

15<sup>TH</sup> INTERNATIONAL  
WORKSHOP ON

**T**HEORETICAL  
**E**AST  
**A**SIAN  
**L**LINGUISTICS

**ABSTRACT BOOK**

teal15

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## **Organizing Committee, The 15th International Workshop on Theoretical East Asian Linguistics**

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## Introduction

The 15th International Workshop on Theoretical East Asian Linguistics (TEAL-15) on June 5-6, 2026 is organized by the T.T. Ng Chinese Language Research Centre, The Chinese University of Hong Kong (CUHK), as one of the commemorative activities for its 60th anniversary. TEAL-15 aims at addressing theoretical issues relating to languages spoken in the area of East Asia, particularly focusing on comparative work in syntax, semantics, or morphology, that contributes to the understanding of Universal Grammar.

We received 195 high-quality abstracts from various countries and regions in Asia, Americas, and Europe. The Organizing Committee came up with a list of prominent scholars to help with the review process. Abstracts were then matched to reviewers based on their specialties. After all of the abstracts were reviewed anonymously, the committee selected the abstracts with the highest average review scores. The authors of those abstracts were then invited to present their papers at TEAL-15. There are totally 23 oral presentations and 26 poster presentations. The final result of this process is a collection of very interesting and professional papers related to theoretical East Asian linguistics.

We are honored to have Professor C.-T. James Huang as our distinguished guest to deliver the opening speech and closing remarks. We are also deeply grateful for the generous sponsorship provided by the United College, CUHK. The Organizing Committee wishes to express its sincere appreciation to the authors who submitted abstracts, the 44 reviewers, and the 8 session chairs. Special thanks go to the research assistants of the Centre and student helpers for their efficiency and dedication, which greatly facilitated the smooth preparation of TEAL-15.

Sze-Wing TANG

Organizing Committee

15th International Workshop on Theoretical East Asian Linguistics  
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## On Multiple Stripping in Japanese

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**Introduction.** Saito (2021) and Maeda and Miyamoto (M&M) (2024) argue that Japanese *wh*-stripping (1) involves *syntactic* focus movement of a remnant *wh*-phrase followed by clausal ellipsis.

(1) John-wa [Mary-ga *nanika-o* katta to] itta ga, [**nani-o** to]-wa iwanakatta.

John-Top Mary-Nom *something-Acc* bought C said but **what-Acc**C-Top said.not

Lit. 'John said that Mary bought something, but he didn't say **what**.'

(Note that *wh*-stripping (1) differs from sluicing in that the *wh*-phrase appears without the Q-morpheme *ka*.) This paper deals with multiple *wh*-stripping (2), which has received little attention.

(2) John-wa [Mary-ga *dareka-ni nanika-o* watasita to] itta ga,

John-Top Mary-Nom *someone-Dat something-Acc* gave C said but

[**dare-ni nani-o** to]-wa iwanakatta.

**who-Dat what-Acc** C-Top said.not

Lit. 'John said that Mary gave something to someone, but he didn't say **what to whom**.'

We argue that multiple *wh*-stripping is derived by movement in the phonological component.

**Against a Syntactic Movement Analysis of Multiple *Wh*-Stripping.** Multiple *wh*-stripping is immune to *syntactic* constraints and LF interpretive effects. First, single *wh*-stripping obeys *syntactic* island constraints like the CNPC (3a) and the Adjunct Condition (3b) (M&M 2024), but multiple *wh*-stripping does not (4a, b) (where █ in the English translation represents the elided part). If multiple *wh*-stripping involves *syntactic* movement, (4) should be worse than (3), where only one constituent moves out of an opaque domain. The result, however, is the opposite of what any *syntactic* movement analysis of multiple *wh*-stripping would predict.

(3)a.?<sup>\*</sup> John-wa [[CNP kossorito *dareka-ni* wairo-o watasiteiru] hito]-o mita to]

John-Nom secretly *someone-Dat* bribe-Acc gave person-Acc saw C

itta ga, [**dare-ni** to]-wa iwanakatta.

said but **who-Dat** C-Top said.not

Lit. 'John said that he saw [a person who secretly gave a bribe *to someone*], but he didn't say that saw [CNP a person who secretly gave a bribe **to whom**].'

b.?<sup>\*</sup> John-wa [[Adjunct Mary-ga *dareka-ni* purezento-o ageta kara] kaetta to]

John-Top Mary-Nom *someone-Dat* present-Acc gave because left C

itta ga, [**dare-ni** to]-wa iwanakatta.

Said but **who-Dat** C-Top said.not

Lit. 'John said that he left [because Mary gave a present *to someone*], but he didn't say that he left [Adjunct because Mary gave a present **to whom**].'

(4)a. John-wa [[CNP kossorito *dareka-ni nanika-o* watasiteiru] hito]-o

John-Nom secretly *someone-Dat something-Acc* gave person-Acc

mita to] itta ga, [**dare-ni nani-o** to]-wa iwanakatta.

saw C said but **who-Dat what-Acc** C-Top said.not

Lit. 'John said that he saw [a person who secretly gave a bribe *to someone*], but he didn't say that saw [CNP a person who secretly gave **what to whom**].'

b. John-wa [[Adjunct Mary-ga *dareka-ni nanika-o* ageta kara] kaetta to]

John-Top Mary-Nom *someone-Dat something-Acc* gave because left C

itta ga, [**dare-ni nani-o** to]-wa iwanakatta.

Said but **who-Dat what-Acc** C-Top said.not

Lit. 'John said that he left [because Mary gave a present *to someone*], but he didn't say

that he left [**Adjunct** because Mary gave **what to whom**].'

Second, single *wh*-stripping obeys criterial freezing (Rizzi 2006; M&M 2024) as illustrated in (5), but multiple *wh*-stripping does not (6). Since the single *wh*-remnant *dare-ni* 'who-Dat' in (5) satisfies the *wh*-criterion in the most deeply embedded interrogative clause, subsequent *syntactic* focus movement is prohibited by criterial freezing. The absence of the criterial freezing effect in multiple *wh*-stripping (6) indicates that multiple *wh*-stripping does not involve *syntactic* movement.

(5)?\*John-ga [[ Mary-ga *dareka-ni* purezento-o watasita ka] siritagatteiru to] kiita ga,  
John-Nom Mary-Nom *someone-Dat* present-Acc gave Q want.to.know C heard but  
[**dare-ni** to]-wa kiiteinai  
**who-Dat** C-Top not.heard

Lit. I heard that John wants to know whether Mary gave a present *to someone*, but I didn't hear that John wants to know **to whom** Mary gave a present.'

(6) John-ga [[ Mary-ga *dareka-ni nanika-o* watasita ka] siritagatteiru to] kiita ga,  
John-Nom Mary-Nom *someone-Dat something-Acc* gave Q want.to.know C heard but  
[**dare-ni nani-o** to]-wa kiiteinai  
**who-Dat what-Acc** C-Top not.heard

Lit. I heard that John wants to know whether Mary gave *something to someone*, but I didn't hear that John wants to know **what to whom** Mary gave.'

Third, single *wh*-stripping allows both surface and inverse scope readings with *syntactic* focus movement of a *wh*-remnant over a universal quantifier (7) (M&M 2024). Multiple *wh*-stripping (8), on the other hand, allows only a surface reading; the *wh*-remnants are interpreted *in-situ* at LF.

(7) John-wa [minna-ga *dareka-ni* purezento-o ageta to] itta ga, [**dare-ni** to]-wa ittenai  
J-Top all-Nom *someone-Acc* present-Acc gave C said but **who-Dat** C-Top say.not  
Lit. 'John said that everyone gave a present *to someone*, but he didn't say **to whom**.'

(8) John-wa [minna-ga *dareka-ni nanika-o* ageta to] itta ga, [**dare-ni nani-o** to]-wa ittenai  
J-Top all-Nom *someone-Acc something-Acc* gave C said but **who-Dat what-Acc** C-Top say.not  
Lit. 'John said that everyone gave *something to someone*, but he didn't say **what to whom**.'

**Proposal.** M&M argue that there are two derivational sources of single *wh*-stripping, *i.e.*, focus movement followed by TP ellipsis and presuppositional clause ellipsis in a cleft. In either derivational source, single *wh*-stripping (1) involves *syntactic* focus movement of a *wh*-remnant to the CP domain. For expository purposes, we illustrate only focus movement + TP ellipsis in (9):

(9) ...[CP **nani-o** [TP Mary-ga *t* katta] to]-wa iwanakatta  
**what-Acc** Mary-Nom bought C-Top said.not

We argue that focus movement is induced by Information Structure (IS), which requires the focus-moved material to be a *single constituent*. In addition, we observe that multiple *wh*-remnants form a *single* phonological constituent—a Major Phrase—characterized by pitch reset and subsequent downstep (Figure 1). We argue that movement induced by IS can apply either in syntax or phonology, and we propose: (i) if the targeted material constitutes a *single* syntactic XP, then it moves in the narrow syntax; (ii) if the targeted material is not a *single* syntactic XP, then that material is packed into a *single* Major Phrase (MP) that undergoes movement to the edge of an intonational phrase (i) in the phonology; this movement is immune to *syntactic* constraints and LF effects. This naturally follows if syntax derivationally precedes phonology, and focus movement is subject to the derivational principle of Earliness (Pesetsky 1989). Multiple *wh*-stripping (2) is analyzed in (10). The NPs to be focus-moved are targeted in syntax, as represented by double-underlines (10a). Since they do not form a *single* XP, they are not eligible for *syntactic* movement. In the phonological component (10b), the two  $\Phi$ 's corresponding to the XPs

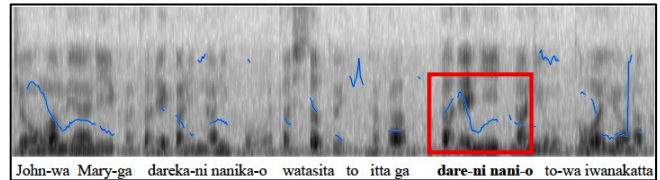


Figure 1

targeted for focus movement are packed into a *single* MP, which moves to the edge of  $\iota$ . Ellipsis applies (10c), yielding multiple *wh*-stripping.

(10) a. .... [FocP [... [NP dare-ni] [NP nani-o] ...]to]-wa iwanakatta (Syntax)

who-Dat what-Acc C Top said.not

b. ... ( $\iota$  (MP dare-ni nani-o)... (... (MP ( $\Phi$  ... ) ( $\Phi$  ....)) ... ) to wa) iwanakatta (Phonology)



c. ... ( $\iota$  (MP dare-ni nani-o) (... (MP ( $\Phi$  ... ) ( $\Phi$  ....)) ... ) to wa) iwanakatta (Phonology)

In single *wh*-stripping (1), the targeted *wh*-element is a *single syntactic* XP which is eligible for focus movement in narrow syntax. The *single syntactic* constituent undergoes focus movement in the narrow syntax, and the movement is therefore sensitive to *syntactic* constraints and LF effects.

**Selected References.** Maeda, M. & Miyamoto, Y. 2024. Bare *wh*-stripping in Japanese. *JEAL* 33. Saito, M. 2021. *Wh*-phrases without quantificational particles. JSPS Core-to-Core seminar talk.

## Headedness and Classifiers in Japanese and Korean Nominals

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**Nutshell:** Simpson (2022) presents an intriguing proposal for Korean and Japanese nominal syntax. He argues that extended nominal projections in Japanese and Korean, aside from NP and *nP*, are left-headed rather than right-headed as is traditionally assumed. While Simpson does derive the wide variety of word order possibilities in Korean and Japanese with fewer operations, he does so at the cost of the standard view of headedness in strongly head-final languages. Notably, case morphology and postpositions are clearly suffixal, requiring a right-headed structure, in violation of FOFC (Biberauer *et al.* 2014). Once we reconsider the evidence in detail, we will see that a fully right-headed analysis of Korean and Japanese provides a more parsimonious analysis of the word order facts.

**Background:** Simpson proposes the structure in (1) for nominals in Korean and Japanese.

(1) [DP D [NumP Num [CIP Cl [*nP* N *n* ]]]]

He argues this is a more economical analysis of word order in the Korean and Japanese extended nominal projection as in the following Korean and Japanese examples.

(2) *ku seykwen-uy chayk sono ni-satu-no hon*

DEMthreeCL-GEN book DEM two-CL-GEN book

‘those three books.’ ‘those two books’

Crucially, he assumes that demonstratives occupy the D head, numerals occupy either the Num head or SpecNumP, and that the classifier occupies the Cl head. He argues that case morphology is inserted at PF, so does not impinge on the syntactic analysis.

**Numeral Classifiers:** Simpson argues that low Korean numerals (one to four) reside in a head position given their phonological interaction with a following classifier. Consider the numeral *twu* (‘two’) in the following example. It appears as *twu* when it precedes a classifier.

(3) *twu myeng-uy haksayng*

twoCL-GEN student ‘two students’

Note, however, that *semul* (‘twenty’) also behaves this way as do complex numerals ending in one to four (ex eleven, twenty-three, etc.). Thus, we see very little motivation for proposing that the numerals one to four appear in the head of a functional projection and instead assume that all numerals appear in a specifier. Thus, the issue of headedness does not arise for numerals. Simpson places the classifier in the head of a functor that take *nP* as a complement; however, there is another well known analysis in which the classifier and the numeral form a constituent to the exclusion of the noun (Krifka 1995; Bale & Coon 2014; Little *et al.* 2022). There is disagreement in the literature as to which the correct analysis is for Korean and Japanese (Park 2009; Kim 2013; Shin 2017; Kang 2002; An 2018; Christina Kim 2005; Choi 2011; Kang 2016; Watanabe 2006; Kitahara 1993). Recently, Little *et al.* (2022) have offered a battery of diagnostics to distinguish between these two analyses. We cannot present all the results here, but mention one. Little *et al.* note that if the numeral and classifier form a constituent they can undergo A’-movement.

(4) [*twu mali-uy*]<sub>i</sub> *nay-ka khiwu-nun t<sub>i</sub> kay*

two CL-GEN 1SG-NOMraise-ADN dog

‘(the) two dogs that I have’

**Demonstratives:** Simpson assumes that since demonstratives in Korean and Japanese are monomorphemic, they occupy a D head. There is, however, much evidence that demonstratives occupy a specifier position (Park 2023; Kim 2019; Hong 2010). First, demonstratives have been argued to merge low in the extended nominal projection (Brugé 2002). This is corroborated by the fact that demonstratives can appear low in the nominal in Korean. Consider the following example.

(5) *Chelswu-ka ilk-un ku chayk*

Cheolsoo-NOM read-ADN DEM book ‘that book that Cheolsoo read’  
The demonstrative can also appear after a numeral classifier (An 2014).

(6) saylow-un twu-chay-uy kukenmwul

new-ADN two-CL-GEN DEM building ‘those two new buildings’

Under Simpson’s analysis the demonstrative would have to undergo long head movement to appear at the left edge of the nominal, violating the head movement constraint.

**Case and Postpositions:** Case is suffixal in Korean and Japanese, so would require a right-headed KP. If, as Simpson argues, lower functional projections are left-headed in Korean and Japanese, a FOFC violation would arise. A right-headed projection would take a left-headed projection as its complement.

(7) [<sub>KP</sub> [<sub>DP</sub> D NumP ] K ]

Within the FOFC literature adpositions are treated as part of the extended nominal projection and are evaluated for violations along with the rest of the nominal (Biberauer 2017; Sheehan et al. 2017). Thus, in order for Simpson’s analysis to work, he would have to claim that all postpositions are added at PF; however, since they have semantic import, postpositions must be merged syntactically. Moving on to his claim that case morphology is added at PF he adduces the following evidence from Nakamura (2012).

(8) [[Zimintoo-kara gaimudaizin-ni Yamada-si]-to [Hosyutoo-kara

LDP-from minister.of.foreign.affairs-DAT Yamada-Ms/Mr-and CP-from  
zaimudaizin-ni Suzuki-si](-to)]-ga syuuninsita.

minister.of.finance-DAT Suzuki-Ms/Mr-(and)-NOM assumed

‘From the Liberal Democratic Party Mr./Ms. Yamada (assumed the role of) the Minister of Foreign Affairs and from the Conservative Party Mr./Ms. Suzuki assumed (the role of) Minister of Finance.’

The nominative case marker appears to be attached to a non-constituent. Vermeulen (2008) proposes that the case particle and the coordinator undergo phonological re-ordering. He notes that even in simple coordinations the case marker appears outside of the coordinator.

(9) John-wa Mary(\*-o)-to Bill-to-o/\*-o-to mita.

John-TOP Mary-ACC-and Bill-and-ACC/\*ACC-and saw  
‘John saw Mary and Bill.’

Vermeulen proposes a phonological re-ordering rule, which can be generalized as in the following schematic.

(10) NP - CASE - to → NP - to - CASE

Thus, such a reordering rule is necessary despite the complex data in (8).

**Conclusion:** Once the data are reconsidered in detail Simpson’s (2022) left-headed analysis is not necessary and a right-headed analysis can be maintained.

**Selected References:** An D-H. 2018. On The Word Order Of Numeral Quantifier Constructions. *Stud. Linguist.* 72(3):662–86. Bale A, Coon J. 2014. Classifiers Are for Numerals, Not for Nouns: Consequences for the Mass/Count Distinction. *LI.* 45(4):695–707. Biberauer T. 2017. Probing the nature of the Final-over-Final Condition: The perspective from adpositions. In *Order and Structure in Syntax I*, eds. LR Bailey, M Sheehan, pp. 177–216. Berlin: Lang Sci Press. Brugè L. 2002. The Positions of Demonstratives in the Extended Nominal Projection. In *Functional Structure in DP and IP*, ed. G Cinque, pp. 15–53. Oxford: OUP. Choi K. 2011. On the Nature of the Dependency between a Numeral and a Classifier. *Linguist. Res.* 28(3):517–42. Hong YT. 2010. HangugeoMyeongsaeogwag. *Stud. Gener. Gramm.* 20(1):27–50. Kang B. 2007. Plurality and the Plurality Marker “deul.” *Eoneohak.* 47(47):3–31. Kang B-M. 1994. Plurality and other semantic aspects of common nouns in Korean. *JEAL.* 3(1):1–24. Kang B-M. 2002. Categories and Meanings of Korean Floating Quantifiers – With Some Reference to Japanese. *JEAL.* 11(4):375–98. Kim C. 2005a. Order and Meaning: Numeral Classifiers and Specificity in Korean. Presented at WCCFL24, pp. 218–26. Somerville, MA: Cascadilla.

## Affectedness and Anti-locality of Mandarin Affective-*gei* Constructions

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**Introduction:** Previous research has extensively investigated the syntactic properties of Mandarin *gei* ‘give’ and the various interpretations it triggers across different predicate classes (Tang 2001, 2002; Huang 2013, a.o.). This paper focuses specifically on the affective use of *gei* analyzed by Huang (2013), exemplified in (1) with the unaccusative predicate *pao-le* ‘run.away’.

- (1) a. *Gei fanren pao-le.*  
 GEI prisoner run.away-PRF  
 ‘It happened that the prisoner ran away (and someone was affected).’  
 b. **Fanren<sub>1</sub> gei t<sub>1</sub> pao-le.**  
 prisoner GEI run.away-PRF  
 ‘It happened that the prisoner ran away (and someone was affected).’

**Empirical puzzles:** This paper identifies two puzzles regarding the affective-*gei* construction. First, Huang (2013: (38)) contends that affective-*gei* is incompatible with unergative predicates as shown in (2), irrespective of the syntactic position of the external argument. Intriguingly, inserting a measurement phrase lifts this constraint, as in (3a) (=the **measurement puzzle**), which is a felicitous remark by *Lisi*’s opponent in a context involving an unexpectedly extended timeout during a close game. The second puzzle concerns the raising of the DP argument in (1b): unlike the flexibility shown with unaccusatives, the raising of the external argument of an unergative predicate is restricted, as in (3b) (=the **argument raising puzzle**).

- (2) a. \**Gei Lisi xiuxi-le.*                      b. \**Lisi<sub>1</sub> gei t<sub>1</sub> xiuxi-le.*  
 gei Lisi rest-PRF                              Lisi GEI rest-PRF  
 Intended: ‘It happened that he rested (and someone was affected).’  
 (3) a. *Gei Lisi xiuxi-le wu.fenzhong.*  
 GEI Lisi rest-PRF five.minute  
 b. \***Lisi<sub>1</sub> gei t<sub>1</sub> xiuxi-le wu.fenzhong.**  
 Lisi GEI rest-PRF five.minute  
 Intended: ‘It happened that Lisi rested for five minutes (and someone was affected).’

**Analysis of the measurement puzzle:** We propose that affective-*gei* construction is subject to the **strong affectedness condition** proposed by Law & Hirschberg (2025) for *bei*-passives. Following Law & Hirschberg (2025), *bei* takes an event predicate  $P$  (type  $\langle e, \langle v, t \rangle \rangle$ ) and returns a predicate of the same type, while adding a **presupposition that the theme  $x$  is strongly affected**, as in (4). This presupposition holds only if **the theme undergoes quantized (i.e. along a scale  $S$  encoded with a specific standard/endpoint  $\text{stnd}_S$ ) change**, as in (4). This accounts for the need for a measure phrase to induce an endpoint in (6).

$$(4) \llbracket \text{bei} \rrbracket = \lambda P \lambda x \lambda e: S\text{-AFF}_S(P)(x). P(x)(e) \quad (e \rightarrow v \rightarrow t) \rightarrow e \rightarrow v \rightarrow t$$

$$(5) S\text{-AFF}_S(P)(x) \text{ is true iff } \forall e. P(x)(e) \rightarrow m_{\Delta S}(x)(e) \geq \text{stnd}_S$$

- (6) *Zhe-zhang zhuozi bei Lisi ca-le \*(san-bian).*  
 this.CL table BEI Lisi wipe-PRF three-CL

‘This table was wiped by Lisi \*(three times).’ (adapted from Law & Hirschberg 2025)

**Affective-*gei* also requires the theme/agent/affectee of the embedded predicate undergo a quantized change.** While (2a) is unacceptable as the atelic predicate *xiuxi-le* ‘rest’ lacks an endpoint, (3a) is well-formed because **the measurement phrase telicizes the event, yielding a quantized change.** One **prediction** of our analysis concerns **additional ways of satisfying the strong affectedness**

**condition.** According to Law & Hirschberg, in the absence of telicity, quantized change can also be derived when the verb encodes agent intention and the theme has the sentience required for intention recognition (i.e. intention transmission). This predicts that affective-*gei* constructions with an inanimate theme cannot be licensed, as such themes lack the necessary sentience for intention transmission. The contrast in (7) supports this prediction: although both animate and inanimate themes are compatible with *da-le* ‘hit’ in (7a), only the animate theme can satisfy strong affectedness via intention transmission and render acceptable affective-*gei* construction in (7b). Note that the addition of the resultative *lan* ‘wrecked’ in (7c) is able to rescue (7b) because it is also an alternative to induce a quantized change to satisfy the strong affectedness requirement.

- (7) a. You ren da-le Lisi/zhe-ge shabao.  
 have person hit-PRF Lisi/this-CL sandbag  
 ‘Someone hit Lisi/the sandbag.’
- b. Lisi/??Zhe-ge shabao<sub>1</sub> gei ren da t<sub>1</sub> le.  
 Lisi/ this-CL sandbag GEI person hit SFP  
 ‘Lisi/??This sandbag was hit by someone.’
- c. Zhe-ge shabao<sub>1</sub> gei ren da.lan t<sub>1</sub> le.  
 this-CL sandbag GEI person hit.wrecked SFP  
 ‘This sandbag was wrecked by someone.’

**Analysis of the argument raising puzzle:** We argue that the ban on argument raising in (3b) follows from the **anti-locality constraint** in (8), which requires Move to cross at least one full phrasal boundary (not just a segment) (Bošković 1997, 2016; Erlewine 2016, 2020; Deal 2019; Branam 2023). Specifically, assuming with Huang (2013) that the affective-*gei* heads an unaccusative VP, the structures of *gei* taking unaccusative/unergative predicates are shown in (9) (see Huang 2023 for arguments that affective-*gei* does not take a CP or a TP). Note that the raising of the (internal) argument of unaccusative predicates to the spec-VP in (10a) does not violate (8) as it crosses two maximal projections. On the other hand, the external argument of unergative predicates is base-generated at specVoiceP (Kratzer 1996), so its raising in (10b) is disallowed because it crosses only the VoiceP.

- (8) Movement of a phrase from Spec,XP must cross a maximal projection other than XP.
- (9) a. [<sub>VP</sub> *gei* [<sub>VP</sub> v [<sub>VP</sub> V **DP**]]] (*gei* + unaccusative predicates)  
 b. [<sub>VP</sub> *gei* [<sub>voiceP</sub> **DP** Voice[<sub>VP</sub> V...]]] (*gei* + unergative predicates)
- (10) a. [<sub>VP</sub> **DP** *gei* [<sub>VP</sub> v [<sub>VP</sub> V <DP>]]] (argument raising based on (9a))  
 ↑ crossing VP + vP ↓
- b. [<sub>VP</sub> **DP** *gei* [<sub>voiceP</sub> <DP> Voice[<sub>VP</sub> V...]]] (argument raising based on (9b))  
 ↑ \*anti-locality ↓

**Prediction:** The anti-locality analysis of (3b) predicts that the external argument of transitive predicates is subject to the same constraint: it cannot undergo raising across affective-*gei* because it is also base-generated at specVoiceP. This prediction is borne out, as evidenced by (11b).

- (11) a. (guanjun.sai shi) *gei* **Ohtani** da.chu-le sanzhi quanleida.  
 Champion.game time GEI Ohtani hit.out-ASP three-CL homerun  
 ‘Ohtani hit three home runs (in the championship game, and someone was affected).’
- b. \*(guanjun.sai shi) **Ohtani**<sub>1</sub> *gei* t<sub>1</sub> da.chu-le sanzhi quanleida.  
 Champion.game time Ohtani GEI hit.out-ASP three-CL homerun  
 Intended: ‘Ohtani hit three home runs (in the final, and someone was affected).’

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## Demonstratives and epithets in bare noun languages

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**Overview.** In many languages, epithets require demonstratives, and demonstratives in turn have affective or derogatory uses. We argue that this follows from three independently motivated assumptions. First, we assume that epithets have non-truth-conditional meanings (Potts 2005, Schlenker 2005, Patel-Grosz 2015). Specifically, we assume that nouns in epithets are type  $(e, u)$  (Gutzmann 2015). Second, we assume that type  $(e, u)$  nouns compose with type  $e$  indices (Gutzmann & McCready 2014, Varaschin & Machicao y Priemer 2026). Finally, we assume that indices are realized as demonstratives in many languages (Jenks & Konate 2022).

**Data.** In a broad range of languages such as Mandarin (1-2), Korean, Japanese (Patel-Grosz 2015), Russian (*ibid.*), Hindi (*ibid.*), Kazakh, and Hungarian, epithets require the use of a demonstrative marker. In (1), for example, *hundan* ‘bastard’ requires the demonstrative *na*. Note in particular that (1) is an environment where bare nouns are also felicitous as anaphoric definites (Saha et al. 2024); the infelicity of bare nouns in (1) must therefore be attributed to its epithet meanings. In what follows, we focus primarily on data from Mandarin.

(1) Wo Zhuang le yi ge jingcha he yi ge lüshi. Jingcha yuanliang le wo,  
 I hit ASP one CL cop and one CL lawyer cop forgive ASP me  
 danshi \*(na) (ge) hundan lüshi ba wo gaoshang le fating.  
 But that CL bastard lawyer ba I press.charge ASP court  
 ‘I hit a cop and a lawyer. The cop forgave me, but that bastard lawyer took me to court.’

(2) Zhangsan shuo ta hui lai danshi \*(na) (ge) bendan mei ganshang mobanche.  
 Zhangsan said he will come but that CL idiot not catch last.train  
 ‘Zhangsan said he will come but that idiot didn’t catch the last train.’

**Two-dimensional semantics.** Following Potts (2005), McCready (2010), Gutzmann (2011, 2015), among others, we assume a multidimensional semantics where expressions have both truth-conditional (TC) and use-conditional (UC) meanings. Following Schlenker (2005), Gutzmann (2015), and Patel-Grosz (2015), we assume that epithets are such expressions. The epithet *hundan* ‘bastard’, for example, denotes both a type  $e$  individual as its TC meaning and the type  $u$  proposition that the speaker holds negative attitude towards this individual as its UC meaning.

**Type  $e$  definite determiners.** To derive this compositionally, Varaschin & Machicao y Priemer (2026) assume following Gutzmann & McCready (2014) a type-shifter they label  $*$ .  $*$  performs two functions. First, it applies to the noun *hundan* and shifts it from type  $(e, t)$  to type  $(e, u)$ . Second, it alters its denotation, such that  $*(hundan)$  denotes (3). (3) then composes with a type  $e$  definite determiner that denotes an index  $i$  to return an epithet that denotes  $g(i)$  as its TC meaning and the proposition in (3) as its UC meaning (Varaschin & Machicao y Priemer 2026).

(3)  $*(hundan) \approx \lambda x.x$  has epistemically accessible ( $\approx$  salient, stereotypical) properties normally associated w/ bastards & the speaker has negative attitudes towards such properties.

**Demonstratives.** Following Schwarz (2009), we distinguish two types of definites: plain and indexed. In plain definites, the definite determiner has the familiar denotation in (4). In indexed definites, the definite determiner instead denotes (5) (Jenks & Konate 2022’s implementation).

