

Syntax below words: verbal suffixation in Chinese

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1 Introduction

- **Debate:** Do affixes attach to the root in the lexicon or after (either in syntax or the PF)?
 - Since early generative grammar (Chomsky 1970; Aronoff 1976)
 - Remains relevant in the Minimalist Program concerning whether language only has one generative engine (Halle and Marantz 1993; Bruening 2018)

- This debate extends to Chinese (including Cantonese & Mandarin), which is rich in verbal suffixes

(1) a. sik-**zo** faan [C(antonese)]
eat-PFV rice
'ate rice'

b. chi-**le** fan [M(andarin)]
eat-PFV rice
'ate rice'

① The **lexicalist view** (Cheng 1989; Gu 1993, 1995; Huang, Li, and Li 2009; Tang 2010) (cf. Chomsky 1995)

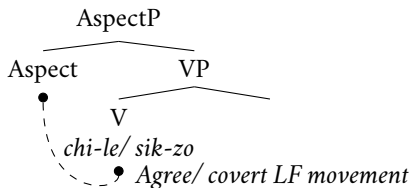
– Lexicon: Aspectual suffixes combine with the verbal stem in the morphological component

(Numeration: { ... **sik**, **sik-zo**, ... })

– Syntax: Enter syntax together as $V^0 \rightarrow$ licensed by Asp^0 via Agree or LF movement in syntax

☞ A more powerful lexicon and a small syntactic workload

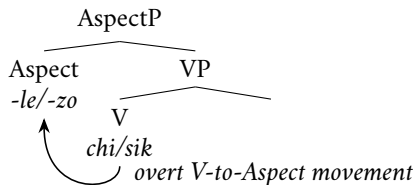
(2) The lexicalist view (View ①)



② The **derivational view** (Tang 1998, 2003; Tsai 2001, 2008)

- Syntax: The verb and the suffix head distinct projections (Asp and V)
- ➔ Verbs combine with suffixes in syntax by head movement
(Or by Lowering in the PF, e.g., Cheng, Yi, and Xiong 2016, to be discussed)
- 👉 A minimal lexicon and only (post-)syntactic components are generative (in the spirit of Distributed Morphology, e.g., Halle and Marantz 1993; Bruening 2018)

(3) The derivational view (View ②)



- View ① is considered the “standard” view in Chinese linguistics, as adopted by Huang, Li, and Li 2009’s textbook, with empirical arguments (e.g., manner adverb placement)
- View ② is often assumed in different works but few arguments have been offered except for suffix ordering (Tang 2003)

Overview of the talk

- **Goal:** We argue for the derivational view ② over the lexicalist view ①
- We offer novel arguments to demonstrate that verbs and suffixes must enter syntax as **separate heads**
- We further show that verbs undergo **V-to-Asp head movement in syntax** to suffixes, rather than Asp-to-V Lowering in PF
- We revisit the lexicalist arguments and suggest that the patterns **can be derived under View ②** without stipulations
- **Upshot:** The findings support the idea that syntax is the only generative engine (following DM).

2 Arguments for the derivational view

We offer four novel *arguments* from independently noticed facts in Mandarin and Cantonese for ② over ①:

(4) Four arguments for the derivational view

- ①. Mirror Principle effects
- ②. Verb doubling constructions
- ③. Mandarin P-to-V incorporation
- ④. Cantonese separable verbs

2.1 ❶ Mirror Principle effects

- Conceptual argument from suffix ordering
- The suffix order mirrors semantic scope that reflects syntactic height (cf. Baker 1985, *et seq.*)
 - Cantonese: universal *-saai* scopes over experiential *-gwo* in (5a)
 - Vs. (5b): the preverbal experiential aspect *si-gwo* (Wu 2020) scopes over *-saai*

(5) a. Keoi sik-**gwo**-saai nidi daangou.

3SG eat-EXP-ALL these cake

‘Each cake, s/he has tried some of it.’

(ALL > **EXP**)

b. Keoi **si-gwo** sik-saai nidi daangou.

[C]

3SG once eat-ALL these cake

‘S/he has eaten all the cake.’

(**EXP** > ALL)

- Mandarin: *V-guo-le* (Gu 1993, 1995; Yip 2020)
- (6): the perfective viewpoint by *-le* scopes over the experiential aspect by *-guo* representing indefinite situations (Smith 1994)

- (6) Ta yijing kan-**guo**-le nei-ben shu le. (Gu 1995:52) [M]
 3SG already read-EXP-PFV that-CL book SFP
 ‘S/he has already read that book.’ (PFV > EXP)

- **View ①:** The mirroring effects **require stipulations to be accounted for**
 - Cannot be recast as inflectional vs. derivational morphology distinction (cf. Zhou 1990): they are all suffixes associated with higher functional projections (e.g., Asp)
 - Operations in the lexicon should not be sensitive to syntactic structures
 - An extra mapping rule between suffix ordering and the licensing projections is needed, as also acknowledged by Gu (1995, 55n5)

- **View ②**: the effects **come for free** as a consequence of roll-up head movement

- The closer the suffix to the stem, the lower its projection is
- Syntactic positions feed semantic scope → Mirror Principle effects
- No extra stipulations are needed.

