SG-SUB sport.shoe run-broken-off-PRF

'He ran my running shoes completely to pieces'

In Tsai (2008), PCs are regarded as the lowest layer of aspectual projections (Inner Aspect), including *zhe^2* 'keep/still' (attach to verbs expressing attachment) and *wan* 'finish'. RVCs are not regarded as aspectual heads. The higher layer is further split into two: Outer Aspect holds elements that can associate with T , and Middle Aspect being holds aspectual suffixes that exhibit incompleteness effects due to failure to associate with T. The dividing lines of the three aspects are on *v*P and VP.

(71) [$_{\text{TP}}$…[$_{\text{AspP1}}$ *zai,-guo* [$_{v}$P…[$_{\text{AspP2}}$ *-zhe^1,-le*…[$_{\text{VP}}$ V-Asp3=PCs

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