(5) takes two arguments, one an NP and the other an index, and returns the unique individual that satisfies

the NP description and stands in some contextually supplied relation  $R$  to the index  $y$ .  $R$  is often identity, such that  $R(x, y) = x = y$ . Other possibilities also exist, such as possessive relations (see Ahn & Zhu 2025 on relational bridging) or depiction relations (see Nunberg 1993 on deferred reference). We assume that Varaschin & Machicao y Priemer (2026)'s type  $e$  definite determiners correspond to this index  $y$ . To formalize this correspondence, we first propose that definite determiners denote (6). (6) takes an NP as its argument and returns a predicate true of individuals satisfying the NP description. Following Coppock & Beaver (2015), we assume that definites in predicative positions denote predicates, while those in argument positions denote the same predicates type-shifted by either  $\iota$  or the existential type-shifter  $EX$ . We propose that semantically, both plain and indexed definite determiners denote (6). However, syntactically, plain determiners select an NP as its complement and a covert *only* as its specifier, while indexed determiners select an index as its specifier instead. Following Chen (2026), we assume that this covert *only* denotes (8) and introduces weak uniqueness (Coppock & Beaver 2015) into plain definites. Additionally, we propose that indices denote (7). (7) is just like  $g(i)$ , but with  $R$  built in to handle, for example, relational bridging (Ahn & Zhu 2025). (Note that relational bridging is possible with epithets; (9) is one example.) We assume that when (7) is selected by an indexed determiner, it is type-shifted by  $\text{ident}$  from type  $e$  to type  $(e, t)$  in order to compose with (6) via Predicate Modification after (6) composes with an NP. Additionally, we propose that when  $*$  applies after (6) composes with an NP to return a type  $(e, u)$  expression, (7) composes directly with this expression to return a type  $e$  individual with a type  $u$  proposition (Gutzmann & McCready 2014, see also Ahn 2024). Finally, building on Jenks (2018) and Jenks & Konate (2022), we propose that (7) is realized as demonstratives in many languages, including Mandarin. Our analysis therefore explains the requirement for demonstratives in Mandarin epithets:

(7) is required in the structure of epithets, and (7) is realized as demonstratives in Mandarin.

$$(4) [D_{\text{def}}] = \lambda P_{(e,t)} \lambda x e. P(x)$$

$$(5) [D_{\text{def}}] = \lambda P_{(e,t)} \lambda y e. \lambda x e. P(x) \wedge R(x, y)$$

$$(6) [D_{\text{def}}] = \lambda P_{(e,t)} \lambda x e. P(x)$$

$$(7) [i] = \iota x. R(x, g(i))$$

$$(8) [\emptyset_{\text{only}}] = \lambda P_{(e,t)} \lambda x e: P(x). \forall y e [y \neq x \rightarrow \neg P(y)]$$

(cf. Coppock & Beaver 2015)

(9) Wo xihuan zhe shou ge, danshi wo taoyan \*(na) (ge) hundan geshou.

I like this<sub>CL</sub> song but I dislike that<sub>CL</sub> bastard singer

'I like this song, but I dislike that bastard singer.'

**Other languages.** In languages where demonstrative and definite articles co-occur such as Hungarian, epithets also require the demonstrative article. we assume that in sentences like (10), the definite article realizes (6), while the demonstrative article realizes (7). Languages like Hungarian therefore confirm that both (6) and (7) are present in the structure of epithets.

(10) János el-jö-tt a buli-ba, de \*(az) a disznó nem tud-t-a,

JÁNOS PRT-COME-PST.3SG-INDF the party-in but that the pig not know

hogy kell viselked-ni

PST-3SG-DEF need behave-INF

'János came to the party but that pig did not know how to behave.'

**Affective & derogatory uses of demonstratives.** In many languages, demonstratives have affective or derogatory uses. (See Potts & Schwarz 2010 on English and Bonney 2022 on Akan.) In Mandarin, using *na* with a proper name can also result in an emotive interpretation. In (11), for example, the speaker can be interpreted to hold either a negative attitude towards Zhangsan (if the speaker is spiteful of Zhangsan's productivity) or a positive attitude (if the speaker admires Zhangsan's productivity). Because generic names like *Zhangsan* are unlikely to have positive or negative attitudes already associated with them, any UC meaning associated with Zhangsan in (11) must come from the application of  $*$ . Taking inspirations

from Orlando & Saab (2020) (but departing from Varaschin & Machicao y Priemer 2026), we propose that these attitudes are de-ri-ved from the cluster of properties obtained from applying \* to *Zhangsan*. If the speaker holds a negative attitude towards the properties \* returns, then (11) receives a derogatory interpretation. If the speaker holds a positive attitude, then (11) receives an affective interpretation.

- (11) Na ge Zhangsan you fabiao le yi pian wenzhang!  
 that<sub>CL</sub> Zhangsan again publish<sub>ASP</sub> ONE<sub>CL</sub> paper  
 ‘That Zhangsan published a paper again!’

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## NP-fronting in Shizhu vs. N-to-D in Zunyi: On shifts in movement type

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**Introduction** This study examines the DP-internal N(P)-fronting strategies in Shizhu and Zunyi, two Southwestern Mandarin varieties, and discusses what they inform us of the nature of syntactic change in general. In both Mandarin dialects, the basic nominal order is Num>CL>N(P):

- (1) a. *san -zi bi* (Shizhu)      b. *san -zi bie* (Zunyi)  
       three -CL pen ‘three pens’      three -CL pen ‘three pens’

Interestingly, the N(P) in the two dialects can be fronted to a pre-(Num)-CL position, obligatorily resulting in a definite reading (see Chen 2025 for Shizhu and Ye 2021 for Zunyi). First, (2a) & (2b) both mean ‘*the pen was expensive*’ with the noun-initial nominal being used in an anaphoric context. Second, in the post-unaccusative position where only indefinites are allowed (3b), an N(P)-(Num)-CL would lead to ungrammaticality (3a). Third, (4) shows the fronted N(P) forms a constituent with the following (Num)-CL, because the N(P)-(Num)-CL can freely occur post-verbally:

- (2) *Zhangsan bought a book and a pen...*  
 a. *Bi (yi) -zi he gui.* (Shizhu)      b. *Bie -zi hen gui.* (Zunyi)  
    pen one -CL very expensive      pen -CL very expensive
- (3) a. \**Tai-sang zo-qi yanyuan (yi/ye) -go.* (Shizhu & Zunyi)  
       stage-on sit-ASP actor one -CL intended: ‘??On the stage sits the actor.’  
 b. *Tai-sang zo-qi (yi/ye -go) yanyuan.* ‘On the stage sits/sit an actor/actors.’
- (4) a. *Han pongyou (yi) -go lai bangmang.* (Shizhu)  
       Ask friend one -CL come help ‘Ask the friend to help.’  
 b. *Han pongyou -go lai bangmang.* (Zunyi)  
       ask friend -CL come help ‘Ask the friend to help.’

**Data** Though they look similar, Shizhu NP-(Num)-CLs and Zunyi N-CLs have different underlying structures. First, an overt numeral can only occur in the Shizhu NP-(Num)-CL (5a), but strictly not in the Zunyi N-CL (5b):

- (5) a. *bi Ø/yi/liang -zi* (Shizhu)      b. *bie (\*ye/\*liang) -zi* (Zunyi)  
       pen e/one/two -CL ‘the pen/the two pens’      pen (\*one/\*two) -CL ‘the pen’

Second, only in a Shizhu N-(Num)-CL (6a), but not in a Zunyi N-CL (6b), can an adjective occur. (6a) implies there is a unique *white coat*; there can be coats in other colors in the context:

- (6) a. *be-di yifu (yi) -jian* (Shizhu)      b. \**bae-di yife -jian* (Zunyi)  
       white-DE coat (one) -CL ‘the white coat’      white-DE coat -CL

Third, although in both Shizhu and Zunyi, a possessor can in principle co-occur with the N(P)-fronting constructions, the possessor receives very different interpretations in the two varieties:

- (7) a. *Ngo-di yifu (yi) -jian; bi la-jian yifu; hao-kan.* (Shizhu)  
       1SG-DE coat (one) -CL compare that-CL coat good-looking  
       ‘My coat looks better than that coat.’  
 b. #*Ngo-di yife -jian; bi a-jian yife; hao-kan.* (Zunyi)  
       1SG-DE coat -CL compare that-CL coat good-looking  
       ‘#The coat, which is mine, looks better than that coat.’ (Ye 2021)

(7a) is natural: There is one unique *coat of mine*. (7b), however, is infelicitous—the reason is that in Zunyi (7b), the definite N-CL presupposes that there is one unique *coat* in the context, and that coat belongs to

me, i.e., the possessor may only receive a non-restrictive reading in (7b).

**Analysis** I argue that (i) the definite NP-(Num)-CL in Shizhu derives from NP-raising, and (ii) the Zunyi N-CL results from head movement of N, both to the D-layer (the NP/DP debate is left aside for ease of exposition; Bošković 2008). Following Tang (1990) and many others, I assume (8) to be the DP structure shared by all Chinese languages, where the numeral and the classifier are both heads (other possible structural analyses will be discussed, though nothing hinges on the choice):

(8) [DP [NumP numeral [CLP classifier [NP noun ]]]]

Shizhu *bi (yi) -zi* ‘pen (one) -CL’ and Zunyi *bie -zi* ‘pen -CL’ are derived in the following ways, respectively, where the DP is projected by a null definite D head (cf. Lyons 1999):

(9) a. [DP [NP *bi* ]<sub>i</sub> [NumP (*yi*) [CLP *-zi* [~~NP *bi*~~ ]<sub>i</sub> ]]] (cf. Shizhu (2a))

b. [DP *bi<sub>i</sub>-zi* [NumP ~~*bi<sub>i</sub>-zi*~~ [CLP ~~*bi<sub>i</sub>-zi*~~ [NP [~~N *bi<sub>i</sub>*~~ ]]]]] (cf. Zunyi (2b))

In Shizhu (9a), the NP moves to SpecDP (cf. Syed & Simpson 2019 on NP-fronting in Bangla), while in Zunyi (9b), the N moves to CL<sup>0</sup> and carries the classifier, and then the N-CL cluster moves to Num<sup>0</sup> and then to D<sup>0</sup>. Alternatively, one could adopt a non-DP analysis and simply say that there is N-to-CL movement, CLP being the highest projection in (9b) (note that the CLP is independently argued to be responsible for definiteness in some Chinese languages; Cheng & Sybesma 1999, a.o.). The contrasts in (5–7) are thus all expected. First (5), an overt numeral in Zunyi would block the head movement of N or the N-CL cluster (9b). The movement can neither (i) skip the numeral, due to the Head Movement Constraint, nor (ii) carry it: One would then expect an N>CL>Num order, which violates a PF constraint that (overt) numerals are always prefixal in Chinese (i.e., a numeral must form a prosodic constituent with a following classifier). The phonologically well-formed N>Num>CL order is also not derivable in Zunyi since the noun must first merge with the classifier. By contrast, in Shizhu (5a), nothing prevents the NP from undergoing phrasal movement to SpecDP. Second (6), only NP-raising, rather than N-to-D movement, can carry an adjective. I assume the adjective is NP-adjoined in Chinese; it can move with the noun only in (9a) but not in (9b). Third (7), the contrast crucially shows the uniqueness presupposition induced by D is satisfied by the possessive *plus* the noun in Shizhu (7a), but by the noun alone in Zunyi (7b). I argue in Shizhu (7a), the possessor is NP-adjoined and raises together with the noun, whereas in Zunyi (7b) the pre-N-CL possessor is base generated and DP-adjoined, as illustrated in (10):

(10) a. [DP [NP POSS-N] D<sup>0</sup> ... [~~NP POSS-N~~ ] (Shizhu)

b. [DP POSS- [DP N-CL-D<sup>0</sup> [NumP ... ]]] (Zunyi)

Independent evidence will be given to support the suggested distinction that Chinese adjectives can only be adjoined to NP, while possessives are either NP- or DP-adjoined (cf. Alexiadou *et al.* 2007). Note there is nothing special about this: There are also two positions for possessors in English (*John's book* vs. *book of John*), but only one for adjectives (*the red book* vs. *\*red the book*).

**Discussion** Since Shizhu and Zunyi are two mutually intelligible varieties of Southwestern Mandarin spoken in geographically close areas, and N(P)-initial definites are unattested in other Sinitic languages outside the Shizhu-Zunyi region, it is reasonable to suggest that the two N(P)-fronting strategies did not develop independently, but they are genetically related. Specifically, I will provide evidence to show that the Zunyi case is historically derived from the Shizhu case, i.e., there was a recent stage when Zunyi behaved exactly like Shizhu regarding NP-fronting, but the strategy has become a case of head movement (the origin of the Shizhu case is an independently important issue and will be briefly addressed in the presentation, but I put it aside here):

(11) [DP NP [NumP (Num) [CLP CL NP ]]] => [DP N-CL [NumP ~~N-CL~~ [CLP ~~N-CL~~ [NP ~~N~~ ]]]]

(11) is a case of diachronic reanalysis, where the specifier of the DP gets lost. Note that the loss of a specifier is a frequently reported kind of diachronic change (e.g., *wh*-phrases in SpecCP are commonly reanalyzed

as C heads; van Gelderen 2004). While there are several formal accounts of this sort of phenomenon (Dadan 2019, Bošković 2021, van Gelderen 2023), the Shizhu/Zunyi case is interesting in that the change in (11) is not a typical Spec-to-head reanalysis: The fronted N(P) by itself does not get reanalyzed as a functional head—it remains lexical. What is observed in (11) is crucially a historical change from phrasal movement to head movement, the loss of a specifier being a byproduct. That is, the reanalysis does not involve a single syntactic element, but the entire derivation. The theoretical motivation for this kind of change will be discussed. I will also show that the change from phrasal to head movement is not rare; similar cases can be found in the history of the *li*-construction in Serbo-Croatian (Bošković 2001), as well as in the loss of *wh*-fronting in Chinese (see Aldridge 2023, where it is argued that *wh*-fronting first becomes head movement in Early Middle Chinese before the operation is entirely lost).

*See Ref.* [Aldridge 2023](#) *Journal of Historical Syntax* // [Bošković 2021](#) Generalized asymmetry // [Dadan 2019](#) PhD thesis // [van Gelderen 2004](#) *Grammaticalization as Economy* // [Tang 1990](#) PhD thesis // [Ye 2021](#) Zunyi N-CL, *Dialects*

## On the syntax of nominal *de*-construction in Chinese

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This study investigates the syntax of *de*-construction in Chinese, with a special focus on the interplay between syntactic structure and argument structure in the nominal domain.

One of the central issues concerning the syntax of nominal *de*-construction is the branching direction of the structure. In other words, the key issue is whether *de* firstly merges with the possessor or with the nominal head, resulting in the two structures in (1b) and (1c).

- (1) a. Zhangsan de shu / diaocha  
       Zhangsan De book investigation  
       ‘Zhangsan’s book/investigation’  
       b. Left branching: [[Zhangsan de] shu/diaocha]  
       c. Right branching: [Zhangsan [de shu/diaocha]]

There is a long debate on the branching direction of *de*-construction in the literature. On the one hand, Si (2004, 2009), Xiong (2005), Yang (2017) and others argue for the left branching structure of nominals; on the other hand, Tang (2006), Shi (2008), He and Jiang (2011) etc. argue for the right branching structure.

In this study, we argue that the two approaches on the syntax of nominal *de*-construction are not totally contradictory. Instead, they are assigned to two different types of nominals. Our proposal is built upon a classification of Mandarin nominals. Specifically, a nominal either can license an argument structure or cannot, which correspond to, in Borer’s (2013, 2014) terminology, A(rgument)S(tructure) nominal and non-AS nominal respectively. Based on Deng (2021a), we argue that **only** the former type can serve as the object of an abstract verb (cf. (2a)), co-occur with an agent-oriented adjectives (cf. (2b)), and have a fixed theta relation with its genitive specifier. Besides, we would like to point out that the AS/non-AS distinction cannot be confused with or reduced to the morphological derivedness or eventivity reading of the relevant nominals.

- (2) a. Zhangsan dui dangdi fangyan **jiayi** diaocha / \*huiyi.  
       Zhangsan to local dialect V<sub>abstract</sub> investigation conference  
       ‘Zhangsan conducted an investigation/\*conference of the local dialect.’  
       b. Zhangsan de san-ci dui dangdi fangyan de **xiaoxinyiyide** diaocha / \*huiyi  
       Zhangsan De three-CL<sub>V</sub> to local dialect De careful investigation conference  
       ‘Zhangsan’s careful investigation/\*conference of the local dialect for three times’

Regarding the syntax of *de*-constructions, we propose that **the branching direction is determined by the argument structure property of the head noun**. Specifically, the right-branching structure should be assigned to AS nominals, in which *de* serves to introduce its specifier as an argument of the head noun, while the left-branching structure characterizes the structure of non-AS nominals, in which *de*P constitutes an adjunct modifier.

- (3) a. AS nominal: [DP D [<sub>deP</sub> [<sub>DP</sub> zhe-ben shu] [<sub>de</sub> de [<sub>NP</sub> **chuban**]]]]  
       b. non-AS nominal: [DP D [<sub>NP</sub> [<sub>ModP</sub> [<sub>DP</sub> Zhangsan] Mod-de] [<sub>NP</sub> **shu**]]]

The empirical support for the different structures comes mainly from the parallelism between non-AS nominal and relative clause as well as the parallelism between AS nominal and noun complement clause. As shown in (4) and (5), non-AS nominals, as well as their relative clause counterparts, can be licensed in both topicalized constructions and cleft sentences. On the contrary, AS nominals, like noun complement clauses, are banned in these two constructions, as indicated in (6) and (7)

- (4) Topicalized Construction (4) Topicalized Construction  
       a. Non-AS nominal (LBS): a. AS nominal (RBS):

Shu, [Zhangsan de] zui-hao.  
book Zhangsan De best  
'In terms of books, Zhangsan's are the best.'

\*Pohuai, [zhe-zuo chengshi de] hen yanzhong.  
destruction this-CL<sub>N</sub> city De very severe  
'\*In terms of destruction, this city's  
destruction is very severe.'

b. Relative clause (LBS):

Shu, [Zhangsan xie de e] zui-hao  
book Zhangsan write De best  
'In terms of books, the one that  
Zhangsan wrote is the best.'

b. Noun complement clause (RBS):

\*Zhe-ge xiaoxi, [Zhangsan jiehun  
this-CL<sub>N</sub> message Zhangsan marry  
de e] zui rang ren kaixin.  
De most make people happy  
'\*This message, that Zhangsan got married  
is the most pleasing one.'

(5) Cleft Sentence

a. Non-AS nominals (LBS):

Zhe-ben shu shi [Zhangsan de].  
this-CL<sub>N</sub> book be Zhangsan De  
'This book is Zhangsan's.'

(7) Cleft Sentence

a. AS nominal (RBS):

\*Zhe-ci chuban shi [zhe-ben shu de].  
this-CL<sub>V</sub> publication be this-CL<sub>N</sub> book De  
'\*This publication is for this book.'

b. Relative clause (LBS):

Zhe-ben shu shi [Zhangsan xie de e].  
this-CL<sub>N</sub> book be Zhangsan write De  
'This book was written by Zhangsan.'

b. Noun complement clause (RBS)

\*Zhe-ge xiaoxi shi [Zhangsan jiehun de e].  
this-CL<sub>N</sub> message be Zhangsan marry De  
'\*The message is that Zhangsan got married.'

The parallel syntactic behaviors suggest the parallelism in the relevant structures. Specifically, the grammatical position of pre-*de* DP in AS nominal phrases should be the same as that of noun complement clauses, i.e., arguments at Spec position (cf. Deng 2021b), and the possessors in non-AS nominals are analogous to relative clauses, which are adjuncts. In another word, AS and non-AS nominal should be assigned the right-branching structure and left branching structure respectively.

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## A novel perspective on Mandarin *hekuang* (*let alone*) in light of *dou* (*even*)

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**1. Intro.** Consider *hekuang* in (1) (and its English equivalent *let alone*). Intuitively, the part before *hekuang* is more informative than the part thereafter: If John can't solve the easy problems, it is reasonable to infer that he can't solve the hard problems; and this is indeed the inference triggered in (1). [5] argues that English *let alone* involves a full proposition  $p$  and a fragmented proposition  $q$  that contrast minimally in the focused part (*easy problems* vs. *hard problems* in (1)), as in the schema  $p$  *let alone*  $q$ . Following [5],  $p$  *let alone*  $q$  asserts that  $p$  is true and presupposes that  $p$  (pragmatically / logically) entails  $q$ . Adopting for Mandarin *hekuang* [5]'s semantics of English *let alone*, the inference that John can't solve the hard problems in (1) is immediately captured via the presupposition. But this semantics fails to explain a crucial aspect about *hekuang*. That is, in the construction  $p$  *hekuang* (*let alone*)  $q$ , although  $p$  is more informative than  $q$  (, which is captured by [5]'s semantics where  $p$  is presupposed to pragmatically / logically entail  $q$ ), the emphasis of the entire construction falls on  $q$  (or more precisely, the focused part in  $q$  (i.e., *the hard problems*)) and  $q$  feels stronger than  $p$  in some sense (to be made precise in our proposal). The stronger flavor associated with  $q$  can be explicitly marked: *geng*, widely taken to be a comparative marker, can be optionally inserted immediately before *hekuang* (see the optional *geng* in (1)), signaling that  $q$  is somehow stronger than  $p$ . Note that [2] makes a similar observation about English  $p$  *let alone*  $q$ : though  $p$  is more informative than  $q$ , “the speech act performed through the B clause [i.e.,  $q$ ] is more certain, more emphatic.” It is unclear **how the emphasis on  $q$  and  $q$  being stronger than  $p$  in some sense can be accounted for** if we adopt [5]'s semantics for *hekuang* (, neither can [5] explain the parallel effects with English *let alone*). This paper aims to offer an account for *hekuang* as in  $p$  *hekuang*  $q$  that can capture both aspects: on the one hand,  $p$  is more informative than  $q$ , and, on the other hand, the the emphasis of the entire construction falls on  $q$  and  $q$  is stronger than  $p$  in some sense.

(1) Yuehan zuo bu chu [jiandande ti]<sub>F</sub>, (*geng*) **hekuang** [nande ti]<sub>F</sub>.

John do NEG out easy problem more let.alone hard problem

John can't solve [the easy problems]<sub>F</sub>, **let alone** [the hard ones]<sub>F</sub>.

To achieve this goal, we draw on (i) the observation that *hekuang* often co-occurs with another much better studied operator *dou* on its *even*-like scalar use (scalar *dou* henceforth), as exemplified in (2B) where *dou* is most naturally glossed as *even* (see also the same co-occurrence pattern of English *let alone* and *even* in the translation), and (ii) a recent degree-based semantics of scalar *dou* by [1]. We will propose that *hekuang*, by reversing the perspective, works in the opposite way in which scalar *dou* works.

(2) A: Does John drink whiskey?

B: ta [pijiu]<sub>F</sub> **dou** bu he, **hekuang** [weishiji]<sub>F</sub>.

3SG beer **even** NEG drink **let.alone** whiskey

He doesn't **even** drink [beer]<sub>F</sub>, **let alone** [whiskey]<sub>F</sub>.

**2. Preliminaries: The degree-based semantics of scalar *dou*** Scalar *dou* is a well-studied focus-sensitive operator. [1]'s recent degree-based modeling of scalar *dou* involves essentially two closely correlated but distinct scales: a contextually determined  $G$  scale  $S_G$  that targets some non-focused item  $x$  in the prejacent, and a distinct scale  $S_{alt}$  which orders the the focused item and its alternatives. (see [3,6] for similar modelings of English *even*; see [7] for a similar move for scalar *dou*.) Take the first conjunct in (2B) (= (3)), for instance.

(3) ta [pijiu]<sub>F</sub> **dou** bu he. (He doesn't **even** drink [beer]<sub>F</sub>) (=the *dou*-hosting conjunct in (2B))

Let's assume that the non-focused item  $x$  is *John*, and the contextually determined  $S_G$  scale is scale of *health-orientedness*, and the focused item *beer* and its salient alternative *whiskey* are ordered on e.g., the scale of alcoholic intensity. Following [1], with (3), the speaker targets the degree of the non-focused item *John* on the  $S_G$  of health-orientedness by talking about beverages of which alcoholic intensity ( $S_{alt}$ ) (i.e., the focused item and its alternative) he does not drink. Specifically, following [1], (3) is interpreted as follows in prose: it contributes (a) a superlative presupposition that John is more health-oriented in the accessible  $p$  worlds where the prejacent holds (*John doesn't drink beer*) than in the accessible  $[q \wedge \neg p]$  worlds where its alternative proposition holds but the prejacent does not (*John doesn't drink whiskey but drinks beer*), and (b) an evaluative presupposition that John is positively health-oriented in such  $[q \wedge \neg p]$  worlds (, since he is more health-oriented in  $p$  worlds, he is positively health-oriented in  $p$  worlds as well). As can be seen, **the *dou*-hosting proposition (*dou p*) targets the degree of the non-focused item on  $S_G$  by relating it to the relative ranking of the focused item vs. its alternatives on  $S_{alt}$ .**

**3. The Proposal** We propose that the interpretation of *hekuang* also involves two scales (see [2] as a predecessor), a scale  $S_G$  that targets some non-focused item  $x$  and a scale  $S_{alt}$  that orders the focused item in  $q$  ( $Q_{foc}$ ) and its salient alternative  $P_{foc}$  (i.e., the focused item in  $p$ ), but precisely in the opposite of scalar *dou*, *hekuang* reverses the perspective by targeting the degree of the focused item  $Q_{foc}$  and its alternative  $P_{foc}$  on  $S_{alt}$  in light of the non-focused item  $x$ 's degree on  $S_G$ , and requires  $Q_{foc}$  to outrank  $P_{foc}$  on  $S_{alt}$ . This proposal immediately explains why the emphasis of the entire construction falls on  $q$ .

Now reconsider (2). Following our proposal, two scales are involved here. Like above, we assume that the non-focused item is *John*, and  $S_G$  concerns *health-orientedness*;  $P_{foc}$  and  $Q_{foc}$  are, respectively, *beer* and *whiskey*, and we take them to be ordered on the scale of alcoholic intensity. (2A) inquires whether John drinks whiskey. (2B), by uttering '*he doesn't (even) drink [beer]<sub>F</sub>*', does not answer the question directly; instead, (2B) provides information about how health-oriented ( $S_G$ ) John, the non-focused item, is by talking about beverage of which alcoholic intensity he does not drink: John is health-oriented to the extent that he doesn't even drink beer ( $P_{foc}$ ). Then, in light of John's degree of *health-orientedness* provided by  $p$ , *hekuang* reverses the perspective by targeting the degree of  $Q_{foc}$  *whiskey* on the scale of  $S_{alt}$ . Given the updated information that John is so health-oriented that he doesn't even drink beer, *beer* ( $P_{foc}$ ), then, is clearly unsuitably alcoholic for him, and crucially, *whiskey* ( $Q_{foc}$ ) is even more unsuitably alcoholic for him. We suggest that this is precisely why in the construction  $p$  *hekuang*  $q$ ,  $q$  is intuitively stronger: it is stronger in the sense that  $Q_{foc}$  is higher on  $S_{alt}$  than  $P_{foc}$  in light of  $x$ 's degree on  $S_G$ . Note that our proposal also explains why  $p$  is more informative than  $q$ : It is more informative in the sense that  $x$ 's degree on the  $S_G$  is higher in  $p$  than in  $q$  (e.g., John's degree of *health-orientedness* is higher in  $p$  worlds where he doesn't even drink beer than in  $[q \wedge \neg p]$  worlds where he drinks beer but no whisky.

**4. One welcome result** Recall that existing theories of English *let alone* take it to conjoin two propositions that contrast minimally in the focused part. Assuming such theories for *hekuang* predicts (4) to conjoin (a) *John almost failed to solve the easy problems*, and (b) *John almost failed to solve the hard problems*. But intuitively, (4) means that John almost failed to solve the easy problems and that John DID NOT solve the hard problems. (see [2,5] for similar observations for English *let alone*.) Our proposal is free of this issue and can capture this inference. We assume that John is the non-focused item measured on the  $S_G$  of *unpreparedness for the test* and that *easy problems* vs. *hard problems* are ordered on the  $S_{alt}$  of difficulty. The first conjunct provides information about how unprepared John was for the test. Given the update that he was unprepared to the extent that easy problems ( $P_{foc}$ ) were difficult for him, the hard problems, the  $Q_{foc}$  targeted by *hekuang*, is even more difficult for him, thus the inference John didn't solve them.

(4) Yuehan chadian mei zuochu jiandande ti, (geng) *hekuang* nande ti.

John almost NEG work.out easy problems more let.alone hard problem

John almost failed to solve the easy problems, *let alone* the hard ones.

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## Sentence-final negation questions from a comparative perspective

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**Introduction.** Forming yes-no questions with sentence-final negation (SFNQs) is a prominent feature of Sinitic languages (Cheng et al. 1997, Hsieh 2001, Pan 2019, *i.a.*) and nearby (South)east Asian languages (e.g., Vietnamese, Duffield 2013). Mandarin SFNQs are formed with irrealis negation *bu* and perfective negation *mei(you)* as in (1). They differ from yes-no question (YNQ) particles (e.g., *ma/ba* in (2)) in requiring verbal answers and are usually analyzed as genuine negation (e.g., Tang 2016, cf. Cheng’s et al. 1997 Neg-to-C “reanalysis”), forming polar alternatives  $\{p, \neg p\}$  that license *daodi* ‘truly’ (which requires alternatives, Huang & Ochi 2004). Nevertheless, SFNs may be grammaticalized into YNQ particles (e.g., *ma* from *wu* ‘not have’ SFNQs in Middle Chinese, see Lü 1956, Wang 1980, a.o.).