(7) i. $[\text{QP } \underline{\text{-saai}} [\text{AspP } \textit{sik}_V\text{-}\underline{\textit{gwo}} [\text{VP } \textit{sik}_V]]]$ →



ii. $[\text{QP } \textit{sik}_V\text{-}\underline{\textit{gwo-saai}} [\text{AspP } \textit{sik}_V\text{-}\underline{\textit{gwo}} [\text{VP } \textit{sik}_V]]]$



(8) i. $[\text{AspP}_{\text{PFV}} \underline{\text{-le}} [\text{AspP}_{\text{EXP}} \textit{kan}_V\text{-}\underline{\textit{guo}} [\text{VP } \textit{kan}_V]]]$ →



ii. $[\text{AspP}_{\text{PFV}} \textit{kan}_V\text{-}\underline{\textit{guo-le}} [\text{AspP}_{\text{EXP}} \textit{kan}_V\text{-}\underline{\textit{guo}} [\text{VP } \textit{kan}_V]]]$



2.2 ② Verb doubling constructions

- Chinese verbs can undergo (long-distance) head movement to the left periphery for focus/topichood with both copies pronounced
 - See Cheng and Vicente (2013) and Lee (2024) for movement evidence: (i) lexical identity effects, (ii) island effects, (iii) intervention effects, and (iv) idiom preservation

- (9) Lin **tai**, keoi dou m-**tai** ni-bun syu (Verb 'even'-focus) [C]
even read 3sg also not-read this-CL book
'S/he doesn't even READ this book.' (Lee 2024:27)
- (10) **Chi**, wo shi xiang **chi**. (...) (Verb topicalization) [M]
eat 1sg be want eat
'As for eating, I do want to eat. (But ...)' (Cheng and Vicente 2013:6)

- When the verbs are suffixed (V-suffix), the higher copy is never a V-suffix string, but the bare V form

- (11) Lin {**tai**/ ***tai-gwo**} keoi dou mou **tai-gwo** ni-bun syu. (Verb 'even'-focus) [C]
 even read read-EXP s/he also not read-EXP this-CL book
 'S/he didn't even READ this book.'
- (12) {**Chi**/ ***chi-guo**}, ta shi **chi-guo** zhe-wan mian de. (Verb topicalization) [M]
 eat eat-EXP 3SG be eat-EXP this-bowl noodles SFP
 'As for eating, s/he has eaten this bowl of noodles.'

- **View ①:** Bare verb doubling is **unexpected**
 - V-suffix is a syntactic terminal; V and suffix are sub-heads
 - ➔ Sub-heads (level below V^0) cannot undergo movement (cf. lexicalists' Lexical Integrity Principle)

- **View ②: Bare verb doubling is derived**

- Verbs and suffixes are different syntactic terminals
- ➔ Bare verbs project their own V^0 and can be targeted by $\text{Foc}^0/\text{Top}^0$
- NB: no excorporation of bare V from V-Asp (cf. Aboh 2006; Kandybowicz 2008 for such parallel chain formation in predicate clefting; and Lee 2021; Lee and Yip 2026a for how the doubling effects are derived)

(13) $[\text{FocP}/\text{TopP} \text{ V-Foc/Top} \dots [\text{AspP} \text{ V-Asp} [\text{VP} \text{ V} \dots]]]$ (V-to-Foc/Top movement)

2.3 ③ Mandarin P-to-V incorporation

- In Mandarin ditransitives with a direct object (DO) and a PP indirect object (IO):
 - ➔ the preposition incorporates to the verb when the DO is moved out (Li 1990; Feng 2019)
 - General to all ditransitive verbs that take a PP IO (other examples: *song* ‘give’ + *gei* ‘to’ IO)

- (15) a. Ta **fang-le** [zhe-ben shu] [zai zhuzi-shang]. (V-**suffix** + DO + P-IO) [M]
3SG put-PFV this-CL book at table-top
‘S/he put this book on the table.’
- b. [Zhe-ben shu], ta {**fang-zai-le**/ ***fang-le** zai} [zhuzi-shang]. (DO + V-P-**suffix** + IO) [M]
this-CL book 3SG put-at-PFV put-PFV at table-top
‘This book, s/he put on the table.’

- **View ①:** P-to-V incorporation is **unexpected**
 - V-suffix is an integral unit: P cannot “move” to in-between them in syntax
 - It must posit that *fang-zai* is listed as a distinct entry from *fang* in the lexicon
 - ➔ leads to undesirable duplicated listing
 - Also wrongly predicts **fang-le zai DP* to be grammatical in (15b)

- **View ②:** P-to-V incorporation is derived
 - V and suffix are different terminals
 - P can move to V, and then to Asp (see Feng 2019 for triggers related to Nuclear Stress assignment)

(16) i. ... [AspP **-le** [VP ***fang-zai*** [PP ~~*zai*~~ IO]]] **→** ii. ... [AspP ***fang-zai-le*** [VP ~~*fang-zai*~~ [PP ~~*zai*~~ IO]]]

2.4 ④ Cantonese separable verbs

- Disyllabic verbs in Cantonese allow suffixes and phrases to separate the 1st syllable from the 2nd one (Chan and Cheung 2020; Lee and Yip 2025, 2026b)
 - Not infixation (morphology): phrases can intervene between the two syllables
 - Not Verb-Object (VO) phrase reanalysis (Chao 1968 *et seq.*): separation of monomorphemic verbs (*oukei* ‘okay’) is possible

(17) a. Keoi **oukei**-zo [saam ci].
3SG okay-PFV three time
‘S/he agreed three times.’

b. Keoi **ou**-zo [saam ci] **kei**. [C]
3SG okay-PFV three time okay
‘S/he agreed three times.’

- See Lee and Yip (2025) for extensive arguments that the separate syllables in Cantonese are not VO-phrases, but **reduced (“partially deleted”) copies of verbs**

- **View ①:** Separation is **unexpected**
 - If *ou* and *kei* are analyzed as part of the same verb ...
 - ➔ A phrase could not be “inserted” between sub-head syllables of a root in syntax
 - If the two syllables are analyzed as different verbs/words ...
 - ➔ Neither *ou* nor *kei* (in the sense of ‘okay’) are independent morphemes
 - **Ou-zo* ‘agreed’ is ill-formed elsewhere; its grammaticality in (17b) is puzzling

- **View ②:** Separation is **allowed** as the two syllables belong to **different copies**
 - V-to-Asp movement in syntax creates different copies
 - Subsequent “distributed” deletion renders both copies realized partially (Lee and Yip 2025)

(19) i. [AspP -zo [VP [FreqP saam ci] [**oukei**_V]]] → ii. [AspP **oukei**_V-zo [VP [FreqP saam ci] [~~oukei~~_V]]]



- The partial deletion analysis is not compatible with View ①
 - View ① denies *overt* V-to-Asp movement in syntax (e.g., Huang, Li, and Li 2009, see §4)
 - Even with it, the lower copy would involve discontinuous deletion of non-constituents:

(20) <~~oukei-zo~~> ... <~~oukei-zo~~>

- ➔ not allowed in standard theory of chain linearization (e.g., Nunes 1995:279; van Urk 2018; also impossible in ellipsis, e.g., Sag 1976; Merchant 2001; Sailor & Thoms 2014)

3 Head movement in syntax

- The four arguments suggest that verbs and aspectual suffixes should be **different syntactic terminals**

→ The derivational view is superior to the lexicalist view

	View ①	View ②
Status of V-suffix:	V^0	$V^0 + Asp^0$
<i>Deriving ...</i>		
① Mirror Principle effects	✗ _{stipulation}	✓
② Verb doubling	✗	✓
③ Mandarin P-to-V incorporation	✗	✓
④ Cantonese separable verbs	✗	✓

- But how does the verb combine with the suffix?
 - Head movement in syntax (Tang 1998, 2003; Tsai 2001, 2008; Lee 2024; cf. Koopman 1984; Matushansky 2006; Arregi and Pietraszko 2021)
 - Lowering in PF
(Cheng, Yi, and Xiong 2016; cf. Embick and Noyer 2001; Arregi and Nevins 2012; Harizanov and Gribanova 2019)

(21) $[_{\text{AspP}} \textbf{V-Asp} [_{\text{VP}} \textbf{V} \dots]]$ (HM in syntax) (22) $[_{\text{AspP}} \textbf{Asp} [_{\text{VP}} \textbf{V-Asp} \dots]]$ (Lowering in PF: *rejected*)

- They derive ❶–❸ equally ...
- Key difference: whether **copies** are created
 - ➔ YES by syntactic movement (cf. The Copy Theory of Movement, Chomsky 1995; Nunes 1995, 2004; Bošković 2007)
 - but NO by post-syntactic operations

Not post-syntactic operations in PF

- Lowering in PF like (22) **does not create verb copies**
 - ➔ Cannot account for ④ separable verbs where two reduced copies are pronounced in Asp and V
 - ➔ The correct word order cannot be derived too (i.e., **saam ci oukei-zo*)