(1) Q: Ta (daodi) chi-guo liulian {**bu/ mei(you)**}?  
 s/he truly eat-EXP durian SFN SFN  
 ‘Has s/he eaten durians?’  
 A: \*Dui. / chi-guo.  
 yes eat-EXP  
 ‘Yes. / (S/he) has eaten.’

(2) Q: Ta chi-guo liulian {**ma/ ba**}?  
 s/he eat-EXP durian SFP.QSFP.Q ‘Has s/he eaten durians?’ yes ‘Yes.’  
 A: Dui.

**Goal.** Reporting elicited data (Mandarin n =10, Hong Kong Cantonese n =2), this comparative study shows that SFNQs form a continuum regarding the syntactic status of SFNs (=Neg or not) and height (>TP or not), and proposes a formal account of the grammaticalization path of SFNQs to YNQs.

**Contrasting *bu* and *mei(you)* SFNQs in Mandarin.** We present four arguments demonstrating that *bu* and *mei(you)* SFNQs differ in (i) relation to the negative counterpart and (ii) syntactic height.

① **Aspectual restriction.** While preverbal negation *bu* is not compatible with experiential *-guo* in (3), SFN *bu* in (1) is (unlike Taiwan Mandarin in Cheng et al. 1997:73). In contrast, negation *mei* is incompatible with stative predicates as well as in SFNQs, as in (4). The retainment of such restrictions is taken to be evidence for base-generation of SFN *mei* at Neg by Cheng et al. (1997).

(3) Ta {**\*bu/ mei(you)**} chi-guo liulian.  
 s/he NEG NEG.PFV eat-EXP durian ‘S/he hasn’t eaten durians.’

(4) a. Ta {**bu/ \*mei(you)**} shi xuesheng.                      b. Ta shi xuesheng {**bu/ \*mei(you)**}?  
 s/he NEG NEG.PFV be student                      s/he be student SFN SFN  
 Int.: ‘S/he {is not/ has not been} a student.’                      ‘Is s/he a student?’/ Int.: ‘Has s/he been a student?’

② **Embeddability.** We observe in (5) that *bu*, unlike *mei*, cannot be embedded in unconditionals with *wulun* ‘no matter’, which also requires alternatives like *daodi*. Assuming that *wulun* projects C (Tsai 2008, Tang 2022), (5) suggests that *mei* is lower than CP while *bu* is either at C or higher.

(5) Wulun ta chi-guo liulian {**\*bu/mei(you)**}, ta dou yao shuaya.  
 no.matter s/he eat-EXP durian SFNSFN                      s/he also must brush.tooth.  
 ‘No matter whether s/he has eaten durians or not, s/he has to brush his/her teeth.’

③ **Wh-indefinite subject licensing.** Mandarin *wh* behaves like NPIs and can have an indefinite reading under negation (Li 1992, Lin 2004), including A-not-A questions (i.e., with  $\{p, \neg p\}$  too). In (6), a *wh*-indefinite subject is only licensed in *bu* SFNQs, showing that *bu* is higher than SpecTP.

(6) Shenme ren xihuan(-guo) Zhangsan {**bu/ ??mei(you)**}?  
 what person like-EXP Zhangsan SFN SFN Int: ‘Has/does anyone like(d) ZS?’

④ **Intervention effects.** Subjects with ‘only’ focus and quantificational adverbs (in the TP domain, Tsai & Yang 2015, 2026) are disallowed in *mei* SFNQs but not in *bu* SFNQs. Assuming that SFNs establish a dependency with a question operator (cf. Cheng’s 1991 C with [+Q]), (7)-(8) suggest that *bu* is higher than TP such that quantificational elements within TP do not trigger intervention.

(7) [In a tea break, the only fruit was durians which no (8) ZS jingchang shuaya {**bu/\*mei(you)**}?



## Circumventing intervention through association: An experimental investigation

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**1 Background.** The focus feature of *wh*-phrases (WHPs) is crucial for illuminating their linguistic nature. Focus intervention effects (FIEs)—the degraded acceptability of WHPs following focus elements—offer a unique window into their focus contribution. Consider Mandarin examples (1) and (2). The focused phrase (FP) *Libai* associated with *zhǐyǒu* ‘only’, a focus particle (F-particle), blocks the following WHP, as in (1), unless the WHP is fronted over the focus elements, as in (2).

- |  |   |
|--|---|
| <p>(1) ?#<b>Zhǐyǒu</b> <u>Lǐbái</u> xǐhuān shéi?<br/>only LB like who<br/>Intended reading = (2)</p> | <p>(2) Shì shéi, <b>zhǐyǒu</b> <u>Lǐbái</u> xǐhuān?<br/>be who only LB like<br/>‘Who does only Libai like?’</p> |
|--|---|

Given that fronting is the canonical repair strategy, existing accounts converge on the generalization that WHPs and FPs cannot co-occur within the scope of an F-particle, despite other distinctions (Beck 2006; Tomioka 2007; Li & Law 2016; Erlewine 2025; a.o.).

**2 Main point.** Based on two experiments, this study identifies an overlooked pattern: an F-particle can associate with both a WHP and an FP within its scope, providing an additional strategy for circumventing FIEs. The result challenges the prevailing generalization and suggests that FIEs arise not only from co-occurrence within the scope of an F-particle, but from specific association patterns, thereby calling for a re-evaluation of their theoretical source.

**3 Testing dual association.** WHPs share a core property with FPs: both can participate in focus association, entering into dependencies with F-particles. As Aoun & Li (1993) and Li & Law (2016) note, WHPs can associate with F-particles (e.g., (3)). While association with WHPs is well attested, it remains unclear **if an F-particle can simultaneously associate with both a WHP and an FP (so-called dual association) and thereby circumvent FIEs.**

- (3) Lǐbái **zhǐ** dú-guò nǎ-běn shū?  
LB only read-PFV which-CLF book  
‘What is the book *x* such that Libai read only *x*?’ ⇒ Libai read only the book.

**Experiment 1.** To address this question, we conducted an experiment ( $n = 81$ ) manipulating association patterns in FIE configurations. The study employed a  $2 \times 2$  design crossing Context and Structure. Context distinguished between a dual-association (DA) condition and a single-association (SA) condition. In the DA context (e.g., (4)-A), a unique person–book pair is established. In the SA context (e.g., (5)-A), association with a single focus is supported, indicating that Libai bought a book exclusively for Dufu.

- (4) A : Lǐbái gěi Dùfǔ mǎi-le yì-běn shū, érqǐě tā méi gěi qítā rènghé rén mǎi-guò shū.  
LB to DF buy-PFV one-CLF book and he not to other any person buy-EXP book  
‘Libai bought a book for Dufu and he didn’t buy any book for anyone else.’  
B : Nà Lǐbái **zhǐ** gěi Dùfǔ mǎi-le nǎ-běn shū? (DA-FWH)  
then LB only to DF buy-PFV which-CLF book  
B’ : Nà shì nǎ-běn shū, Lǐbái **zhǐ** gěi Dùfǔ mǎi-le? (DA-WHF)  
then be which-CLF book LB only to DF buy-PFV  
‘Then, what is the book *x* such that Libai bought only *x* for DUFU?’

- (5) A : Lǐbái gěi Dùfǔ mǎi-le hěnduō shū, érqǐè qízhōng yǒu yì-běn, tā méi gěi qítā  
 LB to DF buy-PFV many book and among have one-CLF he not to other  
 rènghé rén mǎi-guò.  
 any person buy-EXP  
 ‘Libai bought many books for Dufu. Among those books, there was one that he has  
 never bought for others.’
- B : Nà Lǐbái zhǐ gěi Dùfǔ mǎi-le nǎ-běn shū? (SA-FWH)  
 then LB only to DF buy-PFV which-CLF book
- B’ : Nà shì nǎ-běn shū, Lǐbái zhǐ gěi Dùfǔ mǎi-le? (SA-WHF)  
 then be which-CLF book LB only to DF buy-PFV  
 ‘Then, what is the book *x* such that Libai bought *x* only for DuFu?’

Structure contrasted FIEs with their fronting counterparts, corresponding to the *wh*-questions in (4) and (5). (4)-B/B’ targets the identity of the book in the unique person–book pair. More concretely, *zhǐ* ‘only’ in B associates with both *Dufu* and the WHP, aligning with the established pair in (4)-A. Under (5)-A, however, (5)-B/B’ asks for the identity of the book that Libai bought solely for Dufu, that is, *zhǐ* ‘only’ in B associates with *Dufu* rather than with the WHP.

**Experiment 2.** To control for potential confounds arising from discourse coherence between contexts and follow-up questions, we conducted a second experiment ( $n = 86$ ) measuring the acceptability of FIEs and fronting configurations **without contextual support**, alongside baseline in-situ *wh*-questions (WH-IS) and standard *wh*-fronting questions (WH-FRONT).

**Results.** Acceptability ratings (Fig. 1 and 2) were analyzed using Cumulative Link Mixed Models. In Exp-1, SA-FWH scored significantly worse than all other conditions, but **the DA context reversed this structural asymmetry, making FWH significantly preferred over WHF** ( $z = 3.99$ ,  $p < .001$ ). In Exp-2, WH-IS outperformed all other configurations, and WHF was significantly more acceptable than FWH ( $z = 2.82$ ,  $p = .025$ ). Furthermore, *k*-means clustering for both experiments identified individual variation. While a “permissive” subgroup exhibited ceiling effects throughout, the core patterns were driven by “interaction-sensitive” and “strict” subgroups, for whom the restorative effect of DA was maximally instantiated.

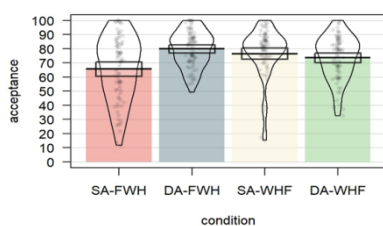


Fig. 1: Responses (Exp-1)

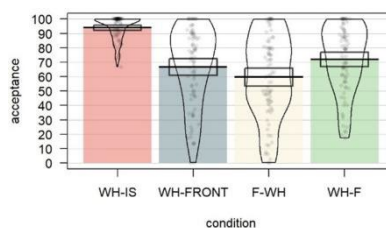


Fig. 2: Responses (Exp-2)

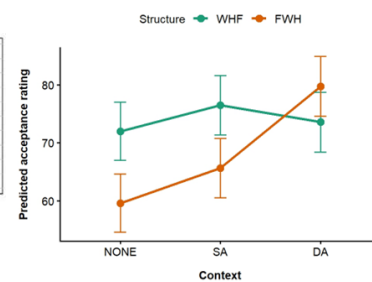


Fig. 3: Predicted rating

An integrated analysis further evaluated the Structure (FWH, WHF)  $\times$  Context (NONE, SA, DA) interaction via difference-in-differences comparisons. In Fig. 3, while the gap between WHF and FWH remained statistically unchanged between the baseline and the SA context ( $p = .871$ ), it was significantly modulated and indeed reversed by the DA context ( $p < .0001$ ). Under SA, both WHF and FWH exhibited parallel improvement relative to the baseline. By contrast, DA produced a crossover interaction: whereas WHF showed only modest gains, FWH exhibited a substantial increase, resulting in a reversal of the baseline preference.

**4 Conclusion.** The parallel improvement across structures under SA indicates that FIEs robustly persist under single association, while the crossover interaction under DA reveals that dual

association reliably neutralizes the FIE. Taken together, it is confirmed that FIEs depend on association patterns of F-particles, rather than on structural configuration alone. These results provide compelling evidence for an association-sensitive account of FIEs.

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Second, anchoring shifts: in declaratives *weibi* targets the **addressee's commitment** ( $\Box_A\phi$ ) while in PQs it targets the **speaker's own inference** ( $\Box_S\phi$ ).

This asymmetry raises a further question: why does anaphoric  $\Box_A\phi$  correlate with declaratives, and accommodated  $\Box_S\phi$  with questions? We suggest that the answer lies in the discourse organization and the status of QUD. When  $\Box\phi$  is anaphoric, the issue  $\phi$  is already on the Table, and *weibi* appears in a declarative to engage the addressee in negotiating that QUD. By contrast, when  $\Box\phi$  is accommodated, the issue  $\phi$  is not yet under discussion; in that case, *weibi* surfaces in a question to introduce the issue, signaling a strategy of inquiry.

**3. Deriving negative bias.** Following Romero & Han (2004), Krifka (2017), and Goodhue (2022), we derive the negative bias of *weibi*-PQs from the interaction of (i) unbalanced partitions, (ii) the nature of denegation and (iii) competition with alternative discourse moves.

Take (6) as a toy example. The simplified denotation for *weibi* is given in (6b).  $\text{Epi}_x(w)$  is the set of worlds compatible with  $x$ 's knowledge in  $w$ , where  $x$  is a contextually determined individual variable. As argued above,  $x$  is the speaker in PQs.

(6) a. *Waitou weibi dei xiayu ma?* 'It is not raining outside, right?'

b.  $\llbracket \textit{weibi} \rrbracket = \lambda p_{\langle s, t \rangle}. \lambda w_s. \neg \forall w' \in \text{Epi}_x(w) [p(w')]$

c.  $\llbracket [Q [\textit{weibi} [\textit{it is raining outside}]]] \rrbracket$

$= \lambda q. [q = \lambda w. \neg \forall w' \in \text{Epi}_S(w) [\textit{it is raining outside in } w']]$

$\vee q = \lambda w. \forall w' \in \text{Epi}_S(w) [\textit{it is raining outside in } w']]$

$= \{ \neg \Box_S \textit{that it is raining outside}, \Box_S \textit{that it is raining outside} \}$

Unlike a plain PQ  $\{ \phi, \neg \phi \}$ , a *weibi*-PQ partitions the space between epistemic necessity for  $\phi$  ( $\Box_S\phi$ ) and the absence of such necessity ( $\neg \Box_S\phi$ ), yielding an unbalanced partition. Moreover, *weibi* as a denegation operator requires that  $\Box_S\phi$  is contextually supported, i.e., the speaker recognizes that the contextual information would license the inference to  $\Box\phi$ .

Now consider the alternative discourse moves available to the speaker. If she had no bias, she could simply ask a plain PQ, which yields a balanced and more informative partition (see also Goodhue 2022). If she were positively biased toward  $\phi$ , she would rationally accept  $\phi$  into the common ground rather than raise a question, given  $\Box_S\phi$  is contextually supported. Since both neutrality and positive bias would favor alternative discourse moves, the only remaining rational option is that the speaker is biased against  $\phi$ . That is, although the contextual evidence supports  $\Box_S\phi$ , the speaker refrains accepting that inference and instead raises the issue by questioning  $\neg \Box_S\phi$ . This resistance signals a prior negative bias toward  $\phi$ .

**4. Conclusion.** This paper provides the first formal analysis of Southwestern Mandarin *weibi* in PQs and shows that negated epistemic necessity does not uniformly yield positive bias, contrary to standard assumptions about HNQs. The proposal explains why structurally similar configurations produce opposite bias effects and lays the groundwork for extending the analysis to Standard Mandarin *nandao*, which is morpho-semantically parallel to *weibi*.

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## Echoic Responses as Free Indirect Discourse: a case study from Korean

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**Introduction.** This paper analyzes a phenomenon in Korean which we call (Echoic) Responses with Noncanonical-Rising intonation (ERNR). See (2) under (1).

- (1) On a busy day at the company, John asked his supervisor Alice to leave early. Alice told this to her boss, Tom. Tom responses with (1) ('John would like to leave (the office) early ↗')
- (2) *pro/\*ku-ka/\*caki-ka/\*ku.pwun-kkeyse cikum cothoy-lul ha-si-keyss-ta ↗*  
*pro/he-Nom/self-Nom/he.Hon-Nom<sub>HON</sub> now leave.early-Accdo-Hon-Mod-Decl*

Here Tom utters (2) as an ERNR: the previous utterance is new information to him, and that information is what he does not expect. One might be tempted that ERNRs are just a kind of echo questions (EQ), but there are noticeable differences: **(i)** The intonation of an EQ is canonical rising, like *yes-no* questions, while the degree of rising in ERNRs is lower than an EQ, which is indicated by '↗', rather than '?. **(ii)** ERNRs do not allow any overt pronominal subject, whereas EQs allow an overt subject. **(iii)** The honorific marker *-si-* does not have its honorific meaning in ERNRs. Usually, *-si-* has the implication that the utterer's social status is lower than the subject (Jou 2024, a.o.). In contrast, in (2), such honorific meaning does not surface. **(iv)** The modal *-keyss-* is limited in ERNRs. In general, *-keyss-* conveys either an epistemic or a volitional flavor as in (3), and in root clauses, its volitional flavor can arise *only if the subject amounts to the 1<sup>st</sup> person*. But in (2) *-keyss-* only expresses John's volition.

- (3) *Nay-/Ney-/Ku-ka ka-keyss-e.* "I should go." (volitional reading is allowed)  
*I-/You-/He-Nom go-Mod-Decl.* "You/he should go." (epistemic reading only)

**Issues.** **(i)** In Korean, unlike English, there is no rising declarative in general; an EQ in Korean needs the sentential ending such as *-ko*, which covers the function of a rising declarative as well (Jeong 2018, a.o), but in the ERNR, *-ta* associates with rising, although non-canonical. **(ii)** In ERNRs, *-keyss-* expresses only the subject's volition, even though the subject is not the actual author of the direct speech context. **(iii)** The honorific meaning of *-si-* becomes blurred in ERNRs. **(iv)** overt pronominal subjects are not allowed in ERNRs.

**Proposal 1: conflict between *-keyss-* and *-si-* and null subjects.** We propose that there is a conflict between *-si-* and *-keyss-* in ERNRs. For *-keyss-* to express volition, a subject should be 1<sup>st</sup>, but for *-si-* to be properly used, the subject cannot be 1<sup>st</sup>: it is unusual for a speaker to be referred to as someone socially superior to herself. In the absence of the marked intonation, thus, an ERNR like (2) can be felicitous only when *pro* refers to a 3<sup>rd</sup> person socially superior to the utterer, with *-keyss-* with an epistemic flavor. This conflict provides a crucial clue for why overt pronominal subjects are not permitted in ERNRs: the 1<sup>st</sup> person subject conflicts with the honorific interpretation of *-si-*, whereas the 3<sup>rd</sup> person one conflicts with the volitional interpretation of *-keyss-*. We assume that this conflict is morpho-syntactic at PF: ungrammaticality arises because [-author] is assigned to the subject via AGREE with *-si-* (Jou 2024), while [+author] must be specified in the subject to support *-keyss-*'s volitional flavor. No lexical insertion rule is available to realize this feature combination. But *pro* is felicitous, since PF-related issues can be circumvented. This also indicates that, meaning-wise, any issues arising from *-si-* and *-keyss-* can be resolved in ERNRs: the honorific implication of *-si-* becomes attenuated, while *-keyss-* still receives a volitional interpretation. To explain this, we suggest that the intonation in ERNRs plays a central role in shaping this unexpected interpretation.

**ERNRs and FIDs.** Such conflict in ERNRs leads us to examine Free Indirect Discourse (FID). Most analyses of FIDs assume some conflicts: either between indirect and direct discourse (e.g., (un)quotation in

Maier 2017), or between different contexts (Schlenker 2004, Eckardt 2014). If ERNRs are analyzed in terms of FIDs, these FIDs can be said to be influenced by intonation. To account for this, building on the observation that *uncertainty* must be grammatically marked (since bare declaratives are used when authors are certain: Wiltschko 2025), and that the author's commitment is weakened in raising declaratives (Gunlogson 2008), we propose (4).

(4) Non-canonical rising contour in ERNRs reflects author's (partial) ignorance on certain context-sensitive relationships among discourse participants.

However, discussing the nature of FIDs, we need to account for how contextual conflicts are resolved, and why the author's commitment becomes weakened.

**Proposal 2: logophoricity and FIDs.** We adopt Charnavel (2025), who argues that FIDs are logophoric environments. This explains ERNRs as follows. (i) If we assume that (2) is said by utilizing the previous utterance made by *John*, such an indirect speech context can be represented in terms of the logophoric context. So, since *pro* in (2) amounts to the author of the logophoric context, the volitional flavor of *-keyss-* arises. (ii) As for *-si-*, since the subject is not the utterer, the issue of self-honorification can also be avoided. Moreover, honorific relations exert their primary effect in conversation based on the *direct* speech context. It is, thus, plausible to assume that, when a sentence with *-si-* is accessed under a logophoric context, its pragmatic contribution becomes attenuated. (iii) The logophoric nature of FIDs can explain (6). Typically, context-sensitive elements which are anchored to the direct speech context presuppose full commitment from the author of that direct speech context. However, when such elements are accessed under a logophoric context, this creates a small window in which ignorance can occur. Of course, this does not imply that ignorance arises in all relevant situations: As widely documented, not all context-sensitive elements allow interpretive shifts in FIDs (Schlenker 2004). Rather, as illustrated in (4), FIDs *inherently* allow certain discourse factors—such as *-si-* in (2)—to be weakened. For this to happen, the uncertainty must be structurally marked in *root* clauses, with the most plausible locus being the SpeechAct phrases (Tenny 2006; Wiltschko 2025, a.o.), resulting in its realization through distinctive intonation pattern.

***caki-man* and antilogophoricity in ERNRs.** Our view of ERNRs as FIDs can explain why *caki-man* can appear as an overt pronominal subject in ERNRs. See (6) under (5).

(5) Scenario: On a busy day at the company, John asked his supervisor, Alice, if he could leave work a little early. Since several employees were sick but still working, Alice decided to check with her boss, Tom. When she asks to him, he responses:

(6) [pro/ *caki-man*/\**ku-man*] cikum cothoy-lul ha-si-keyss-ta↗  
 pro/*caki-only*/he-only now leave.early-Acc do-Hon-Mod-Decl  
 'pro/only himself/\*only he would like to leave (the office) early↗'

This might be because of the exclusive focus particle *-man*, requiring *every person* to be related to the interpretation of the subject, as in (9):

(9) Only John went home. ~> **John** went home, **I/you/Tom/Sue...** didn't go home.

That is, a person restriction triggered by *-si-* or *-keyss-* could be obviated due to such focus reading (i.e., *weakened* projection of a person in focus interpretation; Sauerland 2013). However, this alone cannot explain why *-man* cannot save the other singular pronoun like *ku* as in (8). To account for this, we propose that in ERNRs, because the two context-anchoring elements (i.e., *-keyss-* and *-si-*) exhibit structural dependencies with the subject, the subject position must be filled by a logophor (*anti-logophoricity*). *Caki* has been argued to be a logophor, permitting long-distance binding only when it is not co-indexed with either the author or the addressee of the direct speech context (Park 2018; see also Schlenker 2003, Pearson 2015, a.o.). Nonetheless, accepting this account necessitates further explanation for why *caki* fails to be realized in (2): Why can't *caki* appear with the nominative *-ka*, but should it appear with the exclusive *-man*? To explain this, we adopt the idea that logophors, just like other regular pronouns, can acquire

morpho-syntactic features via AGREE (see also Pearson 2015). That is, the logophor *caki* is also supposed to yield morpho-syntactic conflicts with *-keyss-* or *-si-*. Thus, apart from the use of *pro*<sub>log</sub>, resolving this problem requires the presence of *-man*, as in (9), which induces a weakened projection. This also makes it clear that, although *ku-man* succeeds in resolving the morpho-syntactic issue, it nevertheless cannot be used due to anti-logophoricity. These observations further clarify that by treating FIDs as logophoric environments, various issues related to subject realization are effectively resolved.

## A Cartographic Account of NP<sub>1</sub>NP<sub>2</sub>V in Mandarin: Evidence from Mandarin Children and Adults

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The NP<sub>1</sub>NP<sub>2</sub>V construction in Mandarin (e.g., *xiaomao, xiaogou zhuishangle* ‘the cat, the dog chased’) connects several fundamental issues: the topic-prominent nature of Chinese (Li & Thompson 1976), the syntax-pragmatics interface (Tsai 2015, 2019), and the acquisition of non-canonical word orders (Miao 1984; Hu et al. 2018; Hao et al. 2025). When both NPs are animate, it exhibits two interpretations: an OSV reading (NP<sub>2</sub> as agent: ‘the dog chased the cat’) and an SOV reading (NP<sub>2</sub> as patient: ‘the cat chased the dog’). It is also widely acknowledged that the OSV reading is the unmarked interpretation (e.g., Zeng & Hua 2019). However, the underlying mechanisms that give rise to this ambiguity remain unclear.

Following the cartographic approach (Rizzi 1997; Tsai 2015), we propose that the NP<sub>1</sub>NP<sub>2</sub>V construction engages the syntax-pragmatics interface via the left periphery (TopP and FocP). The ambiguity arises because NP<sub>2</sub> can be interpreted either as the subject (vP periphery) or as a moved constituent to the left periphery. Without contrast (See (1)), the OSV reading (NP<sub>2</sub> as agent) involves no movement: NP<sub>1</sub> *Cat* is a base-generated topic, and NP<sub>2</sub> *Dog* is the subject in the vP periphery (1a). This makes OSV the syntactically unmarked interpretation. The SOV reading (NP<sub>2</sub> as patient) involves topicalization: NP<sub>2</sub> *Dog* moves to a lower TopP (1b).

(1) 小猫， 小狗 追上 了  
cat dog chase resultative PFV

a. OSV (NP<sub>2</sub> as agent): ‘Dog chased and caught Cat.’

[TopP [NP<sub>1</sub> Cat<sub>i</sub>] [vP [NP<sub>2</sub> Dog] [VP [V chased-resultative-PFV] [NP pro<sub>j</sub>]]]]

b. SOV (NP<sub>2</sub> as patient): ‘Cat chased and caught Dog.’

[TopP [NP<sub>1</sub> Cat<sub>i</sub>] [TopP [NP<sub>2</sub> Dog<sub>i</sub>] [vP [NP pro<sub>j</sub>] [VP [V chased-resultative-PFV] [NP t<sub>i</sub>]]]]]]

With contrast (‘...but the Pig did not chase’) (see (2)), the derivation forces FocP. The OSV reading obtains when NP<sub>2</sub> moves from subject position to Spec, FocP (2a), while the SOV reading obtains when NP<sub>2</sub> moves from object position to Spec, FocP (2b).

(2) 小猫， 小狗 追上 了，但 小猪 没 追上。  
cat dog chase resultative PFV but pig NEG chase resultative

a. OSV (NP<sub>2</sub> as agent): ‘Dog chased and caught Cat, but Pig did not.’

[TopP [NP<sub>1</sub> Cat<sub>i</sub>] [FocP [NP<sub>2</sub> Dog<sub>i</sub>] [vP [NP t<sub>i</sub>] [VP [V chased-resultative-PFV] [NP pro<sub>j</sub>]]]]]]

b. SOV (NP<sub>2</sub> as patient): ‘Cat chased and caught Dog, but Cat did not chase and catch Pig.’

[TopP [NP<sub>1</sub> Cat<sub>i</sub>] [FocP [NP<sub>2</sub> Dog<sub>i</sub>] [vP [NP pro<sub>j</sub>] [VP [V chased-resultative-PFV] [NP t<sub>i</sub>]]]]]]

Developmentally, the early setting of the topic parameter (Zhang & Peng 2025) would allow both OSV and SOV readings, but the adult OSV preference is expected to be consolidated later. We therefore predict that young children will be more flexible than adults in accepting both readings in non-contrastive contexts. In contrastive contexts, where FocP projection is forced, even young children are expected to perform like adults, as contrastive information provides a strong pragmatic cue that overrides preferences.

We tested these predictions using a Truth Value Judgment Task (Crain & Thornton 1998) with a 2×2×3 design: Story scenario (NP<sub>2</sub> as agent vs. as patient; within-subject) × Contrastive (no contrast vs. contrast; between-subject) × Age group (5yr; 8yr; adult). Participants heard a story and judged a target sentence like ‘Cat, Dog chased’ (with or without a contrastive clause ‘...but Pig did not chase’). We tested 60 per age group.

Results (Table 1) show that, in non-contrastive contexts, 5-year-olds showed greater flexibility (67% both readings) than 8-year-olds and adults (40% and 37% both readings). This gives support to the prediction that young children have not yet fully consolidated the adult OSV

preference. In contrastive contexts, all age groups predominantly accepted both readings (5 yr: 100%; 8yr: 90%; adults: 87%), indicating that contrastive information overrides the preference and reveals full syntactic competence even in young children.

These results support our cartographic account: syntactic availability of both SOV and OSV readings are acquired early, while the pragmatic OSV preference in non-contrastive contexts is consolidated later, between ages 5 and 8.

**Table 1.** Proportion of Participants with OSV-only Reading or Both SOV and OSV Reading

Age Group	Non-contrastive		Contrastive	
	OSV-only	SOV&OSV	OSV-only	SOV&OSV
5-year-olds	33%	67%	0%	100%
8-year-olds	60%	40%	10%	90%
Adults	60%	37%	13%	87%

#### Appendix: Sample stories and Test Sentences.

##### (1) OSV reading (NP<sub>2</sub> as agent) in the non-contrastive context

**Story:** A cat took a dog's toy away. The dog chased and caught the cat..

**Test sentence:** 猫咪，小狗 追上 了  
 cat dog chase resultative PFV  
 'Dog chased and caught Cat.'

##### (2) SOV reading (NP<sub>2</sub> as patient) in the non-contrastive context

**Story:** A duck took a hen's toy away. The hen chased and caught the duck.

**Test sentence:** 母鸡，鸭子 追上 了  
 hen duck chase resultative PFV  
 'Hen chased and caught Duck.'

##### (3) OSV reading (NP<sub>2</sub> as agent) in the contrastive context

**Story:** A cat played with a yarn ball alongside a dog and a duck. The cat snatched the ball away. The dog chased and caught the cat, but the duck did not.

**Test sentence:** 猫咪，小狗 追上 了，但 鸭子 没 追上。  
 cat dog chase resultative PFV but duck NEG chase resultative  
 'About Cat, Dog chased and caught it, but Duck did not.'

##### (4) SOV reading (NP<sub>2</sub> as patient) in the contrastive context

**Story:** A rabbit played with two yarn balls. A fox and a squirrel each snatched one. The rabbit caught the fox but not the squirrel.

**Test sentence:** 小兔，狐狸 追上 了，但 松鼠 没 追上。  
 cat fox chase resultative PFV but squirrel NEG chase resultative  
 'Rabbit chased and caught fox, but Rabbit did not chase and catch Squirrel.'

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## On negative causation: A case study on Mandarin *zǔzhǐ* and *zǔ'ài*

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**Intro** While (causal) *actuality entailments* (AEs) have been extensively explored by previous accounts (e.g., Bhatt 1999; Hacquard 2006; Nadathur 2019; Alxatib 2021), the negative counterparts, (causal) *anti-actuality entailments* (anti-AEs), have received comparatively little attention (Nadathur 2025). This paper investigates two negative causative predicates in Mandarin, *zǔzhǐ* ‘prevent’ and *zǔ'ài* ‘hinder’, and argues that they instantiate two interesting forms of anti-AEs, expanding the typology of modality- and causation-related inference in natural language.

**Data to be explained** The contrast between *zǔzhǐ* and *zǔ'ài* reveals two robust properties. **First**, both predicates exhibit lexical negativity, as evidenced by their ability to license negative polarity items (1). **Second**, both predicates can exhibit a bias toward non-realization of the target event, though this bias is stronger for *zǔzhǐ* (2) than for *zǔ'ài* (3), and does not amount to a strict entailment in either case which aligns with previous studies (Alxatib 2016, 2019; Privoznov 2023).

- (1) *Zhāngsān zǔzhǐ / zǔ'ài Lǐsì cānjiā rèn hé huódòng.*  
Zhangsan prevent / hinder Lisi participate any activity  
‘Zhangsan prevents/hinders Lisi from participating in any activity.’
- (2) a. *Zhāngsān zǔzhǐ Lǐsì chāo zuòyè, jiéguǒ ✓(i) Lǐsì méiyǒu chāo*  
Zhangsan prevent Lisi copy homework as.a.result ✓(i) Lisi NEG copy  
*zuòyè / ?(ii) Lǐsì hái shì chāo le zuòyè*  
homework / ?(ii) Lisi still copy PFV homework  
‘Zhangsan prevents Lisi from copying homework, and the result is ✓(i) Lisi does not copy homework / ?(ii) Lisi still copied homework.’
- b. *Zhāngsān zǔ'ài Lǐsì chāo zuòyè, jiéguǒ ✓(i) Lǐsì méiyǒu chāo*  
Zhangsan hinder Lisi copy homework as.a.result ✓(i) Lisi NEG copy  
*zuòyè / ✓(ii) Lǐsì hái shì chāo le zuòyè*  
homework / ✓(ii) Lisi still copy PFV homework  
‘Zhangsan prevents Lisi from copying homework, and the result is ✓(i) Lisi does not copy homework / ✓(ii) Lisi still copied homework.’

**Additional experimental evidence** from an acceptability judgment task ( $N=254$ ) further confirms these patterns: while both predicates show a robust preference for non-actuality interpretations, contextual manipulations (*Happened vs. Failed contexts*) significantly modulate this preference, as shown by rating differences across conditions and supported by statistical analysis (omitted due to limited space), which illustrates a significant main effect of context but no consistent main effect of the predicate.

**Analysis** Building on previous modality-based analyses of causation (e.g., Koenig & Davis 2001; Illic 2014; Martin & Schäfer 2017; Luo 2026), we propose that both *zǔzhǐ* and *zǔ'ài* are sensitive to a scale of *event realizability*, a modal notion defined over a set of contextually accessible worlds. Informally, the realizability of a caused event  $e'$  corresponds to the degree to which accessible worlds support its successful realization, given the relevant causal and contextual conditions. Formally, let  $ACC_c(w, e)$  be the set of worlds accessible from a world  $w$  and the causing event  $e$ , determined by a contextually provided modal base and ordering source. We define:

$$REAL_c(e')(w, e) = \mu(\{w' \in ACC_c(w, e) \mid ACTUALIZABLE(e', w')\})$$

where  $\mu$  is a measure over accessible worlds. Thus,  $\text{REAL}_c(e')(w,e)$  returns a degree reflecting how strongly the modal space determined by  $(w,e)$  supports the realization of  $e'$ . Crucially, negative causation predicates do not directly encode negation, but instead operate by modulating this degree of realizability. This approach departs from analyses that reduce prevention to causation of negation (e.g., Dowty 1979), and instead treats negative causation as structured manipulation over modal space (Huang & Luo 2026).

**Lexical semantics** We propose that the causing event  $e$  induces a structured modal space, such that  $\text{REAL}_c(e')(w,e)$  measures the degree to which the accessible worlds determined by  $(w,e)$  support the realization of the target event  $e'$ . We further assume that context  $c$  provides two thresholds: an *actualization threshold* ( $\theta_{\text{actual},c}$ ), above which an event counts as realizable, and a context-dependent baseline ( $\theta_c$ ), which serves as a reference point for degree-based comparison, with  $\theta_c \geq \theta_{\text{actual},c}$ . The two predicates differ in how they manipulate event realizability, yielding a contrast between gradable weakening and threshold-based suppression.

$zǔ'ài$  encodes a *scalar decrease* in realizability, measured as the extent to which the realizability of  $e'$  falls below the contextual baseline:

$$(3) \llbracket zǔ'ài \rrbracket = \lambda d. \lambda e'. \lambda x. \lambda e. \lambda w. [\text{CAUSER}(x,e,w) \wedge \theta_c - \text{REAL}_c(e')(w,e) \geq d]$$

The degree argument  $d$  may be overtly specified or contextually supplied, accounting for its compatibility with degree modification (cf. Kennedy 2007). Intuitively,  $zǔ'ài$  weakens the support for the realization of  $e'$  without necessarily eliminating it.

$zǔzhǐ$ , by contrast, encodes a *threshold-crossing decrease*: the realizability of  $e'$  is reduced below the actualization threshold:

$$(4) \llbracket zǔzhǐ \rrbracket = \lambda e'. \lambda x. \lambda e. \lambda w. [\text{CAUSER}(x,e,w) \wedge \text{REAL}_c(e')(w,e) < \theta_{\text{actual},c}]$$

**Discussion** On this view, both predicates involve structured manipulation of modal space. Rather than directly quantifying over possible worlds, they alter the distribution of worlds that support the realization of the target event. More specifically,  $zǔ'ài$  reduces the degree to which accessible worlds support the realization of  $e'$ , while  $zǔzhǐ$  lowers this degree below a threshold required for actualization. The difference between the two predicates thus reflects a distinction between *gradable attenuation* and *categorical suppression* within a unified semantic system. The strong contextual effects observed experimentally follow naturally under this approach: since REAL is computed relative to a contextually determined modal base and ordering source (Kratzer 1977, 1981, 1991; Portner, 2009, 2018; Luo 2026), contextual manipulations reshape the underlying modal space, thereby modulating the degree of realizability. This explains why contextual effects systematically dominate over predicate-level differences in experimental judgments.

**Implications** This analysis has two broader implications. First, it expands the typology of actuality-related inferences by introducing a systematic class of non-AEs, complementing the well-studied cases of AEs. Second, it suggests that modality in natural language is not purely qualitative, i.e., based on selecting or ordering worlds, but also quantitative, involving degrees of support for event realization (cf. Lassiter 2017 on gradable modality). More generally, the Mandarin data provide evidence that causal expressions encode both graded and threshold-based constraints on event realization (Luo 2025), pointing toward a unified theory of negative causation that integrates causation, modality, and degree semantics.

## A Semantic and Pragmatic Analysis of Concessive Conditionals with *Jiùsuàn* in Mandarin

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**Introduction:** In Mandarin, the counterpart of the English concessive conditional with *even-if*, e.g., *even if John didn't come, Bill would (still) come*, is expressed with the lexical item *jiùsuàn* preceding the antecedent and an additive particle, *yě* 'also' or *háishì* 'still', in the consequent (see (1)).

- (1) *jiùsuàn* Lìsì bù lái Zhāngsān \*(*yě/háishì*) huì lái.  
 even-if p.n. NEG come, p.n. also/still will come  
 'Even if Lisi doesn't come, Zhangsan will come.'

This research focuses on alternation between *yě* and *háishì* in this construction and tries to provide an account from the perspective of the semantics-pragmatics interface.

***Yě-Háishì* alternation:** At first glance, *yě* and *háishì* seem to alternate freely (see (2)).

- (2) [Context: Taxis generally take less time than buses. Wang and Li are discussing how to get to a friend's wedding on time, while rushing.]

W: *If we take bus, we will definitely be late.*

L: *jiùsuàn dā jìchéngchē, wǒmen yě/háishì huì chídào.*  
 even-if take taxi 1. PL also/still will late  
 'Even if we take a taxi, we will be late.'

A slight change in the number of contextually salient alternatives (from two to three), on the other hand, renders the use of *yě* infelicitous (see (3)).

- (3) [Context: Taxis generally take less time than buses and the MRT. Wang and Li are discussing how to get to a friend's wedding on time, while rushing.]

W: *If we take bus, we will definitely be late; if we take the MRT, we will be late, too.*

L: *jiùsuàn dā jìchéngchē, wǒmen #yě/háishì huì chídào.*  
 even-if take taxi 1. PL also/still will late

While two types of *even-if* conditionals, the factive and the non-factive conditionals, have been differentiated in the literature (Bennett 1982; Guerzoni & Lim 2007; a.o.), the contrast between (2) and (3) cannot be attributed to this typology, for the speaker is committed to the truth of the consequent in either of (2) and (3). I suggest that this observed contrast is connected to the size of the alternative set and can be accounted for with *Maximize Presupposition!* (Heim 1991; Chemla 2008; Singh 2011, a.o.) and pruning of alternatives (Fox & Katzir 2011; Chierchia 2012; a.o.).

**Semantics of concessive conditionals:** Mandarin *jiùsuàn*-conditionals, just like their English *even-if* counterparts, show focus-sensitivity and scalarity of likelihood. For instance, (1) expresses that (i) it is the least likely, in comparison to other alternatives, that Wang and Li will be late if they take a taxi, and (ii) it is true that if they take a taxi, they will be late. Following Guerzoni and Lim (2007), I assume that (i) is presuppositional and (ii) is (a part of) the assertion, and that the focus associated with *jiùsuàn* in the antecedent can be either a constituent (e.g., (1), with *Lisi* in focus) or the (possibly covert) polarity operator (i.e., AFF/NEG) which invokes an alternative set  $\{if\ p\ then\ q,\ if\ \neg p\ then\ q\}$ .

- (4)  $\llbracket jiùsuàn \rrbracket^{c,w}(p_{\langle s, \tau \rangle})(q_{\langle s, \tau \rangle})$  is defined only iff:

(i)  $\forall p' \in ALT(p)[p \neq p' \rightarrow [\lambda w'. Sim_w'(p) \subseteq q] \prec_{likelihood,c} [\lambda w'. Sim_w'(p') \subseteq q]]$ ,

where  $Sim_w(p) = \{w' : p(w')\}$  and  $w'$  is the most similar to  $w$ ;

if defined, then (ii)  $\llbracket jiùsuàn \rrbracket^{c,w}(p)(q) = 1$  iff  $\forall p'_{\langle s, \tau \rangle} [p' \in ALT(p) \rightarrow Sim_w(p') \subseteq q]$

**Additive particles:** It has been assumed that an English *even-if* conditional triggers an additive presupposition as well as a scalar one (c.f., Guerzoni & Lim 2007); e.g., *even if p, q* presupposes that there is some alternative  $p'$  to  $p$  such that  $p' \neq p$  and *if p' then q* is true. In light of the obligatory

presence of the additive particles *yě/háishì*, I suggest that the additive presuppositions of *jiùsuàn*-conditionals are encoded by them, and that their presuppositions differ in the quantificational force. These assumptions lead us to the semantics of *yě* and *háishì* in (5) and (6), and according to (4-6), a *jiùsuàn*-conditional ‘*jiùsuàn p, yě/háishì q*’ is parsed as in (7) at LF.

(5)  $\llbracket yě \rrbracket^w(p_{\langle s, t \rangle})$  is defined iff  $\exists p' \in \text{ALT}(p)[p' \neq p \wedge p'(w)=1]$ ; if defined,  $\llbracket yě \rrbracket^w(p)=1$  iff  $p(w)=1$

(6)  $\llbracket háishì \rrbracket^w(p_{\langle s, t \rangle})$  is defined iff  $\forall p' \in \text{ALT}(p)[p' \neq p \rightarrow p'(w)=1]$ ; if defined  $\llbracket háishì \rrbracket^w(p)=1$  iff  $p(w)=1$

(7)  $\llbracket [jiùsuàn p]_1 [yě/háishì [\text{MOD } pro_1] q] \rrbracket$ , where MOD is the conditional modal operator and *pro* is a covert sentential pronoun.

Accordingly, in a *jiùsuàn*-conditional ‘*jiùsuàn p, yě/háishì q*’, *yě* triggers an existential presupposition that there is some  $p' \in \text{ALT}(p)$  such that  $p' \neq p$  and *if p' then q* is true, whereas *háishì* triggers a universal presupposition that for every  $p' \in \text{ALT}(p)$  such that  $p' \neq p$ , *if p' then q* is true. That is, *háishì*, in this construction, is presuppositionally stronger than *yě*.

**Analysis of the *yě-háishì* alternation:** I assume that in *jiùsuàn*-conditionals, *yě* and *háishì* form a presuppositional scale  $\langle yě, háishì \rangle$ , just like  $\langle believe, know \rangle$  and  $\langle all, both \rangle$  in English (see Schlenker 2006 and others). On the basis of the characterizations above, the *yě-háishì* alternation can be accounted for with *Maximize Presupposition!* (Heim 1991; Singh 2011; a.o.), which requires that one choose from a predetermined set of competitors with the same assertive content to the context of utterance *c* the one that marks the strongest presupposition satisfied in *c*.

(8) **Maximize Presupposition!** (MP!): If alternatives *S'* and *S''* are contextually equivalent, and *S'* is presuppositionally stronger than *S''* and the presupposition of *S'* is met in the context of utterance *c*, then one must use *S'*.

The use of *háishì* in (3): In spite of the presuppositional difference between *yě* and *háishì*, a *jiùsuàn*-conditional with *yě*, given an alternative set A, is contextually equivalent to its counterpart with *háishì* due to the equivalent truth conditions (see (4, (ii))): for a *jiùsuàn*-conditional ‘*jiùsuàn p, yě/háishì q*’ to be true, it is required that all the alternatives *if p' then q* to the prejacent *if p then q* be true. MP!, then, correctly predicts that *háishì*, whose presupposition is stronger than that of *yě* and necessarily counted as satisfied in view of the universal assertion (4, (ii)), must be used in (3).

The free alternation in (2): MP!, nevertheless, over-predicts that *háishì* must likewise be chosen in (2). To solve this over-prediction, I suggest that in such cases, the use of *yě* can be saved by ‘truncating’ the presuppositional scale  $\langle yě, háishì \rangle$ , removing *háishì* from being its competitor. This process has the same spirit with ‘*alternative pruning*’ suggested in Fox & Katzir (2011), Chierchia (2013) and others. Without *háishì* as the competitor, the use of *yě* is no longer subject to MP! and is felicitous in these cases as a result.

**Scale Truncation:** Nevertheless, the infelicity of using *yě* in (3) indicates that scale truncation should be constrained. I suggest that this process is governed by the rule spelt out in (9), according to which the key notion to account for the contrast between (2) and (3) is particular relevance (simply called ‘presuppositional relevance’), determined by the **contextual domains** of alternatives generated by the presuppositional scale.

(9) a. Given a presuppositional scale  $\langle \alpha, \beta \rangle$ , where  $\beta$  is presuppositionally stronger than  $\alpha$ ,  $\beta$  can be removed from being  $\alpha$ 's competitor in a structure *S* iff:

$[s \dots \alpha \dots]$  and  $[s \dots \beta \dots]$  are **presuppositionally irrelevant**,

b. where given a context *c*,  $[s \dots \alpha \dots]$  and  $[s \dots \beta \dots]$  are presuppositionally irrelevant iff:

$\{w \in c: w \in \text{Dom}(\llbracket [s \dots \alpha \dots] \rrbracket)\} = \{w \in c: w \in \text{Dom}(\llbracket [s \dots \beta \dots] \rrbracket)\}$ .

In (2), the set of contextually salient alternatives to the *jiùsuàn*-conditional contains two members, simplified as  $\{p, p'\}$ . With this alternative set, the presuppositions of *yě* and *háishì*, regardless of the quantificational strength, lead the *jiùsuàn*-conditional to the same contextual domain:  $\{w \in c: p'(w)\}$  (let *p* be the prejacent and ignore the scalar presupposition of *jiùsuàn*). Scale truncation, thus, can apply in (2) and then saves the use of *yě* from infelicity. By contrast, the contextually

salient alternative set in (3) contains three elements, simplified as  $\{p, p', p''\}$ . With this alternative set, *yě*'s existential presupposition (c.f., (5)) and *háishì*'s universal presupposition (c.f., (6)) lead the structure to separate contextual domains:  $\{w \in c: p'(w) \vee p''(w)\}$  and  $\{w \in c: p'(w) \wedge p''(w)\}$ . As a consequence, scale truncation cannot apply in (3), and *yě* thus enters MP! competition with *háishì* and is eliminated as explained above.

**Implications:** The analysis suggested above carries an implication that violation of *Maximize Presupposition!* can be ameliorated with truncation of the lexical alternative scale in question, which is subject to the presuppositional relevance between sentential alternatives triggered by the scale in the context of utterance.

**Open questions:** This research proposes that the alternation between *yě* and *háishì* in *jiùsuàn*-conditionals is subject to scale truncation as well as *Maximize Presupposition!*. This raises the question of whether the same mechanisms extend to other focus-sensitive particles in Mandarin or even across languages. For instance, *yě*, as an additive particle, also idiomatically alternates with *dōu* in constructions with *lián* in Mandarin (c.f., Hole 2004), e.g., *Lǐsì xiànzài lián shuǐ yě/dōu bù néng hē* 'Lisi cannot even drink water now'. The competition-based analysis developed in this research may provide a key insight into the account of such linguistic puzzles.

**References:** Bennett (1982); Chemla (2008); Chierchia (2012); Fox & Katzir (2011); Guerzoni & Lim (2007); Heim (1991); Kratzer (1991a); Percus (2006); Sauerland (2006); Schlenker (2012); Singh (2011).

## Indifference as an alternative-sensitive attitude report

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**1 Introduction** Previous accounts of indifference in East Asian languages center on *wh*-indefinites, where indifference arises from the alternatives introduced by *wh*-phrase itself (Chierchia & Liao 2015; Liu & Yang 2021 a.o.). *zuebie* in Jiaxing Wu Chinese is an indifference expression that is likewise alternative-sensitive but works differently: as a verbal adverbial, it requires con-textually supplied alternatives rather than lexically encoded ones. Its structural constraint and discourse-sensitivity further distinguish it from *wh*-indefinites, which calls for a new analysis.

### 2 Mental-attitude verbal modifier *zuebie*: conveying at-issue indifference attitude

As shown in (1), *zuebie* conveys that Zhang was indifferent about the heavy punching bag: he wouldn't have cared even if he had kicked anything else.

(1) *eiotsã zuebie ti [tsa tson sota]<sub>F</sub>*  
 Zhang *zuebie* kick [Cl heavy punching.bag]<sub>F</sub>  
 ≈‘Zhang kicked the heavy punching bag, without caring about it.’

Such indifference attitude is at-issue since it can be dissented (Tonhauser 2012):

(2) *na gã i? zuebie ti tsa sota sɿ tsu ve ku*  
 you said he *zuebie* kick Cl punching.bag is wrong not over  
 ≈‘It was wrong for you to say he kicked a punching bag without caring about it.’

**3 Alternative-sensitivity** *zuebie* is truth-conditionally sensitive to the contextually salient set of alternatives, as exemplified below.

(AI-VP/O/M: agent indifference towards actions/entities/manners)

(3) [Context: In the strength test in a boxing class, the students were asked to either kick the punching bags or lift weights. Zhang wasn't interested in boxing at all. He chose to kick the punching bag although he used his biggest effort to kick it.] (AI-VP, #AI-O, #AI-M)

*eiotsã [zuebie ti tsa tson sota]<sub>F</sub>*  
 Zhang [*zuebie* kick Cl heavy punching.bag]<sub>F</sub>  
 ≈‘Zhang kicked a punching bag without caring about the action.’

(4) [Context: ... the students were asked to either kick a heavy or a light punching bag to demonstrate their strength. Zhang wasn't interested in boxing at all. He chose to kick the heavy punching and he used little effort.] (#AI-VP, AI-O, #AI-M)

*eiotsã zuebie ti [tsa tson sota]<sub>F</sub>*  
 Zhang *zuebie* kick [Cl heavy punching.bag]<sub>F</sub>  
 ≈‘Zhang kicked a punching bag without caring about it.’

(5) [Context: ... the students were asked to kick the punching bags as hard as they could. Zhang wasn't interested in boxing at all. He didn't really care whether he kicked the punching bag hard or lightly.] (#AI-VP, #AI-O, AI-M)

*eiotsã zuebie ti tsa tson sota*  
 Zhang *zuebie* kick Cl heavy punching.bag  
 ≈‘Zhang kicked a punching bag without caring about it.’

**4 Constraints on alternative-association:** A structural constraint (Constraint (1)) *zuebie* can only associate with constituents that it locally c-commands, as shown by the contrast in (6).

(6) [Context: Zhang was told to either buy milk tea or treat the office to lunch, as a new employee. Zhang chose the former due to short of budget. When she returned she found her officemates were

away. So she randomly gave them to colleagues in another office.]

- a. #*ɛiotsã* [<sub>VP1</sub>*zuebiɛ ma-lɛ na.tso*] [<sub>VP2</sub>*bə-lɛ tonsɿ*]  
Zhang *zuebiɛ* buy-PFV milk.tea give-PFV colleagues

Intended: ‘Zhang bought milk tea and gave it to colleagues, without caring whom.’

- b. *ɛiotsã* [<sub>VP1</sub>*ma-lɛ na.tso*] [<sub>VP2</sub>*zuebiɛ bə-lɛ tonsɿ*]  
Zhang buy-PFV milk.tea *zuebiɛ* give-PFV colleagues

≈ ‘Zhang bought milk tea and gave it to colleagues, without caring whom.’

A discourse-related constraint (Constraint ②): *zuebiɛ* cannot compose with an anaphoric and uniquely identifiable referent (such as ‘this dog’ in (7)) in its c-commanding domain. Such a restriction is absent when ‘this dog’ in (7) is contrasted (cf. (8)).

- (7) [Context: Mingming took part in a painting competition. A neighbor saw Mingming’s drawing and said to Mingming’s mom: ‘This puppy is drawn so well!’ Mom replies.]

#*iɿʔ η fentson zuebiɛ hue-lɛ krʔ tsa ge*  
she five minutes *zuebiɛ* draw-PFV this Cl dog

Intended: ‘She just casually drew this dog in 5 minutes.’

- (8) *iɿʔ zuebiɛ hue krʔ tsa, hohodzio hue hɛ tsa*  
she *zuebiɛ* draw this Cl carefully draw that Cl

≈ ‘She painted this one casually, but painted the other carefully.’

I assume that the alternative set is singleton in (7) while non-singleton in (8). The contrast above suggest that the restriction concerns the cardinality of the set of alternatives.

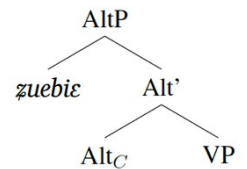
**5 Proposed analysis (i) A syntactic primer.** *zuebiɛ* is situated below vP. Evidence: *zuebiɛ* linearly follows dynamic modal *uətɛ* ‘will’, which is below vP (Tsai, 2015). (ii) **Semantics of *zuebiɛ*:** I adopt Roothian alternative semantics (Rooth 1985, 1992), which assumes ordinary and alternative semantic values. The ordinary semantics of *zuebiɛ* is given in (9) ( $\mu$  is con-textually determined, by default the agent). *C* is anaphoric to a contextually determined set of propositions of type  $\langle\langle s, t \rangle, t \rangle$ , which are derived from the alternative semantic values.

- (9)  $\llbracket zuebiɛ_C \rrbracket_o = \lambda w. \lambda P. \lambda x. P(x)(w) \wedge [\forall Q : Q \neq P(x) \wedge Q \in g(C)] \neg (P(x) >_{Des(\mu, w)} Q) \wedge \neg (Q >_{Des(\mu, w)} P(x))$

(where  $Des(\mu, w)$  is a desirability ordering over propositions representing the desires of  $\mu$  in a world  $w$ ;  $Q >_{Des(\mu, w)} P(x)$  iff  $\mu$ ’s desires in  $w$  privilege  $Q$  over  $P(x)$ )

AltP: The alternatives are valued via an operator  $Alt_C$ , which is hosted by a functional projection  $AltP$ , where *zuebiɛ* is merged as a specifier.  $AltP$  restricts the domain of possible alternatives to the complement of  $Alt_C$  and thus accounts for constraint ①.

Moreover,  $Alt_C$  is presupposed to take non-singleton set of alternatives, which rules out the possibility of composing with singleton alternative sets, thus accounts for Constraint ②. Actions are restricted to be effective ones, i.e. those within the agent’s control (Condoravdi & Lauer 2012), formally represented as a subset of alternative semantic values of VP ( $\llbracket VP \rrbracket_{ALT-effective}$ ). Putting pieces together, the definedness conditions of  $Alt_C$  are shown in (10).



(10) Definedness conditions on  $Alt_C$ 

$$\left\| \begin{array}{c} Alt' \\ \swarrow \quad \searrow \\ Alt_C \quad VP \end{array} \right\|_o^g \text{ is only defined if } g(C) \subseteq [VP]_{ALT_{effective}}^g \ \& \ \text{Card}(g(C)) \geq 2$$

If defined,  $\left\| \begin{array}{c} Alt' \\ \swarrow \quad \searrow \\ Alt_C \quad VP \end{array} \right\|_o^g = [VP]_o^g; [VP]_{ALT}^g = \{[VP]_o^g\}$

**6 Conclusion** This paper presents a case where indifference is encoded in the verbal domain via a mental-attitude adverbial *zuebie*, extending the empirical landscape of indifference expressions beyond well-studied *wh*-indefinites and situating indifference within a broader crosslinguistic typology of alternative-sensitive attitude reports (Villalta 2008; Romero 2015, a.o.).

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## One Result Domain, Two Interpretive Paths: Rethinking Post-*de* Material in Mandarin Chinese

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Mandarin post-*de* material is analyzed here within a unified Bec/Result-complement framework: the constituent following *de* occupies [Comp, BecP/ResP], rather than an independent CP-domain. Descriptively, post-*de* material often looks either ADVP-like or small-clause-like, but the real difficulty lies in the instability of its semantic target. In some cases, the post-*de* predicate characterizes a larger VP/event, as in *ta ba wenti xiang de hen touche* ‘he thought through the problem very thoroughly’ or *ta ba zuoye xie de hen yongxin* ‘he did the homework very attentively’; in others, the relevant target is not even internal to the post-*de* phrase, as in *ai de yao-si* ‘love to death’ or *zhao de nimen hao ku a* ‘search for you all with great hardship’, where the consequence is most naturally anchored externally. This shift among VP-level, NP-like, and externally anchored semantic targets lies behind the traditional ADVP/small-clause distinction: the former is usually taken not to project an internal argument position, while the latter is assumed to involve a clearer local argumental slot. Yet the boundary is often far from sharp, since even ADVP-like predicates may still admit a DP-form semantic target, or depend on an external bearer, at the interpretive level.

I propose that this instability should not be handled by multiplying surface construction types, but by distinguishing two interpretive paths within the same post-*de* Result domain. On a **situation-oriented** path, the post-*de* constituent remains tied to a concrete event, local state, or evaluative profile, and functions as event-internal characterization. On a **content-oriented** path, by contrast, the post-*de* constituent is organized as consequence content: it is less tightly bound to immediate event description and more readily enters the kind of interpretation associated with possible-world shift, cross-world comparison, modal evaluation, and operator-sensitive blocking. In this sense, the difference is not merely that one reading is “more proposition-like” than the other, but that only the content-oriented path naturally opens the way to higher-level relations among worlds, propositions, and interpretive operators.

A further advantage of this distinction is that it is not merely descriptive, but testable. If a post-*de* constituent is interpreted along a situation-oriented path, it is expected to remain closely tied to local event structure and to resist being promoted to an independent content object. If it is interpreted along a content-oriented path, by contrast, it should more readily support the kind of organization associated with modal evaluation, cross-world comparison, and operator-sensitive blocking. The distinction proposed here is therefore intended not as a post hoc relabeling of the data, but as a way of predicting differential behavior at the syntax-semantics interface.