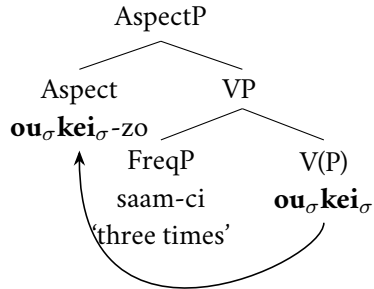
(23) i. [AspP -zo [VP [FreqP saam ci] [**oukei**_V]]] ➔ ii. [AspP ~~-zo~~ [VP [FreqP saam ci] [**oukei**_V-zo]]]



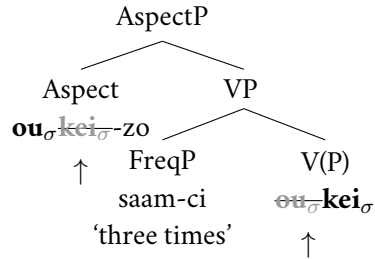
- We thus suggest that verb suffixation—at least in Chinese—is formed by **syntactic head movement**

(24) The derivation of separable verbs (Lee and Yip 2025)

a. *Syntax: Verb movement to Aspect head*



b. *PF: Distributed deletion (2 steps, simplified)*



4 Revisiting the lexicalist arguments

- We suggest that the lexicalist arguments do not challenge the derivational view with close scrutiny

- (25) a. Manner adverb placement
b. Aspect lowering (☞ *see Appendix*)

Manner adverb placement

- One major argument by the lexicalists is that Chinese, unlike French (Pollock 1989), disallows adverbs to follow verbs, as in (27) with manner adverbs
- This has been interpreted as the lack of verb movement to Asp above manner adverbs (Cheng 1989; Gu 1993; Huang, Li, and Li 2009)

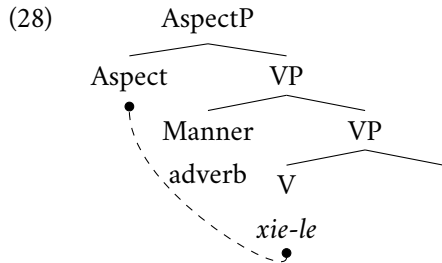
(26) French V-to-T movement and adverb placement

- a. Je **mange** souvent ~~mange~~ des pommes.
I eat often of.the apples
'I often eat apples.'
- b. *Je souvent **mange** des pommes.

(27) Manner adverbs cannot be placed after the verb in Chinese

Zhangsan {hen kuaide} **xie-le** {*hen kuaide} yi-feng xin. (PFV > quickly) [M]
Zhangsan very quickly write-PFV very quickly one-CL letter
'Zhangsan quickly wrote a letter.' (Gu 1993, p.72)

- The lexicalist list view takes the illicit verb-adverb order to be evidence against verb movement. The suffix must not be “picked up” in the overt syntax.



☛ This argument assumes that manner adverbs only attach to v/VP below the licensing Asp head.

- **However:** manner adverbs **can scope over the suffixes**

➔ Manner adverbs can indeed attach above AspP

- Cases where manner adverbs must take wide scope

(29) Aaming **zingzinggai** hok-faan jatman.

[C]

Aaming secretly learn-again Japanese

‘Aaming learns Japanese again secretly.’

a. #**again** > **secretly**: the second time to learn Japanese secretly

b. **secretly** > **again**: the second time to learn Japanese, and this time, secretly

- Cases where manner adverbs can either take wide or narrow scope

(30) Aaming **jat-daam** sik-maai ni-faai kukkei. [C]

Ming one.bite eat-also this-CL cookie

- a. 'Ming ate (something in one bite, and) this cookie in one bite too.' (total: 2 bites) (Narrow: also > in 1 bite)
- b. 'Ming ate this cookie and other stuff together in one bite.' (total: 1 bite only) (Wide: in 1 bite > also)

5 Conclusion

Summary of the talk

- **Goal:** We argued for the derivational view ② over the lexicalist view ① of Chinese verbal suffixation
- We offered novel arguments to demonstrate that verbs and suffixes must enter syntax as **separate heads**
- We further showed that verbs undergo **V-to-Asp head movement in syntax** to suffixes, rather than Asp-to-V Lowering in PF
- We revisited the lexicalist arguments and suggested that the patterns **can be derived under View ②** without stipulations
- **Upshot:** The findings support the idea that syntax is the only generative engine (following DM).

- **Implications**

- Verb-resultative compounds should also be derived syntactically: evidence from verb doubling

➔ Both **verbal compounds** and **verbal suffixation** are derived by syntax

(32) {**Sik**/ baau/ sik-baau}, keoi hai jiging **sik**-baau-zo ge2.

eat full eat-full 3sg be already eat-full-PFV SFP

‘As for eating/ becoming full/ eating and becoming full, s/he has already eaten and become full.’

(Yip 2025b:21–22)