Under this view, the traditional ADVP/small-clause contrast does not directly define the underlying syntax of the construction. Rather, it reflects different ways in which one and the same Result domain is interpreted. The role of syntax is to make different anchoring positions accessible within [Comp, BecP/ResP], while the role of lexical semantics is to bias the post-*de* predicate toward particular kinds of semantic target. The final reading emerges from the interaction between structural accessibility and predicate-specific interpretive bias. What matters, then, is not simply whether post-*de* material looks more ADVP-like or more small-clause-like, but how the lexical semantics of the predicate matches the domain made available in the construction. A predicate may appear adverbial at the surface while still allowing an NP-like semantic target, or it may appear more clause-like while remaining tightly anchored to a local event.

This reanalysis shifts the discussion away from pre-assigned surface categories and toward the syntax-semantics interface: what must be explained is not simply what post-*de* material looks like locally, but how one unified Result domain gives rise to different interpretive organizations. In this sense, the Mandarin *de*-construction shows that category-like effects may arise from distinct semantic paths internal to one structure, rather than from a prior split into unrelated construction types.

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## Mapping meaning to structure: Cantonese argumental and predicative nominal phrases

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Main claims: In this paper, I discuss the properties of demonstrative phrases (DemP), Classifier-Noun (CL-N), and modified noun phrases that occur in argument and predicate positions in Cantonese. Based on the properties of these phrases, I argue, per Cheng, Heycock, and Zamparelli (2017), that a Cantonese nominal phrase has the cartography shown in (1), and that the semantic type of a nominal phrase depends on whether and how the sDP layer is licensed.

(1) [s(trong)DP [Num(eral)P [Cl(assifier)P [NP]]]]

Specifically, while sDPs are of an argumental semantic type, e.g. referential (type *e*) or quantificational (type  $\langle et, t \rangle$ ), all phrases without the sDP layer, i.e. NumP, ClP and NP, denote a property (type  $\langle e, \langle s, t \rangle \rangle$ ). This implies that NumP, ClP and NP cannot occur in an argument position without the sDP layer licensed (c.f. Longobardi (1994)). I claim that when a projection has no overt realization or semantic effect, the projection is absent.

Further, this paper argues (pace Delfitto and Fiorin (2025)) that sDPs cannot occur in a predicate position in Cantonese. For instance, (2) is a predicational copular clause that attributes the property of being a doctor to the subject ‘John’; the syntactic position following *hai* in (2) is a predicate position. While a NumP, ClP or NP can occur there, an sDP cannot.

(2) John hai ((jat) go) jisang // John COPULA ((one) CL) doctor // ‘John is a doctor.’

This paper diverges from CHZ2017 and argues against the presence of a w(eak)DP layer between sDP and NumP in Cantonese. In CHZ2017, the wDP layer is proposed to account for predicative phrases that presuppose uniqueness but not existence. Although this layer may plausibly be present in English, I argue that predicative phrases that encode uniqueness are not DPs in Cantonese; thus, there is no motivation for postulating wDP’s existence in Cantonese.

Ways to license the sDP: I argue, per CHZ2017, that there are three methods of licensing the sDP layer. First, a demonstrative can instantiate  $sD^0$  thus licensing the projection. Second, when the  $sD^0$  is occupied by a phonologically null type-shifting operator, the  $sD^0$  can be licensed by movement; either by head-movement of a functional head from immediately below  $sD^0$ , or by movement of a phrase to Spec,sDP. Third, the  $sD^0$  can remain empty and licensed by a c-commanding verb that introduces Existential Closure. Such sDPs are interpreted as indefinite, and must occur in a post-verbal position, i.e. not the sentence-initial subject position.

I argue that two phonologically null operators contribute to the definite-like interpretations of phrases without a demonstrative. The first operator is MAX (based on CHZ2017 and IOTA in Coppock and Beaver (2015)). It takes a property and returns a referential phrase (type *e*) that refers to the unique individual that exists in the discourse context. I claim that MAX triggers head-movement of the classifier to  $sD^0$  (c.f. Cheng and Sybesma (1999), who argue that Cantonese classifiers can function like the definite article). The second operator is  $\cap$  (Chierchia, 1998). It takes a non-singular property and returns an individual concept (type  $\langle s, e \rangle$ ). The extension of the individual concept is the maximal individual that subsumes all individuals with the property in a particular world.  $\cap$  triggers phrasal movement of its restriction to Spec,sDP.

**Cantonese data:** Since demonstratives instantiate the sDP layer in Cantonese, all DemPs in Cantonese are sDPs. Based on the claim that sDPs cannot occur in a predicate position, the use of a DemP in a predicate position should not be possible. This prediction is borne out. For example, the clause in boldface in (3) is a predicational clause that asserts that the addressee does not have the property of the unique boy mentioned in the antecedent. While it is possible to use a NumP, CIP or NP with the modifier *gam ge* to denote the property, it is not possible to use a DemP (contra. English).

- (3) ngo soeng tong jat go jau jau mongsoeng, jau kanlik ge  
 1SG want with one CL CONJ have dream, CONJ diligent GE  
 naamzai paakto, hou hosik ngo m gokdak **nei**  
 boy date, much unfortunately 1SG not consider **2SG**  
**hai** { ((jat)go) **gam ge naamzai /#go go naamzai /#go naamzai** }  
**COP** { ((one) CL) **as.such GE boy / #DEM CL boy / #CL boy** }  
 ‘I want to date a boy who is ambitious and diligent. Unfortunately, I don’t consider **you that boy.**’

Given the absence of the wDP layer, a Cantonese CL-N phrase cannot be a wDP; it can either be CIP, which denotes a property, or an sDP that refers to a unique individual that exists in the context. (3) supports this claim. When the CL-N phrase *go naamzai* is used in (3), the sentence only has the interpretation that the speaker does not think that the addressee is a boy, which is the property stated by the noun. This suggests that there is no functional head within the predicative CL-N phrase that allows the phrase to pick up the property of the unique boy mentioned in the antecedent clause. This is consistent with the claim that a predicative CL-N phrase cannot be a wDP.

Further, the properties of modified phrases support the claim that the sDP layer is required, in order to type-shift a property into a referential expression. When a modified phrase functions as the subject of a stage-level predicate, such as in (4), a demonstrative must be used; the marker *ge* cannot be used instead of Dem+CL. However, when the modified phrase occurs in a predicate position, such as in (5), *ge* can be used instead of Dem+CL.

- (4) cyun-baan zoei gou {go go /\*ge} noeizai jap-zo laamkau doi  
 all-class most tall {DEM CL /\*MARKER} girl enter-PFT basketball team  
 ‘The tallest girl in class entered the basketball team.’
- (5) Amy hai cyun-baan zoei gou ge noeizai  
 Amy COP all-class most tall MARKER girl  
 ‘Amy is the tallest girl in class.’

Without Dem+CL, the modified phrase is an NP with the modifier adjoined (Sio (2006)). Given that NPs denote properties, it is unsurprising that the phrase can occur in a predicate position. However, the sDP layer must be licensed in some way if the phrase is to occur in an argument position grammatically. Since this NP, which is modified by a superlative, denotes a singular property, it cannot be type-shifted by  $\cap$ . Further, the NP does not contain any functional item that can be head-moved to sD<sup>0</sup>. Hence, a demonstrative must be used to license the sD<sup>0</sup>. I claim that the superlative phrase occurs at Spec,sDP and functions as the second argument of the demonstrative (c.f. Ahn (2022)).

Although the definite article *the* is required in the English counterpart of (5), the

demonstrative is not required in the Cantonese sentence. This implies that while the English article *the* may express definiteness without performing type-shifting (CB2015, CHZ2017), there is no functional item in Cantonese that perform the same function. Hence, while English may require the presence of the wDP layer to host a definite article that does not type-shift, Cantonese does not.

Conclusion: This paper argues that argumental nominal phrases must have an sDP layer; and that while English may have a wDP layer, there is no motivation to postulate its existence in Cantonese. These facts from Cantonese shed new light on how the functional projections of a nominal phrase determine its interpretation, and the crosslinguistic variations that exist.

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## Revisit HKSL pronouns from a child language acquisition perspective: How many grammatical persons are distinguished?

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Pronouns in sign languages, including person pronouns and demonstrative pronouns, are usually represented as pointing signs (IX), very much like co-speech pointing gestures in spoken languages. While it is generally agreed that sign language has a pronoun category, it is controversial on how many person features are distinguished in the system. The fact that the same pointing sign may be used to refer to an addressee or a non-participant in a conversation, depending on the context, has driven some scholars to propose that there is only a first/non-first distinction, with the second and third persons not being distinguished (Meier 1990). In contrast, others argue that there should be three person features (first, second, and third) and (e.g., Lam 2003 for HKSL, Veiga Busto 2023 for LSC) that resemblance of form may be due to syncretism at the morphophonological level (Lillo-Marín and Chen Pichler 2020).

To address the above-mentioned debate, this project explores the sign pronoun system from a child language acquisition perspective, aiming to provide new evidence. Specifically, we investigate the pronoun acquisition of a bimodal bilingual deaf child, WT, who was exposed to Hong Kong Sign Language (HKSL) from birth and received cochlear implantation at around 2 years of age to facilitate his spoken language acquisition (i.e., Cantonese). We examine whether WT's pronoun acquisition can be predicted by the morphological feature geometry (for pronouns) proposed by Harley and Ritter (2002; hereafter H&R), according to which more marked pronouns (ones with more features, e.g., 1<sup>st</sup> person singular, 3<sup>rd</sup> person singular inanimate) are acquired later than less marked ones (e.g., 2<sup>nd</sup> person, the plural ones).

WT's data of spontaneous pointing signs were extracted from the Child HKSL-Cantonese Bilingual Corpus, including 14 HKSL-target sessions (each around 45-60 minutes) and 14 corresponding Cantonese-target sessions (each around 30-45 minutes) (age range: 1;0 - 4;3). For a control, spontaneous pronoun production of a monolingual Cantonese-acquiring child (CKT) was extracted from CANCELP (Lee et al., 1996), including 5 sessions (age range: 1;5-2;6). Similar coding schemes were used to analyse both children's data. (Note that monolingual HKSL data are not available so far.) For every pronominal extracted, we coded for grammatical function (e.g., SUBJECT, OBJECT), language mode (e.g., HKSL-only, Cantonese-only, multimodal), and utterance context. The criteria of acquisition adopted here are as follows: (1) first repeated use (at least 5 tokens within the same session), (2) observed use at least in three different syntactic positions (e.g., subject position, object position, modifier position).

Table 1. Acquisition orders of different pronouns (in chronological age)

Types of pronouns	WT's HKSL	Cantonese	
		WT's	CKT's
<b>Demonstrative (inanimate)</b>	2;0	3;0	2;0
<b>1<sup>st</sup> person singular</b>	2;9	3;3	2;6
<b>2<sup>nd</sup> person singular</b>	After 4;3	After 4;3	After 2;6
<b>3<sup>rd</sup> person singular (animate)</b>	2;9	After 4;3	After 2;6

In the results (cf. Table 1), in line with H&R's geometry, inanimate pronouns (i.e., demonstrative pronouns) were acquired earliest across WT's HKSL (2;0), his Cantonese (3;0, approximately 1

year after implantation), and CKT's Cantonese (2;0), which was assumed to be the most unmarked pronoun feature. Secondly, corroborating H&R's proposal, the first-person feature is acquired before the second-person feature, across WT's HKSL (2;9), WT's Cantonese (3;3, around 15 months after implantation), and CKT's Cantonese (2;6). Moreover, as predicted by H&R's geometry, singular pronouns are acquired earlier than plural pronouns. Plural pronouns were not recorded in WT's Cantonese and CKT's Cantonese throughout the period of observations. For WT's HKSL, plural pronouns did not occur until 3;3 (1 token in the form of "IX\_all") and were not productively used in the period of observation.

To conclude, our results can be well accommodated by Harley and Ritter's morphological feature geometry. Since WT's different pointing signs, IX\_1 (for the signer himself), IX\_2 (for the addressee), and IXs for inanimate or animate non-conversational participants were acquired at different ages, it supports the previous assumption by Lam (2003) that HKSL has a three-person pronouns system (1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup>) rather than a two-person system (first/non-first). WT's different acquisition timelines for the 1<sup>st</sup>-person singular and 3<sup>rd</sup>-person animate in his HKSL (both at 2;9) and Cantonese (3;3 for 1<sup>st</sup> singular and after 4;3 for 3<sup>rd</sup> person animate) may suggest independent development in the two languages.

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Lisi run DE very fast/tired      Lisi noodle eat DE noodle very happy  
 ‘Lisi runs fast/tired.’              ‘Lisi ate (noodle) happily.’

**3. Our analysis of [NP<sub>theme</sub>-V-*qǐ*-*lái*-Pred]:** (i) [V-*qǐ*] being a compound formed by head-movement is followed by a *lái*-marked modifier; (ii) *qǐ* is an aspect marker that denotes the inchoative stage of an activity, given the evidence that no other aspect markers can be added; while *lái* is a complementizer (also see Wu 2001/2002 for a directional verb diachronically turning to an aspect marker or a complementizer *bǔyǔ biāoji*). We propose the structures of [NP<sub>theme</sub>-V-*qǐ*-*lái*-Pred] as in (9-10).

(9) [NP<sub>theme</sub>-V-*qǐ*-*lái*-Pred<sub>event</sub>] (cf.(3a))  
 [TP [Subj *Zhè-běn xiǎoshuō*] [AspP Asp-[*fānyì-qǐ*] [VP [*zhè-běn xiǎoshuō*] [V' V-*fānyì* [LAIIP *lái* [*bù róng yì*]]]]]]  
 PHRASAL-MOVEMENT ↑ \_\_\_\_\_ ↑ \_\_\_\_\_ | \_\_\_\_\_ |  
 HEAD-MOVEMENT | \_\_\_\_\_ |

(10) [NP<sub>theme</sub>-V-*qǐ*-*lái*-Pred<sub>non-event</sub>] \_\_\_\_\_ HEAD-MOVEMENT (cf.(3b))  
 ↓ \_\_\_\_\_ |  
 [TP [Subj *Zhè-duǒ huā*] [AspP Asp-[*kàn-qǐ*] [VP [*zhè-běn xiǎoshuō*] [V' V-*kàn* [LAIIP *lái* [PRO *hěn piàoliàng*]]]]]]  
 PHRASAL-MOVEMENT ↑ \_\_\_\_\_ | \_\_\_\_\_ |  
 BINDING | \_\_\_\_\_ |

**Not (necessarily) a middle construction:** there can appear a logical subject of the V in the structure with event-denoting predicates as in (9), though not in the other as in (10) (see (11a, b). In (11a), we propose that the NP [*zhè-běn xiǎoshuō*] is a base-generated topic which is “re-analyzed” as the theme of the matrix verb (see Hu 2010, 2016 for post-syntactically re-analyzing the thematic meaning of base-generated NPs in Chinese). In (11b), the logical subject *Lili* intervenes the binding between the embedded subject PRO and the topic [*zhè-duǒ huā*].

(11) a. *Zhè-běn xiǎoshuō*, *Lǐsì fānyì-qǐ* [*lái bù róngyì*]. (cf. (8))  
 this-CL novel, Lisi translate-QI LAI NEG easy

‘This novel is not easy for Lisi to translate.’

b. \**Zhè-duǒ huā*, *Lìlì kàn-qǐ* [*lái* [PRO *hěn piàoliàng*]]. (cf. (9))  
 this-CL flower Lili look-QI LAI very pretty

(‘This flower is pretty for Lili to look at.’)

**4. Extended discussion:** (i) In [NP<sub>theme</sub>-V-*qǐ*-*lái*-Pred] where *qǐ* is an aspect marker generated higher than V, *lái* should not undergo head-movement; otherwise, in a bottom-up fashion of movement, [V-*lái*-*qǐ*] cannot be derived. (ii) Moreover, *lái* being a directional verb can also appear in-situ without head-movement, as in (11). (iii) When the directional verb *lái* in-situ co-occurs with *qǐ*, the logical object can appear post-verbally, forming [V-*qǐ*-Asp-O-*lái*] and [V-*qǐ*-O-*lái*]. The former is derived if *qǐ* is a directional verb, as in (12); while the latter is derived if *qǐ* is an aspect marker, as in (13).

(11) *Lǐsì sòng-le shū lái*. (cf. (1b))  
 Lisi send-ASP book come ‘Lisi sent books to (here).’

(12) a. (?) *Lìlì chàng.qǐ-le gē lái*. [V-*qǐ*-Asp-O-*lái*]  
 Lili sing.up-ASP song come ‘Lili (begins to) sing songs.’

b. [TP *Lìlì* [AspP Asp-[*chàng.qǐ-le*] [VP [*Lìlì*] [V' V-[*chàng-qǐ*] [VP1-dir [*gē*] V<sub>dir</sub>-*qǐ* [VP2-dir PRO

HEAD-MOVEMENT ↑ \_\_\_\_\_ ↑ \_\_\_\_\_ | [V<sub>dir</sub>-*lái*]]]]]]

(13) a. *Lìlì chàng-qǐ gē lái*. [V-*qǐ*-O-*lái*]  
 Lili sing-up song come ‘Lili (begins to) sing songs.’

b. [TP *Lìlì* [AspP Asp-[*chàng-qǐ*] [VP [*Lìlì*] [V' V-*chàng* [VP-dir [*gē*] [V<sub>dir</sub>-*lái*]]]]]]

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## Speaker intention and the encoding of disjunction: *háishì* and *huòzhě* in Mandarin

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When discussing disjunction, traditional semantics typically links the concept to the meaning of *or*. English *or* is often treated as the natural language counterpart of logical disjunction  $\vee$ , with essentially the same core meaning (Horn 1972, Gamut 1991). Cross-linguistically, however, a connective equivalent to  $\vee$  is not universal. Some languages encode disjunction differently in interrogative and non-interrogative contexts (Haspelmath 2007). Mandarin *háishì* (還是) and *huòzhě* (或者) exemplify this pattern, making Mandarin a useful case for examining how disjunction is expressed in natural languages. Despite cross-linguistic variation, disjunction is interpreted similarly across languages, particularly in how hearers infer speaker intention and how such intentions are shaped by linguistic convention.

Research on English *or* shows that scope differences of *or* generate distinct readings, reflecting different speaker intentions. Consider Rooth and Partee's (1982) example:

- (1) Mary is looking for a maid or a cook.  
 → a. Mary is looking for a maid, or Mary is looking for a cook.  
 → b. Mary is looking for [a maid or a cook].

In (1a), *or* connects two clauses with an ignorance implicature: Mary is looking for a maid or a cook, but the speaker is unsure which one she wants. In (1b), *or* connects two noun phrases within a single proposition: either option would satisfy Mary's need, so whether it is a maid or a cook makes no real difference, and no ignorance is implied.

In Mandarin, *háishì* and *huòzhě* differ in scope. *Huòzhě* links alternatives within a single proposition, so its scope is more flexible and it can be embedded under modals, negation, and quantifiers. *Háishì*, by contrast, typically appears in interrogatives and connects two propositions, contrasting possible worlds and not allowing flexible embedding. For example, the following sentences are unacceptable with *háishì* (Erlewine 2014):

- (2) a. \* Zhangsan bu-xiang tuodi haishi xiwan?  
 Zhangsan NEG-want sweep.floor HAISHI wash.dished

Intended meaning: "Does Zhangsan not want to sweep the floor or wash the dishes?"

- b. \* Shi Zhangsan chi-le pingguo haishi juzi?  
 is Zhangsan eat-LE apple HAISHI orange

Intended meaning: "Was it Zhangsan who ate the apple or the orange?"

Erlewine (2014) points that *háishì* projects semantic focus, so to make (2a) becomes acceptable, *háishì* should scope above negation. However, the same adjustment does not rescue (2b), see (2b') below. In (2b'), the focused subject conflicts with the focus projected by *háishì*. I therefore argue that *háishì* constructs a set of contrastive foci and defines a clear question focus domain. In (2b'), the contrast expands to two clauses—"Zhangsan ate the apple" vs. "Zhangsan ate the orange"—improperly including "Zhangsan" in the domain, even though it does not contrast.

- (2b') \* Shi Zhangsan chi-le pingguo haishi Zhangsan chi-le juzi?

The scope contrast between *háishì* and *huòzhě* reflects different speaker intentions. *Háishì* presents disjuncts to express uncertainty and invites the hearer to choose, with its contrastive foci highlighting distinct possible worlds. By contrast, *huòzhě* forms a single proposition and conveys known information. Any inference that the speaker is uncertain is merely truth-compatible (Ariel & Mauri 2018)—logically available, but not part of the speaker's communicative intention.

Speaker intention also helps explain other special uses of *háishì* in statements:

- (3) Lisi qu-le Xianggang haishi Aomen, mai-le hen duo huazhuangping.  
 Lisi go-LE Hong Kong HAISHI Macau buy-LE very much cosmetics

‘Lisi went to Hong Kong or Macau, and he bought a lot of cosmetics.’

Here, the speaker signals uncertainty but does not seek confirmation. *Háishì* appears in the first clause, after which the speaker proceeds with the main point: regardless of whether Lisi went to Hong Kong or Macau, he bought many cosmetics. The alternation between “Hong Kong” and “Macau” does not affect the conclusion.

*Háishì* also occurs without expressing uncertainty in declaratives, as in “... it depends on A *háishì* B” and “no matter whether A *háishì* B...”. In these cases, the speaker’s intention is simply to evoke distinct possible worlds associated with the alternatives. This parallels the English *whether...or...*, which can appear in both interrogative and non-interrogative contexts.

We summarize the difference between *háishì* and *huòzhe* in Table 1.

Table 1. The difference in usages between *háishì* and *huòzhe* (! = emphasized)

Connective	Usage	Scope	Speaker Intention		
			Disjuncts refer to distinct possible worlds	Uncertainty about which option is true	Necessity to confirm one choice
<i>háishì</i>	Alternative questions	P(A) <i>háishì</i> P(B)	+	+	+
	Uncertain statements, see (4)		+	+	-
	“..., it depends on A <i>háishì</i> B” “no matter it is A <i>háishì</i> B,...”	P(A) <i>huòzhe</i> B )	+	-	-
<i>huòzhe</i>	Statements		-	-	-

The question raised at the beginning was whether a universal disjunction connective exists. The distinction between Mandarin *háishì* and *huòzhe* suggests at least one clear conclusion: disjunctive expressions in language do not directly correspond to the logical concept of disjunction. Future research on the network of expressions found in Sinitic languages may help us push this discussion further: in natural communication, how is the concept of disjunction understood and communicated?

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## (Implicit) directive on one *hann*, echo question on the other *hann*

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**1. Summary.** This study unifies the various uses of a confirmational sentence-final particle *hann* in Penang Hokkien, claiming that it primarily questions the addressee's commitment regarding its prejacent *p*. It forms an (implicit) directive when combining with imperatives and declaratives, while presupposing the speaker's commitment to *p*. On the other hand, *hann* derives echo questions and rising declaratives if it is the addressee who previously committed to *p*, and the speaker questions the such commitment due to perceptual or epistemic blockage.

**2. Distributions.** *hann* can combine an imperative to form a request for approval (1), or a declarative to derive an implicit directive (2), whose flavor of the directive is contextually determined.

- |   |  |
|---|--|
| <p>(1) X:khui muinn hann?<br/>open door HANN<br/>'Open the door, okay?'<br/>↪ Please allow me to open the door.</p> | <p>(2) jitthau tui tangpinn tshutlai HANN?<br/>sun from east come.out HANN<br/>'The sun rises from the east, okay?'<br/>↪ Don't make mistakes in the exam.</p> |
|---|--|

*Hann* can also combine with interrogatives. It cannot occur out-of-the-blue, but has to be a response to a discourse commitment previously put on the Table by the addressee. Combining with a wh-interrogative, it yields a perceptual echo question (3), or an epistemic echo question (4a) (Biezma et al. 2021). It may also combine with a rising declarative, felicitous only in epistemic echo contexts (4b).

- |  |  |
|--|--|
| <p>(3) Y:'Ming ate #@!@#.'<br/>Y intended:'Ming ate apples.'<br/>X:Ming tsiak hamik HANN?<br/>Ming ate what HANN<br/>'Ming ate WHAT?' ↪ I couldn't hear you.</p> | <p>(4) Context: Ming is known for disliking apples.<br/>Y:'Ming ate apples.'<br/>a. X:Ming tsiak hamik HANN?<br/>Ming ate WHAT HANN<br/>'Ming ate WHAT?' ↪ I can't believe it!<br/>b. X:Ming tsiak phengko HANN?<br/>Ming ate apples HANN<br/>'Ming ate APPLES?' ↪ I can't believe it!</p> |
|--|--|

It can also derive rhetorical question (5) and cornering question (6).

- |   |   |
|---|---|
| <p>(5) Y said 3+3=7. X said:<br/>sann ke sann si lua-tse HANN?<br/>3 plus 3 be how.much HANN<br/>'What does 3+3 equal to, huh?'</p> | <p>(6) Y once said he would come to the party, but once said he would not. X was annoyed:<br/>lu kaute si lai m-lai HANN?<br/>2.SG at.bottom be come NEG.come HANN<br/>'Are you coming or not?'</p> |
|---|---|

**3. Proposal:** We aim to unify the uses of *hann* by suggesting that its primary function is to question the addressee's commitment to the prejacent. Their various distributions can be accounted for by whether the speaker's commitment is presupposed. We adopt Farkas and Bruce (2010)'s formalization while omitting irrelevant details to define a simple context  $c = \langle DC_{spk}, DC_{adr}, Table \rangle$ , where the *DC* refers to the commitment set of an interlocutor, i.e. the set of propositions that an interlocutor is publicly and successfully committed to all participants in a context.  $DC_{spk} \cup DC_{adr}$  forms the common ground *CG*.

We first examine the imperative uses (1). Like canonical imperatives, the radical denotes a future event. But unlike canonical imperatives, *hann* imperatives by default are the first-person instigator. The speaker asks whether she is allowed to open the door, and therefore should be of  $\diamond$  modality,

not  $\square$ . The LF of *hann* is as (7). Before saying (1), the speaker must have a bias towards  $\diamond p$ , as in (8). By saying (1), the speaker adds (9) on *Table*. What the speaker puts on *Table* is not a question of whether  $\diamond p$ , but a question whether  $\diamond p$  is in  $DC_{adr}$ .

(7) LF: [*hann* [ $\diamond$  [ $p$ ]]]    (8) pres.:  $\diamond p \in DC_{spk}$     (9)  $\{\diamond p \in DC_{adr}, \diamond p \notin DC_{adr}\}$

Implicit directives like (2) are defined only if the speaker holds epistemic authority over the truth of  $p$ . The prejacent of *hann* for the declarative case (2) is a non-modalized proposition  $p$ , as in the LF (10). Before saying (2), the speaker should be biased towards  $p$  (=11). By saying (2), the speaker pushes the question (12) on *Table*. The question cannot be simply whether  $p$  because  $p$  is not up to debate, and is pre-determined by the speaker. The speaker asks whether the addressee knows  $p$ , not whether the addressee thinks  $p$  is true. The implicit directive effect is achieved by  $p$  altering the epistemic modal base of the speaker (Kratzer 1991), and ultimately adding  $\square q$  into  $CG$ .

(10) LF: [*hann* [ $p$ ]]    (11) pres.:  $p \in DC_{spk}$     (12)  $\{p \in DC_{adr}, p \notin DC_{adr}\}$

As for echo *hann* (3) and (4a), it is licensed when the addressee's commitment instead of the speaker's commitment to the at-issue content  $p$  is presupposed (=14). The speaker either did not hear the addressee's commitment clearly, or did not believe that the addressee made such a commitment. As a result, the speaker pushes (15) to *Table*, asking what the addressee has just committed. The question is not a simple set  $\{p, q, r, \dots\}$  because the echo question does not ask for the truth. It just wants to make sure that what proposition is indeed in  $DC_{adr}$ , so that they can discuss accordingly.

(13) LF: [*hann*[ $p$ ]]    (14) pres.:  $p \in DC_{adr}$     (15)  $\{p \in DC_{adr}, q \in DC_{adr}, r \in DC_{adr} \dots\}$

Regarding rising declaratives (4b), it is similar to the echo question case in the way that it is the addressee giving a previous commitment (=17). The speaker makes use of a *hann* rising declarative to push (18) on *Table*. Again, it does not inquire the truth of whether  $p$ , but it just aims at clarifying whether the addressee really commits to  $p$ .

(16) LF: [*hann* [ $p$ ]]    (17) Pres.:  $p \in DC_{adr}$     (18)  $\{p \in DC_{adr}, p \notin DC_{adr}\}$

Recall that in echo questions and rising declaratives, the speaker may not have bias. Rhetorical question (5) and cornering question (6) are both side-products of the echo effect. Rhetorical question (5) is asked when the speaker has maximal commitment to  $\neg p$ , as opposed to the addressee's previous commitment  $p$ . The speaker thus has to question whether  $p$  is really in the addressee's commitment, anticipating a negative answer which retracts the previous one. Cornering question (6) is asked when the addressee commits to incompatible propositions, leading to the speaker questioning which of them is actually in  $DC_{adr}$ .

**4. Implications.** While the cognate of *hann* exists across Sinitic languages (see Table 1), Penang Hokkien stands out as typologically unique due to its multifunctionality. This study may also serve as a case study of the properties of the linguistic universal 'huh' (Dingemanse et al. 2013).

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Dialects	Particle	Imperatives		Declaratives		Interrogatives	
		1.SG	2.SG	S>A	A>S	Echo	RD
S.Min (Penang)	hann	✓	✓	✓	✓	✓	✓
S.Min (Changtai)	hann	✓	✓	✓	✓	×	×
Gan (Lianhua)	xǎ	✓	✓	✓	✓	×	✓
Yue (Hong Kong)	haa2	✓	✓	✓	×	×	×
Mandarin	ha	✓	✓	✓	×	×	×
Mandarin (SW)	ha	✓	✓	✓	×	×	×
Wu (Linhai)	go33	✓	✓	✓	×	×	×

Table 1: *ha* across Chinese dialects

## nP-phasality and a subtle sign of successive cyclicity in colloquial Lhasa Tibetan

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**1. Introduction** This study argues that in colloquial Lhasa Tibetan (cLT), various phrasal nominalizers should be analyzed as heading an nP-phase. Under a classic phase theory (Chomsky 2008), such an nP-phasality analysis of cLT phrasal nominalization accounts for its association with a number of operations: **object scrambling**, **absolute subject licensing**, and **relativization**, as well as their **mutual bleeding** within nominalized phrases as they compete for the single edge position of an nP-phase. It also correctly predicts a subtle sign of successive cyclicity in this language: given a long distance movement across an nP boundary, which supposedly leaves a cyclic movement copy occupying the edge of that nP, all other operations associated with that nP-edge are bled as a result. By showing that n in cLT exhibits such complex properties of a phasal category, this study provides novel empirical support to a hypothesis that nP could also be a phasal category (cf. López, Alexiadou & Veenstra 2017 a.o.). Novel utterances in this study are from original fieldwork and transcribed in IPA.

**2. Empirical facts** This section shows that **object scrambling**, **absolute subject licensing** and **relativization** are available within a nominalized phrase in cLT, but no more than one of them can be initiated together. In other words, they bleed each other in such environment. These properties are demonstrated with the nominalizer ‘-pà’, but they carry over to other nominalizers including ‘-klú’ and ‘-já’. Different nominalizers are associated with different aspectual and nuanced syntactic properties, which I claim is orthogonal to their common property investigated here.

First, (1) demonstrates **absolute subject licensing**, where the subject in a nominalized phrase can be either ergative, or exceptionally assigned the absolutive (unmarked) case.

- (1) tʂá.ʂí-kè [pé.mé:/pé.ma tʰuŋ.tʂúp-là mò.mó sò:-pà tì] há.kʰò:-pà-ɿe  
Trashi-ERG Pema.ERG/ABS Donvgrub-DAT dumpling make-Pa DEF know-PA-COP  
‘Trashi knew that Pema made dumplings for Donvgrub.’

Second, (2) shows that object scrambling across the subject is possible in such environment, and crucially, it would bleed an absolutive subject. Note that both objects can be scrambled with the same consequence, while I demonstrate with a dative object to establish it as a genuine case of movement instead of base generation, since dative case must be assigned in the base position.

- (2) tʂá.ʂí-kè [tʰuŋ.tʂúp-là<sub>i</sub> pé.mé:/\*pé.ma t<sub>i</sub> mò.mó sò:-pà tì] há.kʰò:-pà-ɿe  
Trashi-ERG Donvgrub-DAT Pema.ERG/\*ABS dumpling make-Pa DEF know-PA-COP  
‘Trashi knew that Pema made dumplings for Donvgrub.’

Third, it is known that relativization in LT apparently involves a genitive-marked nominalized phrase with an argument gap associated with the relative head noun, as in (3) (DeLancey 1999).

- (3) [pé.mé tʰuŋ.tʂup-la <sub>-i</sub> sò:-pè] momo<sub>i</sub>  
Pema.ERG Donvgrub-DAT make-Pa.GEN dumpling  
‘Dumplings that Pema made for Donvgrub’

Importantly, in such “relativizing” nominalized phrases, both object scrambling and absolutive subject are not possible, as shown in (4) and (5).

- (4) \*[tʰuŋ.tʂup-la<sub>j</sub> pé.mé t<sub>j</sub> <sub>-i</sub> sò:-pè] momo<sub>i</sub>  
Donvgrub-DAT Pema.ERG make-Pa.GEN dumpling  
Int: ‘Dumplings that Pema made for Donvgrub.’

- (5) \*[pé.ma tʰuŋ.tʂup-la <sub>-i</sub> sò:-pè] momo<sub>i</sub>  
Pema.ABS Donvgrub-DAT make-Pa.GEN dumpling  
Int: ‘Dumplings that Pema made for Donvgrub.’

**3. Analysis I** build my analysis of above facts on some key assumptions from a classic version of phase theory delineated in Chomsky 2008 and a dependent case theory by Baker (2015): (a<sub>1</sub>) – a phase head may introduce Edge Features (EFs) responsible for various kinds of movements (Copy & I-Merge) to its specifier (Chomsky 2008); (a<sub>2</sub>) – a phase head initiates the Spell-Out of its complement and EF-related movements **at the same stage** (Chomsky 2008: 143); (a<sub>3</sub>) – the dependent case specific to a particular Spell-Out domain is assigned **during Spell-Out**, to a caseless c-commanding/c-commanded NP relative to the other caseless NP (Baker 2015). Then, **specific to cLT**, I propose that (p<sub>1</sub>) – cLT phrasal nominalizers head an **nP phase** that can introduce **only one** EF: [REL] for operator movement or [Σ] (Grewendorf & Sabel 1999) for scrambling; (p<sub>2</sub>) – *n* in these cases nominalizes VoiceP, and different aspectual properties associated with different nominalizers are encoded in the semantics of nominalizers, instead of coming from a Asp projection; (p<sub>3</sub>) – Ergative case is the dependent case assigned within VoiceP to the higher c-commanding NP. **These premises can now derive patterns in §2. First**, optional object scrambling and absolutive subject licensing are both triggered by a [Σ] on *n*. Absolutive subject licensing: when [Σ] targets the external argument (EA), the targeted lower copy hasn't received the ergative case that is assigned a bit later after VoiceP Spell-Out is initiated by *n*, per (a<sub>2</sub>). The higher copy of EA then remains caseless on Spec,nP and subsequently receive the unmarked case (**absolutive**) in the next Spell-Out cycle. Thus “absolutive subject licensing” is understood here as **subject scrambling** to Spec,nP; Object scrambling: When [Σ] on *n* targets the indirect object which as been previously assigned dative before [Σ]-probing, the higher copy on Spec,nP also appears with dative. This naturally explains why object scrambling bleeds an absolutive subject: because they are both enabled by the same [Σ] feature while there can be only one EF on *n* per (p<sub>1</sub>). **Second**, whenever relativization is involved, it is reasonable to assume that there is a relative operator moving to the edge of nP. Such movement indicates a [REL] on *n*. Again according to (p<sub>1</sub>), [Σ] and [REL] can't co-exist on *n*, therefore both object and subject scrambling (absolutive subject) are bled here.

- (6) [n<sub>P</sub> Op<sub>i</sub> pé.mé t<sup>h</sup>uŋ.tʂup-la t<sub>i</sub> sò:-pè] momo<sub>i</sub>  
 Pema.ERG Donvgrub-DAT make-Pa.GEN dumpling  
 ‘Dumplings that Pema made for Donvgrub’

**4. Prediction** This analysis correctly predicts that long distance scrambling (LDS) across nP bleeds any kind of lower-nP-internal scrambling (7). This is because due to PIC and the proposed nP-phasality, LDS must stop at Spec,nP to remain visible to the higher probe, rendering this position unavailable to any scrambling within the embedded nP.

- (7) a. t<sup>h</sup>uŋ.tʂúp-là<sub>i</sub> tʂá.ʂí-kè [pé.mé:/\*pé.má t<sub>i</sub> mò.mó sò:-pà tí]  
 Donvgrub-DAT Trashi-ERG [Pema.ERG/\*ABS dumpling make-Pa DEF]  
 há.k<sup>h</sup>ò:-pà ɿc  
 know-Pa COP  
 ‘Trashi knows that Pema made Donvgrub dumplings.’  
 b. \*t<sup>h</sup>uŋ.tʂúp-là<sub>i</sub> tʂá.ʂí-kè [mò.mó<sub>j</sub> pé.mé: t<sub>i</sub> t<sub>j</sub> sò:-pà tí] há.k<sup>h</sup>ò:-pa  
 Donvgrub-DAT Trashi-ERG dumpling Pema.ERG make-Pa DEF know-Pa  
 ɿc  
 COP  
 Int: ‘Trashi knows that Pema made Donvgrub dumplings’

**Sel.Ref.** Baker, M. (2015). *Case: Its Principles and...*; Chomsky, N. (2008). *On phases...*; DeLancey, S. (1999). *Relativization in Tibetan*.; Grewendorf, G. & Sabel, J. (1999). *Scrambling in German and Japanese...*;

# The Impact of Verb Factivity on the Acceptability of Dependency Relations in Mandarin: A Processing-Distribution Integration Account

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**1. Introduction** This study investigates how the semantic properties of verbs, specifically factivity, influence the acceptability of dependency interpretations in Mandarin. In research on syntactic islands and long-distance dependencies, earlier studies often emphasized categorical syntactic constraints such as the Condition on Extraction Domain (CED), whereas more recent experimental work has suggested that acceptability judgments are gradient and sensitive to multiple interacting factors, including processing cost, discourse compatibility, and distributional expectation. Factive verbs (e.g., 知道 ‘know’, 发现 ‘discover’) presuppose the truth of their complements, whereas non-factive verbs (e.g., 认为 ‘think’, 相信 ‘believe’) do not. Although factive effects on dependency acceptability have been widely discussed in English, comparable experimental evidence from Mandarin remains limited. Building on expectation-based and usage-based approaches, this study examines whether verb factivity interacts with clause type in shaping participants’ acceptability judgments.

**2. Research Questions** This study addresses two primary questions: (i) Does verb factivity influence the acceptability of dependency interpretations in Mandarin? (ii) Does clause type (Declarative vs. Interrogative) interact with verb factivity in shaping these judgments, potentially reflecting differences in processing demands and discourse structure?

**3. Methodology** We employed a 2×2 factorial design crossing **Verb Type** (Factive vs. Non-factive) and **Clause Type** (Declarative vs. Interrogative). Ten commonly used verbs (5 factive, 5 non-factive) were selected to construct 100 experimental items involving long-distance dependency interpretations. Lexical frequency and overall sentence length were controlled across conditions, while the target constructions were matched as closely as possible in surface structure. Fifty native Mandarin speakers participated in an acceptability judgment task (AJT) using a 7-point Likert scale.

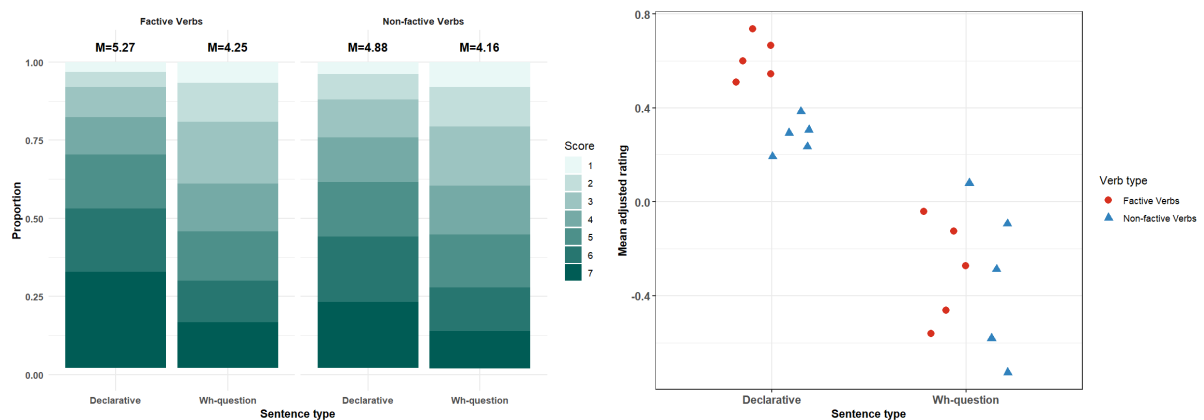


Figure 2. The left panel shows the distribution of acceptability judgments based on verb type and sentence type, while the right panel shows the adjusted average score distribution for each verb.

**4. Results** The results of this experiment are shown in Figure 1, which mainly reveal the following two findings: (i) Sentences in declarative conditions received significantly higher acceptability ratings than those in interrogative conditions across verb types ( $p < 0.05$ ). (ii) A significant interaction between verb type and clause type was found. In declarative conditions, sentences containing factive verbs received significantly higher ratings than those containing non-factive verbs ( $p < 0.05$ ). In interrogative conditions, this difference was not statistically significant.

**5. Discussion** The present findings suggest that the acceptability of dependency interpretations in Mandarin cannot be explained by verb semantics alone. In particular, the interaction between verb type and clause type indicates that factivity-related effects may be sensitive to broader processing and discourse conditions. We therefore propose a Processing-Distribution Integration Account, according to which acceptability judgments reflect the interaction of semantic properties, distributional expectation, and processing demands. (i) From a processing perspective, interrogative conditions may impose greater integration demands and discourse complexity, potentially reducing participants' sensitivity to subtle semantic contrasts associated with verb factivity. (ii) From a usage-based perspective, Mandarin factive verbs such as 知道 tend to occur more frequently with declarative complements, which may strengthen participants' expectations for particular verb-frame pairings. Following expectation-based approaches to sentence processing, these distributional tendencies may contribute to the higher acceptability ratings observed in declarative factive conditions.

**6. Conclusion** The present study suggests that acceptability judgments associated with dependency interpretations in Mandarin are shaped by the interaction of semantic, distributional, and processing-related factors. These findings provide preliminary experimental support for a multi-factor approach to dependency acceptability in Mandarin and highlight the importance of integrating semantic and usage-based perspectives in the study of sentence processing.

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## Influence of Animacy and Collectivity on the Production of the Optional Mandarin Plural Marker "*men*"

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The Mandarin marker *men* is traditionally described as an optional plural or collective marker, strongly restricted to human nouns (Li 1999; Iljic 1994). However, recent studies of spoken corpora suggest that *men* is more flexible, appearing occasionally with non-human nouns (Yao & Cook, 2025), and exhibiting a range of extended uses beyond plurality (e.g., diminutive; Cook 2009, 2019). Further, Mandarin plural expression often relies on quantifier-classifier structures (Kim 2008; Kim & Meng 2022), which raises questions about how speakers' use of *men* interacts with alternative strategies.

Corpus studies allow close examination of places where *men* was used, but make it challenging to identify places where it was possible but omitted. The current study uses an experimental approach to explore the influence of animacy and collectivity on Mandarin speakers' use of *men* and other number-marking strategies. By observing participants' descriptions of structured scenes, we can build a fuller understanding of the factors that guide speakers' use and non-use of *men*.

Native speakers of Mandarin (n=84) completed a picture description task. Pictures varied by animacy of the target referent (human, animal, object) and number/collectivity (singular, plural-individual, plural-group; Table 1). Plural-individual and plural-group images differed in whether the target referents formed a coherent group or not (e.g., apples spread on a table vs in a bowl, children playing individually vs together). Participants' descriptions were audio-recorded and coded for presence/absence of *men* and other number-marking strategies: other plural expressions (*ji3ge4* "several"), singular expressions (*yi1ge4* "one"), unmarked. If both animacy and collectivity play key roles, we predicted that *men* would appear primarily with multiple human referents, with the highest rates in the plural-group condition.

Results indicate a preference to use *men* with human nouns, but also frequent use with animal nouns, and little difference between the plural-individual and plural-group conditions. As shown in Figure 1, *men* occurred in approximately 60% of trials with human plurals and 36% of trials with animal plurals. It never occurred in singular trials, and was very rare with object plurals. Mixed-effects models of *men* use in plural-individual and plural-group trials supported this pattern: There was a reliable effect of both Helmert-coded animacy contrasts (human/nonhuman, animal/object;  $ps < .001$ ), and no reliable effect of collectivity (plural-individual/plural-group) nor any reliable interactions ( $ps > .5$ ).

Further exploration of the data showed that, collapsing across animacy, plural-marking strategies were similar in the plural-individual and plural-group conditions. Figure 2 shows the distribution of *men*, other plural expressions, and unmarked forms across singular, plural-individual, and plural-group trials. Notably, some plurals were marked with both *men* and another plural expression.

Our results thus suggest a stronger role for number and animacy than for collectivity: *men* occurs only in plural contexts, with both human and animal referents, and use was not reliably different between plural-individual and plural-group conditions. These findings provide experimental evidence that Mandarin plural marking is less constrained than traditionally assumed and that collectivity may play a more limited role, with implications for formal analyses and future corpus and diachronic research.

**Keywords:** *men*, plural, collective, morphosyntax, Mandarin Chinese, production

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**Table 1.** Experimental image examples.<sup>1</sup>

	Singular	Plural-group	Plural-individual
Human (child)	Tip: Play with toys <sup>2</sup> 提示: 玩玩具 	Tip: Play with toys 提示: 玩玩具 	Tip: Play with toys 提示: 玩玩具 

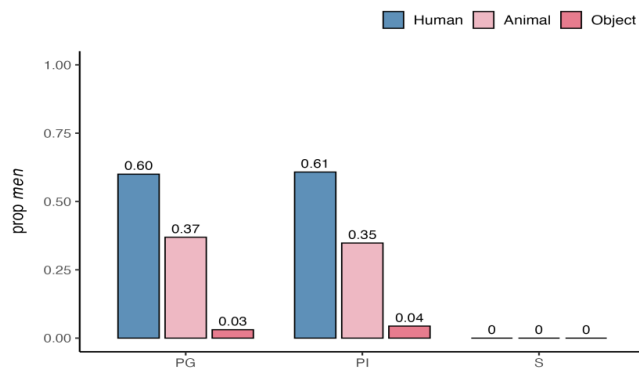


Figure 1. Proportion of nouns marked with *men* across different animacy categories (human, animal, inanimate) and number conditions (singular, plural individual, plural group).

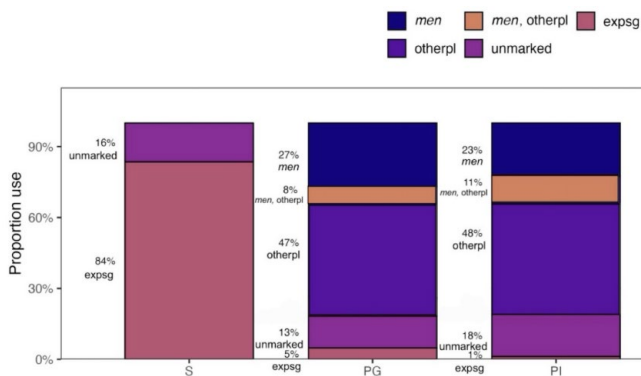


Figure 2. Distribution of number-marking strategies (*men*, *men* with other plural expression, other plural expression, singular expression, unmarked) across different number conditions (singular, plural individual, plural group).

<sup>1</sup> All images were hand-drawn by the first author, who claims the creative copyright.

<sup>2</sup> Only Mandarin tips were presented in the experiment.

## Mandarin *ba* as an Overt Causative Construction: Rethinking Overt *Cause* Semantics in a SEM-Based Analysis

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**Abstract.** Recent work on linguistic causation argues for a unified structural equation model (SEM) of causative meaning in which overt cause selects a causally relevant condition from a sufficient set, whereas change-of-state (CoS) predicates such as open add a stronger completion-event requirement (Baglini & Bar-Asher Siegal 2025). This paper seeks whether Mandarin *ba* can be treated as the overt-cause counterpart in that architecture. Drawing on published Mandarin data and new acceptability-based contrasts, we compare *ba*, low-level result predicates such as *da-kai* ‘open’, *dasui* ‘break’ and *mie* ‘extinguish’, the abstract causative verb *daozi* ‘lead to/cause’, and their English counterparts *cause/open*. Three findings emerge. First, when a *ba* sentence can be naturally paraphrased with *daozi*, the *ba* sentence typically entails the *daozi* sentence, but not vice versa. Thus, *ba*-to-*daozi* mapping patterns like a shift from a concrete causative event to an abstract causal report, rather than like a truth-condition-preserving syntactic alternation. Second, low-level Mandarin result predicates pattern closest to English CoS predicates: they favor the condition that actually realizes the result and therefore often show a last-straw effect. By contrast, *ba* does not stably track the completion event. In examples such as (1), the subject of *ba* may be a proximal implement, but published Mandarin data also permit more remote participants, activities, time spans, and related factors as *zhi-shi* ‘causers’ (Xiong & Guo 2024). Third, *daozi* is semantically closer to English cause than *ba* is, but even *daozi* may be less permissive than Baglini’s strongest formulation in competitive sufficient-set scenarios. The contrast in (1)-(2) illustrates the core split:

- (1) Zhangsan *ba* beizi da-sui-le.  
Zhangsan BA cup hit-break-PFV  
‘Zhangsan broke the cup.’
- (2) Zhangsan de shiwu *daozi* beizi sui-le.  
Zhangsan GEN carelessness lead.to cup break-PFV  
‘Zhangsan’s carelessness led to the cup’s breaking.’

On the basis of these contrasts, we argue that *ba* is a phonological realization of a causative functional category embedded in a cause-become configuration, but with a construction-specific selectional constraint on subject choice. Using Baglini’s notation, we propose that *ba* shares with overt cause the absence of a completion-event requirement, but differs in requiring that the selected condition be realizable as a constructional causer in the *ba* frame. Formally:

- (3) Ba-causative:  

$$\exists Q \exists R \exists e \exists t \exists S: \text{suff}(S, R)_{M=1} \ \& \ (Q \in S_M) \ \& \ S(e) \ \& \ \tau(e) \subseteq t \ \& \ \forall O [((O \neq S) \ \& \ \text{suff}(O, R)_{M=1}) \rightarrow \neg O(e)] \ \& \ \text{Select}_{ba}(Q, y, R, P, M, C, W)$$

Here *Select<sub>ba</sub>* requires that *Q* be selectable, given discourse context *C* and world knowledge *W*, as a causally linked condition that can be realized as the subject of a *ba*-construction together with the affected theme *y* and predicate-specific manner/result semantics *P*. This preserves Baglini's SEM architecture while distinguishing three Mandarin layers: abstract causatives (*daozhi*), low-level result predicates, and *ba* as a higher causative construction with unusually free causer selection. The broader consequence is typological: cross-linguistically, the overt-cause slot cannot be identified simply by visible causative morphology or marking. In Mandarin, the expression most similar to English cause is *daozhi*, whereas *ba* encodes a more structured cause-become construction whose subject selection is freer than CoS predicates but not reducible to overt cause.

Keywords: Mandarin *ba*; causation; overt cause; last straw effect; SEM; causative constructions

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## Copula complementizers in Mandarin and Vietnamese

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**Background:** Recent work has observed that Mandarin *shì* and Vietnamese *là*—both derived from copulas—may occur immediately after certain modal elements, such as the epistemic adverb ‘maybe’ in (1), in the absence of any selecting predicate (Yang 2024 and references therein; Phan 2024):

- (1) a. *Yěxǔ (shì) tā shēng-bìng le.*      b. *Có thể (là) Tí sẽ đến.*  
 maybe SHI 3SG get.sick PRF      maybe LA Tí will come  
 ‘Perhaps he has got sick.’ (Yang 2024) ‘Maybe that Tí will come.’ (Phan 2024)

Crucially, the licensing elements must be either speaker-oriented adverbs or non-root modal auxiliaries. The former include epistemic, evidential, evaluative, and stance adverbs, while the latter include epistemic modals and *ought*-type deontic modals. Based on similar licensing conditions found in complementizers in Romance (2), we propose that in these contexts *shì* and *là* function as main-clause complementizers.

- (2) *Certo che potevamo impegnarci un po’ di più.*  
 certain that could.1PL commit-us a little of more  
 ‘We could have certainly made a greater effort.’  
 (Italian, Cruschina & Remberger 2017: 82)

**Observation:** The copula complementizers *shì* and *là* can also introduce embedded clauses (Yang 2024; Phan 2024). We notice, however, that their distributions are sensitive to predicate types. Both *shì* and *là* are excluded after Li’s (1990) *persuade*-type predicates, but are compatible with *believe*-type predicates more generally:

- (3) a. Tí            *kêu* Tèo<sub>i</sub>    (\**là*) [PRO<sub>i</sub> bỏ thuốc]. (Vietnamese)  
 b. Zhāngsān    *jiào* Lǐsì    (\**shì*) [PRO<sub>i</sub> jiè yān.] (Mandarin)  
 Tí/Zhāngsān ask Tèo/Lǐsì LA/SHI      quit smoke  
 ‘Tí/Zhāngsān asked Tèo/Lǐsì to quit smoking.’
- (4) a. Tí            *nghĩ* (*là*) Tèo    sẽ    bỏ    thuốc. (Vietnamese)  
 b. Zhāngsān    *rènwei* (*shì*) Lǐsì    huì    jiè    yān. (Mandarin)  
 Tí/Zhāngsān think LA/SHI Tèo/Lǐsì will quit smoke  
 ‘Tí/Zhāngsān thinks that Tèo/Lǐsì will quit smoking.’

We further notice that the distribution of *shì* in Mandarin appears to be even more restrictive than *là* in Vietnamese, operating along Hooper’s (1975) (non-)assertive and (non-)factive distinctions. There is some degree of speaker variation, but for many speakers, *shì* is most natural with epistemic (assertive) non-factive predicates, such as *cāi* ‘guess’, and *shì* is considered marginal after (assertive) semi-factives such as *zhīdào* ‘know’ and ruled out after (nonassertive) true factives such as *yìhàn* ‘regret’, as in (5a). A parallel constraint is found in epistemic vs. factive adverbs, as in (5b):

- (5) a. Wǒ *cāi*/?*zhīdào*/\**hěn-yìhàn shì* wàimiàn zài xiàyǔ.  
 1SG guess/know/regret SHI outside PROG rain  
 ‘I guess/know/regret that it is raining outside.’

- b. *Dàgài*/?*guǒrán*/\**kěxǐ*                    **shì**   wàimiàn   zài   xiàyǔ.  
 probably/indeed/unfortunately   SHI   outside   PROG   rain  
 ‘It is probably the case that/Indeed/Unfortunately it is raining outside.’

Nonetheless, for all speakers, the occurrence of *shì* after factive predicates is considered more acceptable when *shì* is associated with a (contrastive) focus reading, as in (6) (Vietnamese *là* has this function, too). In these cases, however, *shì* is analyzed as a copula, rather than a complementizer (Pan & Liu 2023). Notice that the example (5a) does not give rise to the same meaning since it is infelicitous to say that ‘It is **outside<sub>F</sub>** that is raining (but not inside)’:

- (6) Wǒ   *hěn-yíhàn* [shì **Zhāngsān**]   tōu-zǒu-le   tángguǒ.  
 1SG   regret   SHI   Zhāngsān   steal-away-ASP   candy  
 ‘I regret that it is **Zhangsan<sub>F</sub>** who stole the candy (not Lisi).’

(5b) also differs from (7), in which *shì* is an auxiliary verb associated with the verum focus. This type of *shì* may trigger the cleft transformation, as indicated by the sentence-final *de* (Paul & Whitman 2008; Cheng 2008):

- (7) Wàimiàn   guǒrán   **shì**   zài   xiàyǔ   (de).  
 outside   indeed   SHI   PROG   rain   DE  
 ‘It indeed **IS** raining outside.’

Finally, when the matrix verb is negated, Mandarin *shì* is disallowed since the embedded clause lacks assertive force, whereas Vietnamese permits the use of *là* in this context:

- (8) Wǒ *bù*   *xiāngxìn*   (\***shì**)   míngtiān   huì   xiàyǔ.   (Mandarin)  
 Tôi *không tin*   **là**   ngày mai   sẽ   mưa.   (Vietnamese)  
 1SG NEG   believe   SHI/LA   tomorrow   will   rain  
 ‘I do not believe it will rain tomorrow.’

**Analysis:** Since *persuade*-type predicates select infinitival clauses whereas *believe*-type predicates select finite clauses in both Mandarin (Huang 2022; He 2024) and Vietnamese (Phan 2025), this distributional pattern in (3) and (4) suggests that both *shì* and *là* are restricted to finite clauses, leading us to analyze them as complementizers in FinP (Rizzi 1997) specified for a [+finite] feature. We then analyze the restricted distributions of copula complementizers in Mandarin and Vietnamese in (5) and (8) with reference to Krifka’s (2023) distinction between assertion of ‘facts’, which represents a stronger commitment to the proposition, and assertion of ‘personal belief’, which constitutes a weaker judgement. Krifka argues that strong assertion is associated with the Commitment Phrase (CommP), while weak assertion is associated with the Judgement Phrase (JudgeP). The former can be modified by (semi-)factive adverbs, and the latter by epistemic or evidential ones. In conjunction with Rizzi’s (1997) left periphery, we map the distributions of copula complementizers in (9). We account for their differences in terms of the range of head-movement in the Split-CP. Both copula complementizers start out in Fin<sup>0</sup> with a [+finite] feature (selecting finite clauses), but Mandarin *shì* needs to undergo movement to Judge<sup>0</sup> (thus representing assertions with epistemic elements). Finally, Vietnamese *là* may move to Judge<sup>0</sup> or to Comm<sup>0</sup> (compatible with factive elements), depending on the adverb/predicate that licenses it:

- (9) a. [CommP ‘indeed’ Comm<sup>0</sup> [JudgeP ‘probably’ Judge<sup>0</sup> [FinP Fin<sup>0</sup> [+Fin]...]]]  
 b. Vietnamese:                    *là*    *là*    *là*  
 c. Mandarin:                        *??/\**    *shì*    *shì*

Selected references: Krifka, M. 2023. Layers of assertive clauses: Propositions, judgements, commitments, acts. In *Propositional arguments in crosslinguistic research*, 115-181. Phan, T. 2024. Where two ends meet: Non-at-issue meanings on the syntactic treetops of Vietnamese. Doctoral dissertation, NTHU. Yang, Z. 2024. *Shi* as a complementizer. *JCL* 52, 362-384.

## Distinguishing Number and Degree in Mandarin

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**Introduction** Following an ontological distinction between number and degree (Snyder 2021, 2026), this study proposes an ambiguity account of Mandarin numerals, where they could be either number-denoting or degree-denoting conditioned by different environments. Numbers (of type *n*) are abstract mathematical entities, whereas degrees (of type *d*) are nominalized properties along certain measurement dimensions, including cardinality (Scontras 2014). Although many previous studies in Degree Semantics regard number as a kind of degree as well (e.g. Bylinina & Nouwen 2020), we utilize three kinds of phenomena in Mandarin to support such a distinction, namely (i) the complementary distributions of two forms of 2, *er* and *liang*, (ii) the use of certain quantity predicates before classifiers or nouns, such as *xuduo* ‘many/much’ and *wushu* ‘innumerable’, and (iii) the behavior of approximation particles *duo* and *lai* after numerals or measure phrases.

**I. two ‘two’s in Mandarin: *er* and *liang*** It is well-known that the two forms of number 2, i.e. *er* and *liang*, have distinct distributions. However, a principled account of their differences is still absent. The uses of *er* is shown in (1), which we refer to as number-denoting uses. These are the uses that exhibit typical properties of mathematical numbers, i.e. being objects of math operations, occurring in sequence, used to construct complex numerals, etc. Replacing any occurrence of *er* in (1) would lead to ungrammaticality. By contrast, we refer to the uses of *two* in (2) as degree-denoting uses. (2a-b) shows the counting and measuring uses of *liang* respectively. (2c) forms an interesting contrast with (1d), where ‘2 year’ means a time point with *er* but a time span with *liang*. (2d) is more peculiar in that although *liang* cannot replace *er* in the complex numerals in (1e-f), it can modify base words larger than 10. This could be accounted for by the noun-like (or classifier-like) properties of base words in general (Hurford 1975, Her 2012). Note that all the other numerals, including 1 and 3~9 in Mandarin, have both kinds of uses in a single form.

- |                                   |  |
|-----------------------------------|--|
| (1) a. <i>er jia er dengyu si</i> | ‘two plus two equal to four’ (2 plus 2 equals 4.)  |
| b. <i>er shi yi ge oushu</i>      | ‘Two be a CL even.number’ (Two is an even number.) |
| c. <i>di-er ming</i>              | ‘ordinal.prefix-two rank’ (the second place)       |
| d. <i>(gongyuan) er-nian</i>      | ‘AD two-year’ (AD 2)                               |
| e. <i>jiu-shi-er</i>              | ‘nine-ten-two’ (92)                                |
| f. <i>er-shi</i>                  | ‘two-ten’ (20)                                     |
| (2) a. <i>liang ben shu</i>       | ‘two CL book’ (two books)                          |
| b. <i>liang mi bu</i>             | ‘two meter cloth’ (two meters of cloth)            |
| c. <i>liang nian</i>              | ‘two year’ (two years)                             |
| d. <i>liang-bai/qian/wan</i>      | ‘two 100/1,000/10,000’ (200/2,000/20,000)          |

We propose that *er* denotes the number 2 and *liang* denotes a degree, modeled as a nominalized measurement property following Snyder (2021, 2026), as shown in (3a-b).

- |                       |  |
|-----------------------|--|
| (3) a. $[[er]]_n = 2$ | b. $[[liang]]_d = \lambda x. \mu(x) = 2$ |
|-----------------------|--|

**Excursus: classifier semantics** A crucial question concerning semantic composition is the role played by numeral classifiers. Discussion in this topic is plentiful (see e.g. Li 2013). Here I tentatively propose an account where classifiers are needed by numerals to specify a measurement dimension in degree-related uses. Specifically, the degree denoted by *liang* in (3b) is underspecified in its dimension, unable to compose with nouns to express a certain measuring property. In other words, we do not know whether \**liang shu* ‘two water means two books, two piles of books or anything else. By contrast, English numerals are specified with a cardinality dimension, i.e. *two* denotes  $\cap \lambda x. \mu_{\#}(x) = 2$  or  $\cap \lambda x. \mu(x) = 2$  & DIM( $\mu$ ) = CARD, hence able to modify nouns directly. The semantics of Mandarin classifiers can thus be formalized in (4), where DIM( $\mu$ ) = CARD specifies a cardinality dimension and book-like(x) encodes a physical property.

(4)[[*ben* (in 2a)]] =  $\lambda d \lambda x. \mu(x) = [\cap \lambda x. \mu_{\#}(x) = 2] \& \text{DIM}(\mu) = \text{CARD} \& \text{book-like}(x)$   
 Since classifiers like *ben* require a degree argument, it cannot compose with *er*. For other numerals like *san* ‘three’ which are ambiguous, I assume the number denotation as basic and posit a type-shifter (5) to derive degree meanings (Snyder 2021).

(5)[[DEG]] =  $\lambda n. \cap \lambda x. \mu(x) = n$

**II. quantity predicates** There are several quantity-related predicates in Mandarin that both modify nouns and classifiers. Use *xuduo* ‘many/much’ as an example. It has both cardinality (6a) and measuring (6b) uses. Crucially, these words do not have number-denoting uses, as shown in (7). We take this to show that they only have degree-denoting uses, aligning with their predicate-like behavior. A formal semantics of *xuduo* is provided in (8), where  $d_{\text{large}}$  refers to a contextually salient large degree. Since its dimension is also underspecified, it also has to combine with a classifier to modify nouns, and is type-shifted by a nominalizer  $\cap$ . Cases where it directly modifies a noun are assumed to contain a silent classifier CL that gets its meaning from context.

(6)a. *xuduo (ben) shu* (a lot of books)

b. *xuduo (tong) shui* (a lot of/ many buckets of water)

(7)a. \**yi-bai-er-shi jia wu-bai-liu-shi dengyu xuduo* ‘120 plus 560 equals.to many’

b. \**di-xuduo-ming* ‘the many-th place’

c. \**san-shi-xuduo* ‘three-ten-many’

(8)[[*xuduo*]] =  $\lambda x. \mu(x) = d_{\text{large}}$

**III. approximation particles** There are two approximation particles (APs) in Mandarin, i.e. *duo* and *lai*, that can follow either complex numerals (9a) or measure phrases (9b). The latter clearly shows that they are functions that map degrees to degree intervals. We observe that complex numerals suffixed by an AP should be degree-denoting. As shown in (10), these complex numerals cannot be used as time points. However, they do exhibit some number-denoting uses like in (1), e.g. in ordinal phrases like *di-er-shi-duo-ming* ‘the 20~30<sup>th</sup> place’, which I take to indicate the possible presence of type-shifting from degrees to numbers.

(9)a. *er-shi-duo/lai ben shu* (20~30 books)      b. *san-mi-duo/lai chang* (3m~4m long)

(10)a. *shi-duo/lai-yue* ‘ten-DUO/LAI-month’  $\surd$  10~20 months×November or December

b. \**er-shi-duo/lai-dian* ‘two-ten-DUO/LAI o’clock’      cf. *er-shi-ji-dian*

## Control, Complement Size, and Overt Controlees in Mandarin: An Experimental Study

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**Introduction.** Recent years of research have shown growing interest in the syntactic properties of partial control (PC) and exhaustive control (EC) constructions. A substantial body of cross-linguistic evidence suggests that these two types of control predicates, by default, select complements of different sizes, commonly analyzed as TP/IP by PC, *v*P by EC, and finite CP by belief verbs. This paper provides formal-experimental evidence that Mandarin Chinese likewise exhibits such complement-size distinctions across control types (following theoretical works of C.-T.J. Huang 2022; Wurmbrand & Lohninger 2023; He 2024; Liu & Yip, in press; among others), and shows that these size distinctions condition the acceptability of overt controlees.

**Hypotheses.** This study rests on three hypotheses: (i) Mandarin exhibits comparable complement-size distinctions, such that belief verbs by default select finite CP complements, PC predicates select TP/IP, and EC predicates select *v*P; (ii) only finite clauses license overt subjects; and (iii) overt subjects in Mandarin occupy Spec-TP/IP.

**Experiment 1.** These hypotheses yield two initial predictions. *First*, with low (*v*P-internal) adverbs and null controlees in complement clauses, all three predicate types should be acceptable, since their default complement sizes are compatible with both. *Second*, still with low adverbs, the introduction of overt controlees is predicted to incur gradient penalties: PC degrades due to the finiteness constraint, and EC degrades further due to both that constraint and the need for structural reanalysis from *v*P to TP/IP to accommodate overt subjects—yielding a three-way distinction.

Two acceptability judgment experiments were conducted with 96 self-identified native Mandarin speakers recruited via Prolific (48 per experiment). Experiment 1 tests the initial two predictions using a 2×3 factorial design, crossing Controlee Overtness (*Overt* vs. *Null*) with Verb Type (*Belief* vs. *Partial* vs. *Exhaustive*), with five main verbs per predicate type drawn from well-established Chinese syntax literature:

- (1) a. zhege xiaotou **renwei** (**ta**) keyi qiaoqiao touzou namei zuanshi. (*Null/Overt. Belief*)  
this.CL thief thinks he can secretly steal that.CL diamond  
“This thief thinks that he can secretly steal that diamond.”
- b. zhege xiaotou **dasuan** (**ta**) qiaoqiao touzou namei zuanshi. (*Null/Overt. Partial*)  
this.CL thief plans he secretly steal that.CL diamond  
“This thief plans to secretly steal that diamond.”
- c. zhege xiaotou **changshi** (**ta**) qiaoqiao touzou namei zuanshi. (*Null/Overt. Exhaustive*)  
this.CL thief try he secretly steal that.CL diamond  
“This thief tries to secretly steal that diamond.”

**Results.** After data cleaning, a linear mixed-effects model was fit for analysis. The results provide evidence for structural differences among control predicate types. In the null-controlee conditions (e.g., (1a–c) without *ta*), all three predicate types show comparable acceptability (Fig.1:“Null”). When overt controlees are introduced (e.g., (1a–c) with *ta*),

however, significant acceptability contrasts emerge, yielding the predicted three-way gradient *Belief verb*  $\gg$  *Partial* > *Exhaustive* (Fig.1:“Overt”).

**Experiment 2.** Two further predictions follow from the same hypotheses. *Third*, in the presence of future-oriented temporal adverbs (i.e., TP/IP-level adverbs) but no overt controlee in the complement clause, belief verbs and PC predicates are predicted to remain acceptable, whereas EC predicates should be degraded due to the temporal simultaneity constraint associated with EC (cf. C.-T. J. Huang 2022; He 2024). *Fourth*, when both future-oriented temporal adverbs and overt controlees are present, the same three-way distinction observed in Experiment 1 is predicted to re-emerge.

The second experiment tests these two predictions using the same 2×3 factorial design, replacing the low adverbs (e.g. *qiaoqiao* 'secretly') with pre-subject future-oriented temporal (TP/IP-level) adverbs (e.g. *mingtian wanshang* 'tomorrow evening') in the complement clause.

**Results.** Unlike Experiment 1, EC constructions were already degraded relative to PC and belief verb constructions in null-controllee conditions, as predicted (Fig.2:“Null”). Introducing overt controlees produced the same three-way split *Belief verb*  $\gg$  *Partial* > *Exhaustive* as in Experiment 1 (Fig.2:“Overt”), but did not further widen the acceptability gap between EC and PC.

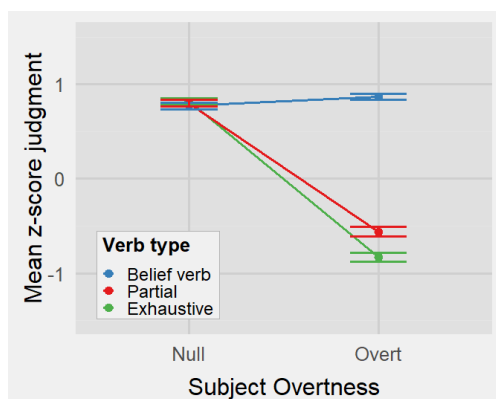


Fig.1 Low adverb experiment interaction

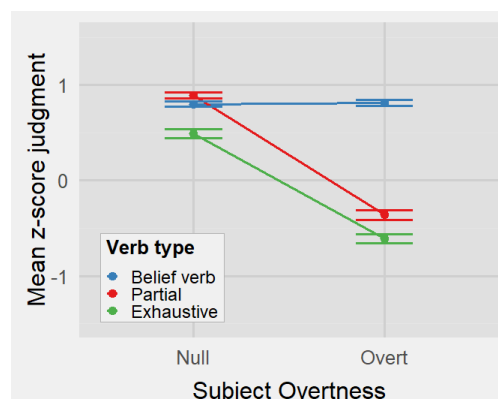


Fig.2 High adverb experiment interaction

**Implications.** This study has three main implications for the analysis of control and finiteness in Mandarin Chinese. *First*, Mandarin exhibits control-related complement-size distinctions comparable to those observed cross-linguistically, pointing to a potentially universal property of control systems.

*Second*, the finding that both partial and exhaustive control constructions are degraded with overt-controllees points to a reassessment of their finiteness status in Mandarin. If overt subjects are licensed only in finite clauses, as commonly assumed, the observed degradations suggest that neither PC nor EC satisfies the structural conditions for overt embedded subjects. This challenges the claims of Hu et al. (2001), N. Zhang (2016), and D. Li (2024) - who treat at least one of these construction types as allowing overt controlees - but aligns with the experimental findings of N. Huang (2024).

*Finally*, and most importantly, although finiteness is often treated as a binary feature, the Mandarin controlee-overtness diagnostic reveals a three-way distinction among predicate types, supporting recent proposals that complement size varies gradiently across control classes (C.-T. J. Huang 2022; He 2024; Liu & Yip, in press). It

further suggests that the acceptability of overt controlees is not a reliable indicator of finiteness *per se*, but is mediated by other syntactic factors — here argued to reduce to size differences.

**Selected references.** He. (2024). *JEAL*. Hu et al. (2001). *Linguistics*. Huang, C. T. J. (2022). *New explorations in Chinese theoretical syntax*. Huang, N. (2024). *NLLT*. Li. (2024). *JEAL*. Liu & Yip. (in press). *NLLT*. Wurmbrand & Lohninger. (2023). *Propositional arguments in cross-linguistic research: Theoretical and empirical issues*. Zhang. (2016). *JEAL*.

## Base-Generated Wh-Ex-Situ in Mandarin: The Role of Prolepsis

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**Introduction.** *Wh-ex-situ* constructions in a *wh-in-situ* language such as Mandarin have been shown to serve discourse-related purposes: topicalization (Wu 1999; Yuan and Dugarova 2012) or focalization (Hoh and Chiang 1990; Cheung 2008). Leveraging insights from resumption-triggered weak crossover (henceforth WCO) amnesty, this study provides a novel criterion to differentiate Mandarin *wh*-focalization from *wh*-topicalization and the different syntactic derivations therein. Specifically, when an *ex-situ wh*-phrase leaves an unpronounced copy in the main clause, it creates an A'-dependency due to focus movement, thus triggering WCO (Benincà and Poletto 2004), as illustrated in (1a). In contrast, when the object position is overtly filled, resembling a 'resumptive' *wh*-dependency, the occurrence of a co-construing DP (such as a pronoun or an epithet)–regardless of its position–signifies a shift in the interpretation of the *ex-situ wh*-nominal towards a shifted/hanging topic parse (Badan and Del Gobbo 2011), as in (1b). This interpretation aligns with constructions described as 'as for' phrases. I further argue that this 'resumptive' A'-dependency involves a hidden prolepsis construction, where the base-generated proleptic *wh*-phrase in the main clause predicates over a propositional complement containing a co-construing pronoun or epithet through a Relator head R (Lohninger, Kovač and Wurmbrand 2022), and there is no movement involved from the complement clause. Consequently, no WCO effect occurs.

- (1) a. [Na ge nanhai]<sub>i</sub> ta-de nv-pengyou taoyan ti? Focalization  
 which CLF boy 3M.SG-POSS girlfriend dislike  
 'Which boy<sub>i</sub> does his\*<sub>i/j</sub> girlfriend dislike?'  
 b. Na ge nanhai, ta-de nv-pengyou taoyan ta/na-xiaozi? Topicalization  
 which CLF boy 3M.SG-POSS girlfriend dislike 3M.SG/that-guy  
 'As for which boy<sub>i</sub>, his<sub>i</sub> girlfriend dislikes him<sub>i</sub> that guy<sub>i</sub>?'

**Two patterns of *wh-ex-situ*.** As shown in the two tables, while the gapped dependency in (1a) only allows the crossed possessive pronoun to refer to someone salient in the discourse, excluding 'the boy', the 'resumptive' dependency only precludes the scenario in which neither pronominal in the main clause refers to 'the boy'. The referential options for (1b) speak to the characteristics of a prolepsis construction, wherein the proleptic DP in the main clause is cataphorically related to a pronominal in the embedded clause, as observed in English (Khalaily 1997), Madurese (Davies 2005), and German (Salzmann 2006, 2017). Therefore, I propose *wh-ex-situ* questions like (1b) has the underlying structure, as schematized in (2).

- (2) [Na ge nanhai]<sub>i</sub>, [IP ni-[-VP renwei [RP ti R<sup>0</sup> [CP OP C<sup>0</sup> [IP ta-de nv-pengyou taoyan ta/na-xiaozi]]]]?]  
 which CLF boy 2SG think 3M.SG-POSS girlfriend dislike

3M.SG/that-guy: 'As for which boy<sub>i</sub>, do you think his<sub>i</sub> girlfriend dislikes him<sub>i</sub> that guy<sub>i</sub>?'  
 By appeal to Lohninger, Kovač and Wurmbrand (2022), I contend that the predication relation between the proleptic *wh*-phrase and the remaining proposition can be cashed out by postulating a Relator Phrase (RP)–a proposition semantically required by the matrix predicate. The R head relates its specifier and its CP-complement through predication.

Referent	<i>na-ge nanhai</i> 'which boy'	possessive pronoun	gap
Option 1	i	j	i
*Option 2	i	i	i

Table 1 Referential options for (1a)

Referent	<i>na-ge nanhai</i> 'which boy'	possessive pronoun	lower pronoun /epithet
Option 1	i	j	i
*Option 2	i	j	j
Option 3	i	i	i
Option 4	i	i	j

Table 2 Referential options for (1b)

Further, the dependency between the proleptic *wh*-phrase and the pronominal is established by base generating an operator in the specifier of the embedded C, and it unselectively binds the pronominal element, transforming the CP into a predicate. The surface order in (2) results from the proleptic *wh*-phrase undergoing A'-movement to Spec,TopP, leaving the matrix IP implicit. The empirical adequacy

No.	Properties	Gapped <i>wh</i> -dependency	Hidden prolepsis
1	Restriction on the matrix predicate	N/A	No (preferably epistemic or desiderative verbs)
2	Obligatoriness of a coreferential element in the embedded domain	N/A	Yes
3	Unbounded dependency	Yes	Yes
4	Connectivity effects	Idiom interpretation: No Variable binding: Yes Binding Principle A/B/C: Yes	Idiom interpretation: No Variable binding: No Binding Principle A/B/C: No
5	Island sensitivity	Asymmetry	No
6	Superiority effects	Asymmetry	No
7	Semantic restriction on the ex-situ <i>wh</i> -phrase	Contrastive focus	Specific/referential/D-linked; lack amount reading

of my proposal comes from 6 additional diagnostics, beyond the obligatoriness of a coreferential element in the embedded domain. The table presents the comparative results of 7 properties. Diagnostics such as variable binding, Principle C, island sensitivity, and Superiority all suggest that the proleptic *wh*-phrase is base generated in the matrix clause, whereas the ex-situ *wh*-phrase in the gapped dependency is derived via movement.

Using Principle C as an illustration, the gapped *wh*-dependency complies with it, whereas the elliptical proleptic *wh*-ex-situ question may violate it, indicating no reconstruction happens, as illustrated in (3).

- (3) a. [Zhangsan-de na-wei pengyou]<sub>i</sub> ta jingchang yudao t<sub>i</sub>?  
Zhangsan-POSS which-CLF friend 3SG always come-across  
'Which friend of Zhangsan<sub>i</sub> does he\*<sub>i/j</sub> always come across?'
- b. [Zhangsan-de na-wei pengyou]<sub>i</sub> (ni juede t<sub>i</sub>) ta jingchan yudao ta?  
Zhangsan-POSS which-CLF friend 2SG think 3SG always come-across 3SG  
'As for [which friend of Zhangsan<sub>i</sub>]<sub>k</sub>, do you think he<sub>i/j</sub> always runs into him<sub>k</sub>?'

To further support that the ex-situ *wh*-phrase in the 'resumptive' dependency is a proleptic DP, I argue that the *wh*-phrase and the clausal predicate are located in distinct clauses; consequently, the *wh*-phrase cannot be analyzed as occupying a left-peripheral position of the clausal predicate. Three pieces of evidence support this: (i) matrix-predicate modifiers may follow the *wh*-phrase; (ii) a clear prosodic break separates the *wh*-phrase from the clausal predicate; and (iii) matrix negation may yield an indefinite reading of the *wh*-phrase, as would be unexpected if they belonged to different clause. For space reasons, only (iii) is illustrated below.

- (4) Zhangsan bu xiangxin na-ge nanhai [ta-de nvpengyou taoyan ta]?/.  
Zhangsan NEG believe which-CLF boy 3SG.M-POSS girlfriend dislike 3SG.M  
'Which boy<sub>i</sub> does Zhangsan not believe that his<sub>i</sub> girlfriend dislikes him<sub>i</sub>?'/  
'Zhangsan does not believe that there is any boy<sub>i</sub> whose girlfriend dislikes him<sub>i</sub>.'

**Crossover effect: a diagnostic for A'-dependency rather than movement.** One might ask whether the resumptive dependency in (1b) is movement-derived, given that resumption appears to obviate primary WCO. However, secondary crossover effects argue against this (Safir 1996). If (1b) involves movement, it is unclear which pronoun is resumptive. Following Hewett (2023), secondary crossover constructions can disambiguate the A'-variable from the crossed pronoun. This is achieved by embedding the *wh*-phrase in a larger DP and pied-piping it to a clause-initial position, yielding two pronouns: the lower as the resumptive for the pied-piped DP, and the crossed pronoun coindexed with the *wh*-phrase. Since DP-pied-piping resumption in Mandarin is island-insensitive, the persistence of secondary crossover in island contexts indicates an A'-dependency rather than movement. Secondary WCO is indeed detectable in Mandarin when both pronouns are found in the island, as illustrated in (5).

- (5) [[Na-ge nanhai]<sub>i</sub> de meimei]<sub>j</sub>, ni juede t<sub>j</sub> wo qu le [DP na-ge [CPTA-de mama  
 whichCLF boy POSS sister 2SG think 1SG go PFV that-CLF 3M.SG-POSS mom  
 bang ta ban de juhui]]? 'As for which boy<sub>i</sub>'s sister<sub>j</sub>, do you think I went for the  
 help 3F.SG organize SUB party party that his<sub>i</sub> mother helped her<sub>j</sub> organize?

**Implications.** Mandarin *wh-ex-situ* shows two A'-dependencies: focus movement and prolepsis plus topicalization. Gapless cases (Pan 2014) likely instantiate the latter, with a null pronominal. Selected ref. Salzmann, M. 2006. Resumptive Prolepsis: A Study in Indirect A'-Dependencies

## The “Object *shi* Verb” Construction in Archaic Chinese: A Light Verb Analysis at the Syntax-Semantics Interface

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This paper investigates the “object *shi* (是) verb” construction in Archaic Chinese (e.g., *wéi lì shì shì* 唯力是视 ‘only strength is considered’) from the perspective of the syntax-semantics interface. This construction exhibits three systematic constraints that demand a unified theoretical account: (i) no element may intervene between *shi* and the verb; (ii) the proposed object position strictly excludes pronouns; and (iii) the verb is subject to rigorous semantic selection. While the first two have been noted in previous literature (Yin 1985), the third constitutes a novel empirical contribution of this study.

Based on an exhaustive survey of the *Zuozhuan*, *Guoyu*, *Shangshu*, and *Shijing*, I demonstrate that the verb entering this construction must exhibit two core semantic properties: agentivity (the action is initiated and controlled by an agent) and atelicity (the event lacks a natural endpoint and is temporally extended). Verbs that are non-agentive (e.g., *zhī* 知 ‘to know’), or telic (e.g., *shā* 殺 ‘to kill’) are systematically excluded. The selectional profile reveals that the construction requires an event that is both agent-controlled and temporally unbounded.

Previous analyses have struggled to account for these constraints. The resumptive pronoun analysis cannot explain why *shi* and the verb form a tight unit with no intervening material. The focus marker analysis (Shi & Xu 2001) cannot account for the absolute syntactic rigidity or the exclusion of pronouns (which can otherwise be foci). The genitive marker analysis (Aldridge 2019) does not explain why pronouns are excluded (they can serve as genitive modifiers) nor why only agentive, atelic verbs are allowed.

I propose a unified account within the Minimalist Program. I argue that *shi* in this construction is a light verb ( $V_{\text{ASSERT}}$ ) with the assertive meaning “to take X as the norm/principle”. Diachronically, *shi* grammaticalized from a demonstrative pronoun (‘this’) to a verb meaning ‘to regard as right’ (e.g., *Mozi: shàng zhī suǒ shì, bì jiē shì zhī* 上之所是, 必皆是之 ‘what the superior regards as right must regard as right’), and then, under the influence of the exclusive particle *wéi* (唯), further grammaticalized into a light verb. Synchronically,  $V_{\text{ASSERT}}$  occupies the v-position, thereby blocking structural accusative Case assignment to the internal argument. The internal argument must move to [Spec,  $V_{\text{ASSERT}}P$ ] to obtain partitive Case (Kiparsky 1998). Partitive Case is cross-linguistically associated with atelic, non-culminating events and with objects that are merely directed toward rather than consumed. In Archaic Chinese, this inherent Case is realized through feature-driven movement, accounting for the tight *shi*-verb bond via V-to-v head movement.

This analysis yields a unified account of the three constraints. First, the verbal restrictions follow directly from the correlation between partitive Case and agentive,

atelic event structures. In Finnish, for example, the object appears in the partitive case precisely when the event is ongoing and atelic (*luen kirjaa* ‘I am reading a book’) versus accusative when completed (*luen kirjan* ‘I read the book’). Second, the exclusion of pronouns follows from partitive Case being a weak Case that disallows strong NPs such as pronouns (de Hoop 1992). Third, the tight *shi*-verb bond follows from head movement (V-to-v), which forms a complex head with word-internal integrity, systematically barring any intervening material. The analysis also clarifies the status of the subject that appears before the “object *shi* verb” sequence. Drawing on the frequent co-occurrence of the construction with the copular elements *wéi* (唯) ‘only’ and *fēi* (非) ‘not’—which form a paradigmatic positive-negative contrast in copular predication—I demonstrate that the subject (whether overt or null) is not the agent of the verb but rather a base-generated topic in [Spec, TP] that serves as the bearer of assertion. This resolves the apparent contradiction between the verb’s agentivity requirement and the subject’s non-agentivity: agentivity is a lexical property of the verb, satisfied by a syntactically implicit agent within the light verb’s event structure, while the surface subject is a topic about which the assertion holds.

Cross-linguistically, this analysis aligns with partitive Case proposals for other East Asian languages and with Case-blocking effects in English passives and middles. The study provides a unified account of the construction’s syntax and semantics, demonstrating that it is not a merely pragmatic focus structure but a syntactically driven configuration that reconfigures specific events into abstract norms. This contributes to the broader understanding of Case licensing, event structure, and the syntax-semantics interface in East Asian languages.

**Key Words:** Archaic Chinese; light verb; event structure; syntax-semantics interface

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## Positive readings of Mandarin gradable adjectives and state-kinds

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A well-known puzzle about Mandarin is that gradable adjectival predicates like *gao* ‘tall’ often require an unstressed degree adverb *hen* ‘very’ to express a positive reading in out-of-the-blue contexts (1). However, this requirement is absent under negation, in interrogatives (2), or with contrastive focus, etc (Gu 2007; Liu 2010, 2018; Grano 2012). Recent studies attribute this optionality to the presence of a set of alternatives in the context, where *gao* is contrasted with its negated form *bu-gao* ‘not tall’ or other qualities like *shou* ‘slim’ (Lin 2020; Wu and Zhu 2013).

- (1) Lili ??(hen) *gao*.      (2) Lili {*bu gao / gao ma?*/GAO *bu shi SHOU*}  
 Lily HEN tall              Lily not tall/tall SFP/TALL not be<sub>FOC</sub> SLIM  
 ‘Lily is tall.’              ‘Lily is not tall/Is Lily tall?/Lily is TALL, not SLIM’

Mainstream accounts attribute the necessity of *hen* in (1) to a syntactic/prosodic requirement on matrix predicates, which can be satisfied by DegP projected by *hen* or other functional elements (e.g. focus or negation). However, these accounts leave two gaps: **First**, non-gradable adjectives use a distinct predication strategy (3), *shi...de*, which is incompatible with gradable adjectives (4) (Niu 2015). Noticeably, copula is also used for nominal predication (5). **Second**, a striking parallel of (1-2) exists in eventive sentences: bare verbal predicates are infelicitous in expressing a habitual reading without a frequency adverb (6), yet contrastive focus can license them (7).

- (3) *zhe-mei jiezhi shi jin de*.      (4) ??Lili *shi gao de*.      (5) Lili *shi yisheng*.  
 this-CL ring be golden DE      Lily be tall DE      Lily be doctor  
 ‘This ring is golden’              Int: ‘Lily is tall’              ‘Lily is a doctor’
- (6) Lili ??(*jingchang*) *paobu*.      (7) Lili {*bu paobu / paobu ma?* /PAOBU, *bu shi YOUYONG*}  
 Lily often run      Lily not run / run SFP run not be<sub>FOC</sub> SWIM  
 ‘Lily (often) runs.’      ‘Lily doesn’t run/Does Lily run?/Lily RUNS, not SWIMS.’

**Proposal.** I propose that Mandarin copula *shi* is reserved for individual properties ( $\langle e, t \rangle$ ) that can form a natural kind via the “ $\cap$ ” operator (Chierchia 1998) as in (8a), such as those denoted by nominal predicates (8b). Syntactically, *shi* selects a NP; semantically, it adds temporal manifestation by introducing a *t* variable, which is interpreted through some default rule.

- (8) a.  $\llbracket \text{shi} \rrbracket = \lambda P_{\langle e, t \rangle} \lambda x \lambda t. \underline{P(x)}$  (the underlined part) is true at *t*; defined iff  $\cap P \in D_k$   
 b.  $\llbracket \text{yisheng} \rrbracket = \lambda x. \underline{\text{doctor}(x)}$   
 c.  $\llbracket \text{Lili shi yisheng} \rrbracket = \underline{\text{doctor}(l)}$  is true at  $t_{\text{now}}$  (via default tense rule)

In contrast, verbal predicates, denoting properties of eventualities, can combine with viewpoint markers for episodic readings as in (9), or with frequency adverbs like *jingchang* to return properties of plural events and then with a covert imperfective aspect for habitual readings (Smith 1997) in (10). Such non-copular predication features  $\exists$ -closure over an eventuality variable at Asp level, where temporal manifestation is introduced.

- (9) Lili *paobu -le<sub>PFV</sub>*. ‘Lily ran’  
 a.  $\llbracket [{}_{vP} \text{Lili paobu}] \rrbracket = \lambda e. \underline{\text{run}}(e) \wedge \mathbf{Ag}(e, l)$   
 b.  $\llbracket [{}_{\text{AspP}} -\text{le}_{\text{PFV}} [{}_{vP} \text{Lili paobu}]] \rrbracket = \lambda t_0. \exists e [\underline{\text{run}}(e) \wedge \mathbf{Ag}(e, l) \wedge \tau(e) \subseteq t_0]$

(10) Lili jingchang paobu. ‘Lily often runs’

- a.  $\llbracket [\text{vP Lili paobu}] \rrbracket = \lambda e. \mathbf{run}(e) \wedge \mathbf{Ag}(e, l)$   
 b.  $\llbracket [\text{Lili jingchang paobu}] \rrbracket = \lambda e'. \mathbf{MOST}[\lambda i. C(i)] [\lambda i'. \exists e \sqsubseteq e' [\mathbf{run}(e) \wedge \mathbf{Ag}(e, l) \wedge \tau(e) \subseteq i']]$   
 c.  $\llbracket [\text{AspP } \emptyset_{\text{IMPF}} [\text{Lili jingchang paobu}]] \rrbracket = \lambda t. \exists e' [\mathbf{MOST}[\lambda i. C(i)] [\lambda i'. \exists e \sqsubseteq e' [\mathbf{run}(e) \wedge \mathbf{Ag}(e, l) \wedge \tau(e) \subseteq i']] \wedge \tau(e') \supseteq t]$

**Predication strategies explained.** I propose that non-gradable adjectives use copular predication because *jin* ‘golden’, *youxian* ‘finite’ denote non-vague individual properties ([+N]) that can form natural kinds of individuals. In (11), *jin* ‘golden’ combines with the nominalizer *de* to satisfy the syntactic selection of *shi*, and their semantics satisfies *shi*’s presupposition. Conversely, Mandarin relative gradable adjectives denote gradable properties of states ([+V]). Like verbs, they can directly take perfective markers *-le/-guo* and they also resort to non-copular predication: saturating the degree argument and receiving temporal manifestation via a covert imperfective aspect. This is compatible with what we observed, *gao* has no problem to serve as a predicate directly on its comparative use (*Lili bi Ann gao* ‘Lily is taller than Ann’) or measure use (see Grano 2012).

$$(11) \llbracket [\text{jin}_{[+N]}] \rrbracket = \lambda x. \mathbf{golden}(x) \quad (\cap \llbracket [\text{jin de}] \rrbracket \in D_k) \quad (12) \llbracket [\text{gao}_{[+V]}] \rrbracket = \lambda d \lambda s. \mathbf{hold-height}(s) \geq d$$

But why can’t *gao*<sub>[+V]</sub> go through the regular POS-shift as regularly assumed for English gradable adjectives so that *Lili gao* can be used to express ‘Lily is tall’? I argue this is due to an inherent asymmetry: the comparison class (C) required to determine a standard is easily retrieved from individual properties ([+N])—such as being a child or adult—but not from state properties ([+V]), as elaborated in (13). Since POS-shift cannot apply to *gao*<sub>[+V]</sub>, an unstressed degree adverb like *hen* is required to saturate the degree argument, asserting the state’s measure at least exceeds the a contextual standard for a bit ( $\geq!$  relation), as in (14).

$$(13) \text{ a. } \llbracket [\text{tall}_{[+N]}] \rrbracket = \lambda d \lambda x. \mathbf{height}(x) \geq d \\ \text{ b. } \llbracket [\text{POS tall}_{[+N]}] \rrbracket = \lambda x. \exists d [\mathbf{height}(x) \geq d \wedge \mathbf{standard}(d) (\llbracket [\text{tall}_{[+N]}] \rrbracket) (C)] \\ \text{ where } C(\text{comparison class}) = \{y \mid y \text{ has some contextually relevant property } \beta \text{ of } x\}$$

$$(14) \text{ a. } \llbracket [\text{hen gao}] \rrbracket = \lambda s. \mathbf{tall}(s) \geq! \mathbf{norm}_c \\ \text{ b. } \llbracket [\emptyset_{\text{IMPF}} \text{ Lily hen gao}] \rrbracket = \lambda t. \exists s [(\mathbf{tall}(s) \geq! \mathbf{norm}_c) \wedge \mathbf{Hol}(s, l) \wedge \tau(s) \supset t]$$

**Why focus salvages bare forms.** This leaves the question of why *gao* and *paobu* would not need support from degree and frequency adverbs for the positive and habitual readings, when contrastive focus exists ((2), (7)). I propose that these forms denote eventuality-kinds (Luo 2022; Gehrke 2019) as in (15) (type  $\langle s, v \rangle$ )—nominalized properties of states or events—that can be transformed into standard properties via ‘U’ and compose like regular s-level properties. While this denotation is typically accessible in argument position ((16)-(17)) and typically inaccessible in predicate positions, focus (or a specific QUD like ‘What properties/kinds of exercising habits does Lily have?’) makes the nominalized reading salient. This allows the bare form to function as a predicate by highlighting the relevant quality or habit.

$$(15) \text{ a. } \llbracket [\text{gao}] \rrbracket = \lambda w. \iota^* \{s \mid \mathbf{POSITIVELY-TALL}_w(s)\} \\ \text{ b. } \llbracket [\text{paobu}] \rrbracket = \lambda w. \iota^* \{e \mid \mathbf{REGULARLY-RUN}_w(e)\}$$

$$(16) \text{ gao shi yi-zhong youshi.} \quad (17) \text{ paobu shi hao xiguan.} \\ \text{ tall be one-kind advantage} \quad \text{run be good habit} \\ \text{‘Being tall is a kind of advantage’} \quad \text{‘Running is a good habit’}$$

**Implications.** The full paper provides further evidence for this semantically-motivated distinction between copular and non-copular predication, including an analysis of the

intermediate status of absolute gradable adjectives (e.g. *zhi* ‘straight’) and an account of how *shi...de* distinguishes dispositional readings from actualized habitual readings (see also Cable 2022; Asatryan 2025).

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## A Maximize Presupposition account for the co-occurrence of *zhiyou* and *cai*

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While the literature often attributes the co-occurrence of Mandarin *mei* ‘every’ and the particle *dou* to syntactic reasons, [7] proposes that *dou* is a particle with a scalar presupposition (and vacuous semantics), and since sentences like (1) tend to satisfy *dou*’s presupposition, *dou* obligatorily occurs because of the principle *Maximize Presupposition* (MP) [2]. This paper extends the MP account to (2), proposing that *cai* and *zhiyou* ‘only’ obligatorily co-occurs when *zhiyou*-sentences satisfy *cai*’s scalar presupposition. This move not only captures the puzzling asymmetry between monoclausal *zhiyou*-sentences and biclausal conditional *zhiyou*-sentences (‘only if’), but also provides the first formal compositional account of *zhiyou...cai*.

- |   |  |
|---|--|
| (1) ⟨mei-bun shu⟩ ta ⟨mei-bun shu⟩ *(dou) du.<br>Every-CL book she every-CL book DOU read<br>‘Every book, she DOU reads.’ | (2) ⟨zhiyou YU⟩ Mali ⟨zhiyou YU⟩ *(cai) chi.<br>Only fish Mary only fish CAI eat<br>Only [fish] <sub>F</sub> , Mary CAI eats.’ |
|---|--|

**Puzzle.** There are two competing accounts for the co-occurrence of *zhiyou* and *cai*. [4] proposes that *zhiyou*-phrases (with features [uONLY(+), uSCAL(+)]) hold a Spec-Head relation with  $cai_{[iSCAL(), EPP]}$ . By contrast, [8] proposes that *cai* is an adjunct in (2) and is added to satisfy an independent requirement for sentences with fronted objects in Mandarin, namely, that the predicate cannot be a bare verb in such cases. [8]’s motivation is that *cai* is in fact always optional for subject *zhiyou*-phrases as in (3), or when this independent requirement is satisfied in other way as in (4).

- |   |  |
|---|--|
| (3) zhiyou MALI (cai) chi yu.<br>Only Mary CAI eat fish<br>‘Only [Mary] <sub>F</sub> (CAI) eats fish’ | (4) zhiyou YU Mali {chi-guo/ jingchang chi}.<br>Only fish Mary eat-EXP often eat<br>‘Only [fish] <sub>F</sub> , Mary {once ate/often eats}.’ |
|---|--|

To address (3-4), [5] proposes that *zhiyou* comes in two variants: one with an uninterpretable scalar feature in (2), and one without this feature in (3-4). Crucially, he points out that [8]’s account cannot explain why *cai* is truly necessary in conditional sentences like (9) ([3, 9]). It is not possible to improve (9) by adding other pre-verbal elements in absence of *cai* as in (4). However, [5] still fails to explain why the non-scalar *zhiyou* is available in its monoclausal use like (2-4) but is unavailable in its conditional use. Moreover, neither of these accounts provide a detailed semantic analysis for the sentences involving *zhiyou* and *cai*.

**Proposal.** Following a degree-QUD-based analysis of *even* [1, 10], we propose that ‘ $cai_{ALT}(s_0)$ ’ presupposes: (i) the prejacent  $s_0$  provides information to resolve a degree Question Under Discussion (QUD) ‘How  $G_{QUD}$  is  $x_{QUD}$ ?’ and the largest degree such that the measurement of  $x$  reaches in all worlds where  $s_0$  holds true is  $d_0$  such as  $d_0$  reaches the contextual standard value  $d_{std}$ ; and (ii) for all alternatives  $s'$  to  $s_0$  in the alternative set *ALT* associated with *cai*, the largest degree such that the measurement of  $x$  reaches in all the worlds where  $s'$  holds true is  $d'$  such that  $d_0 > d_{std} > d'$ . In other words, unlike the degree additivity of *even*, *cai* indicates degree exclusivity such that only the prejacent suggests an unexpectedly high degree answer to the QUD. Now we can explain why *cai* is required in the conditional *zhiyou* but not in the monoclausal *zhiyou* with an inherent asymmetry between the two cases in terms of whether alternatives built based on individual sums are possible, which further correlates whether a degree QUD that renders the prejacent as the most informative answer can be naturally accommodated. For a monoclausal *zhiyou*-sentence like (2) ‘zhiyou [fish]<sub>F</sub> Mary eats’, its semantics is illustrated in (5) (with simplification). We assume that the propositional operator ONLY<sub>C</sub> presupposes that the prejacent

$p$  is true and all the (contextually-relevant) alternatives in  $C$  associated with ONLY (contextually) asymmetrically entail  $p$ , and asserts that all these alternatives to  $p$  are false. Crucially, we assume two ways are available here to build the alternatives ( $q_1, q_2$ ) in  $C$ , sum-based as in (6a) and quality-based as in (6b).

(5)  $[[\text{ONLY}_C(p)]]^w = \forall q \in C [q \neq p \rightarrow \neg q(w)]$ , defined iff  $p(w) \wedge \forall q \in C [q \neq p \rightarrow q \supset_C p]$

(6) a.  $C = \{M \text{ eats fish } (p), M \text{ eats fish } \oplus \text{ beef } (q_1), M \text{ eats fish } \oplus \text{ beef } \oplus \text{ pork } (q_2)\}$

(all alternatives  $q_1, q_2$  asymmetrically entail the prejacent  $p$ )

b.  $C = \{M \text{ eats fish } (p), M \text{ eats beef } (q_1), M \text{ eats pork } (q_2)\}$

(In a context where Mary is on diet, and the degree of healthiness for food is ‘fish > beef > pork’, then alternatives  $q_1, q_2$  both contextually asymmetrically entail the prejacent  $p$ .)

These two cases correspond to different kinds of QUDs in the context: for the sum-based  $C$ , the salient QUD is ‘How many kinds of meat do Mary eat?’; while for the quality-based  $C$ , the salient QUD is ‘How healthy is Mary’s diet?’. We propose that *cai*’s degree exclusivity presupposition is not satisfied in the former case, but obligatorily satisfied in the latter case. For the *how-many* question, the prejacent naturally suggests the lowest degree so that *cai*’s presupposition is not satisfied. In the latter case, the prejacent intuitively indicates the highest degree compared to the alternatives, and *cai* obligatorily occurs because of *Maximize Presupposition* (MP). We spell out the formal compositional details of the latter case as follows. Following [7], we assume that the alternatives associated with *cai* are not directly inherited from ONLY, but rather are the so-called domain alternatives of ONLY (i.e.  $C', C'', \dots$ ), as in (7). In this case, the prejacent of *cai* entails ‘M eats fish but not beef and pork’ ( $p \wedge \neg q_1 \wedge \neg q_2$ ), which suggests the highest degree to the QUD ‘How healthy is M’s diet?’, while all (relevant) alternatives ‘M eats fish but not pork (and possibly beef)’ ( $p \wedge \neg q_2$ ), ‘M eats fish (and possibly beef and pork)’ ( $p$ ) to it in ALT indicate a lower degree. Since *cai*’s scalar presupposition is thereby satisfied, *cai* obligatorily occurs due to MP.

(7)  $\text{cai}_{\text{ALT}} ([_{s_0} \text{ONLY}_C ([_p M \text{ eats fish}_F]) ] )$

ALT =  $\{ \text{ONLY}_{C=\{p, q_1, q_2\}}(p), \text{ONLY}_{C'=\{p, q_2\}}(p), \text{ONLY}_{C''=\{p\}}(p), \dots \}$   
 $\approx p \wedge \neg q_1 \wedge \neg q_2 \quad \approx p \wedge \neg q_2 \quad \approx p$

Turning to (9), we propose that the sum-based alternatives (in which case *cai*’s presupposition may not be satisfied) are unavailable mainly because of the downward-entailing nature of conditional antecedents: since ONLY presupposes that the prejacent is (contextually) asymmetrically entailed by its alternatives, (8a) is blocked. The quality-based  $C$ , by contrast, is available (8b).

(8) a.  $C = \{M \text{ comes} \rightarrow J \text{ comes}(p), M \oplus A \text{ come} \rightarrow J \text{ comes}(q_1), M \oplus A \oplus B \text{ come} \rightarrow J \text{ comes}(q_2)\}$

b.  $C = \{M \text{ comes} \rightarrow J \text{ comes}(p), A \text{ comes} \rightarrow J \text{ comes}(q_1), B \text{ comes} \rightarrow J \text{ comes}(q_2)\}$

This captures our intuition that when a conditional is uttered, we by default care the question ‘How stringent the conditions are for the consequent to be realized?’ and the assertion of (9) suggests the highest degree to this QUD. Since *cai*’s presupposition is satisfied, *cai* obligatorily occurs. But the *how-many* QUD is intuitively unavailable—it is hard to accommodate QUDs like ‘How many people must come to guarantee John’s attendance?’ and utter (9) to suggest the lowest degree.

**Implications.** With more space, we detail our mechanics and show how it extends to emphatic *cai*, such as (11) as a response of (10) ([6]).

(9) zhiyou MALI lai, Yuehan \*(cai) lai. (10) A: jintian hen leng. (11) B: ZUOTIAN cai leng ne!

Only Mary come John CAI come Today very cold Yesterday CAI cold SFP

‘Only if [Mary]<sub>F</sub> comes, John comes.’ ‘Today is cold.’ ‘[Ytd]<sub>F</sub> was cold, not today!’

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## The specificity dimension of tense: Evidence from Japanese

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**1. Background.** Tense has been analyzed as an existential quantifier over times (Dowty 1979, a.o.) or as a pronoun anchored to a contextually salient time (Partee 1973, Kratzer 1998); Zhao (2023) further proposes a *uniqueness* reading parallel to definite descriptions. If NPs and tense share a unified indexical mechanism (Enç 1981), the specificity dimension that Farkas & Brasoveanu (2021) identify for indefinites—*anti-variation* vs. *variation-tolerance*—should extend to tense, yet no existing analysis encodes this. I argue that Japanese *-ta/-tei-ta* provides the first morphological evidence for this extension: *-tei-ta* is an anti-variation marker requiring witness stability across alternatives, while *-ta* is its variation-tolerant counterpart, subsuming

Zhao’s uniqueness as the limiting case  $/A/ = 1$ .

**2. Data.** Both *-tei-ta* and *-ta* share the past-tense condition  $\tau(e) < t_c$ , with *-tei-ta* additionally encoding perfect aspect via  $t_R$ ; the following environments show that *-tei-ta* is degraded precisely when the witness varies across alternatives, while *-ta* remains acceptable throughout.

### §1 Witness stability across temporal alternatives.

- (1) Tooshi-kurabu-ni hai- $\{tta / ttei-ta\}$  hito-wa minna ie-o  
 investment.club-DAT join- $\{PST / PERF.PST\}$  person-TOP all house-ACC  
 kau-darou.  
 buy-FUT  
 ‘Everyone who  $\{joined / had been in\}$  the investment club will buy a house.’  
 a. wide reading: anyone who joins at any time before purchase  $\{OK -tta / \# -ttei-ta\}$   
 b. narrow reading: only those who are already members now  $\{OK -tta / OK -ttei-ta\}$

*-tei-ta* restricts the reading to individuals whose membership witness remains stable across temporal alternatives. No scope configuration of the subject NP and the future tense operator derives this contrast: the wide and narrow readings do not differ in relative scope but in whether the witness covaries with temporal alternatives. Crucially, this cannot reduce to current relevance: the result state of club membership persists equally under both readings.

### §2 Witness stability under quantification.

- (2) Dono kyooju-mo [Syntax 1-o to- $\{tta / ttei-ta\}$ ] gakusee-o home-ta.  
 every professor-also [Syntax 1-ACC take- $\{PST / PERF.PST\}$ ] student-ACC praise-PST  
 ‘Every professor praised students who  $\{took / had taken\}$  Syntax 1.’  
 a.  $\exists \gg \forall$ : same students across professors  $\{OK -tta / OK -ttei-ta\}$   
 b.  $\forall \gg \exists$ : different students across professors  $\{OK -tta / \# -ttei-ta\}$

This is the critical contrast: aspect is held constant across both scope readings (the result state of having taken Syntax 1 persists equally), isolating witness stability as the sole variable. A purely aspectual analysis predicts no difference; what varies is only whether the *same* students serve as witnesses across the quantificational alternatives—precisely the cross-quantifier witness identity that *-tei-ta* requires.

§3 **Perfect aspect does not entail anti-variation.** English past perfect confirms the independence of the two dimensions:

(3) Everyone who had joined the investment club will buy a house. {OK wide/OK narrow}

The wide reading—anyone who joins at any point before purchase—is fully available despite the perfect. The membership witness varies freely across temporal alternatives; perfect aspect constrains the temporal ordering ( $\tau(e) < t_R$ ) but imposes no stability on the witness. If anti-variation were a by-product of perfect aspect, *had joined* should pattern with *-tei-ta* in blocking the wide reading; it does not. Anti-variation is therefore an independent dimension that Japanese *-tei-ta* encodes morphologically but English past perfect does not.

**3. Proposal.** Farkas & Brasoveanu (2021) distinguish two modes of witness evaluation for indefinites: *anti-variation*, where the witness must remain constant across a contextually given set of alternatives  $A$ , and *variation-tolerance*, where the witness may differ from alternative to alternative. I propose that *-tei-ta* is an anti-variation tense marker and *-ta* its variation-tolerant counterpart, extending this distinction from the nominal to the temporal domain: both NP and tense witnesses are evaluated over a shared alternative set  $A$  of possible worlds without scope mediation. Zhao’s uniqueness presupposition is not a primitive but a limiting case: when  $|A|=1$ , anti-variation is trivially satisfied and uniqueness follows.

**4. Analysis.** Following Farkas & Brasoveanu (2021),  $A \subseteq W$  is the set of alternatives generated by the closest c-commanding operator—modal (§1) or quantificational (§2). Where Farkas & Brasoveanu model  $A$  as assignment functions for NP witnesses, I model  $A$  as worlds, since tense witnesses—who holds club membership, which students took a course—are world-relative facts; the two formulations yield identical predictions for NP witnesses. A witness  $d$  for eventuality  $e$  at world  $w$  is the unique thematic participant of  $e$  that satisfies the restrictor of the host NP at  $\langle \tau(e), w \rangle$ , written  $\text{WIT}(d, e, w)$ . I define  $\text{STABLE}(d, e, A) : \Leftrightarrow \forall w' \in A [\text{WIT}(d, e, w') = d]$ . That is,  $d$  remains the witness of  $e$  in every alternative world.

$$\begin{aligned} \blacktriangleright \llbracket -tei-ta \rrbracket &= \lambda e. \lambda A. \lambda w_c. \lambda t_R. \exists d \left[ \underbrace{\text{WIT}(d, e, w_c) \wedge \tau(e) < t_R < t_c}_{\text{perfect}} \wedge \underbrace{\text{STABLE}(d, e, A)}_{\text{anti-variation}} \right] \\ \blacktriangleright \llbracket -ta \rrbracket &= \lambda e. \lambda A. \lambda w_c. \exists d \left[ \underbrace{\text{WIT}(d, e, w_c) \wedge \tau(e) < t_c}_{\text{simple past}} \right] \end{aligned}$$

Both denotations existentially introduce a witness  $d$ ; the sole difference is that *-tei-ta* additionally requires  $\text{STABLE}(d, e, A)$ —the witness must be constant across alternatives—while *-ta* is silent on cross-world identity. This directly mirrors Farkas & Brasoveanu (2021), where

specific and non-specific indefinites differ only in whether the witness is constant across the alternative set. When  $|A| = 1$ , STABLE is trivially satisfied, recovering Zhao's (2023) uniqueness as a limiting case. Neither aspect nor scope figures in the contrast; only witness stability does.

**5. Derivations and cross-linguistic prediction. §2:** Each quantificational alternative introduced by *dono kyoozyu-mo* contributes a world to  $A$ . Under  $\exists \gg \forall$ , the same students witness  $e$  throughout  $A$ , so STABLE is satisfied; under  $\forall \gg \exists$ , witnesses vary and STABLE fails. *-ta* is acceptable throughout, as existential satisfaction imposes no cross-world stability. Note that *-ta* takes  $A$  as an argument but places no condition on it, correctly predicting variation-tolerance across the board. **§1:** The future tense generates  $A$  spanning worlds that differ in club membership; the wide reading lets membership vary (anti-variation fails), while the narrow reading holds it constant (satisfied). **Zhao:** When  $|A| = 1$ , STABLE is trivially satisfied, deriving uniqueness as a limiting case while predicting §1–§2, which Zhao's framework leaves underivable. **Prediction:** If the specificity dimension is a universal property of the tense–NP parallel, other East Asian languages should exhibit analogous contrasts. Chung (2012) analyzes Korean *-ess-ess-* as a perfect paralleling Indo-European past/perfect distinctions; on the present account, it is a candidate anti-variation marker, predicted to be degraded when the witness varies while simple *-ess-* remains acceptable.

**Selected References.** Chung, K.-S. 2012 *Space in Tense*. Springer • Enç, M. 1981. Tense without scope. U. of Wisconsin-Madison dissertation. • Farkas, D.F. & A. Brasoveanu. 2021 Kinds of (non) specificity. In *The Wiley Blackwell Companion to Semantics*. Wiley-Blackwell. □ Zhao, R. 2023. The English past tense as a definite description. *Glossa* 8:1–42.

## On the Nature of Modifier Phrase

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This paper argues against the proposal that all heads must be silent (cf. Kayne 2016, Cinque 2017, a.o.), based upon a cluster of licensing properties of certain functional categories. First consider the following pattern of pied-piping out of an object in Mandarin Chinese:

- (1) a. Akiu hen xihuan [Xiaodi zuo de [liang-pian-zhuang de CD]].  
Akiu very like Xiaodi make DE two-piece-pack DE CD  
'Akiu quite likes the two-pack CD that Xiaodi made.'
- b. CD, Akiu hen xihuan [Xiaodi zuo de [liang-pian-zhuang de \_\_\_]].  
CD, Akiu very like Xiaodi make DE two-piece-pack DE
- c. [liang-pian-zhuang de CD], Akiu hen xihuan [Xiaodi zuo de \_\_\_].  
two-piece-pack DE CD, Akiu very like Xiaodi make DE
- d. [Xiaodi zuo de [liang-pian-zhuang de CD]], Akiu hen xihuan \_\_.  
Xiaodi make DE two-piece-pack DE CD Akiu very like

Also, it is possible to omit the "inner" *de*, as in (2a), but then the extraction becomes impossible, as evidenced by the deviance of (2b). On the other hand, when we replace the relative clause with a genitive DP, as in (3a), the "outer" *de* becomes optional, but again the extraction is blocked in its absence, as shown by the contrast of (3b):

- (2) a. Akiu hen xihuan [Xiaodi zuo de [liang-pian-zhuang CD]].  
Akiu very like Xiaodi make DE two-piece-pack CD
- b. \* CD, Akiu hen xihuan [Xiaodi zuo de [liang-pian-zhuang \_\_\_]].  
CD, Akiu very like Xiaodi make DE two-piece-pack
- (3) a. Akiu hen xihuan [Xiaodi (de) [liang-pian-zhuang de CD]].  
Akiu very like Xiaodi DE two-piece-pack DE CD  
'Akiu quite likes Xiaodi's two-pack CD.'
- b. [liang-pian-zhuang de CD], Akiu hen xihuan [Xiaodi (\*de) \_\_\_].  
two-piece-pack DE CD, Akiu very like Xiaodi DE

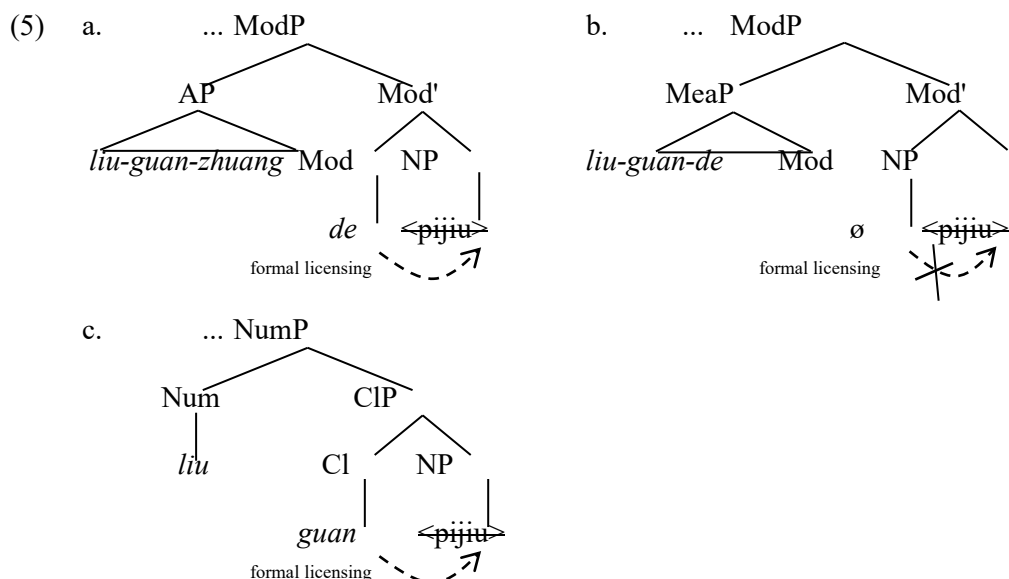
All these facts demonstrate that, as far as formal licensing is concerned, the sister head of the extraction site cannot be silent. Along this line, the "adjuncthood" in the traditional sense must be reinvented as a projection of Modifier Phrase (ModP, cf. Rizzi 2004): The modifier/adjunct is hosted by the Spec position, whereas the head position is occupied by *de*.

Interestingly enough, this is reminiscent of Tsai's (2015) observation that there are two types of *de*: One serves as the head of ModP: As shown in (4a), must be present to license extraction from its complement/sister position (or deletion of the copy left behind in the Minimalist terms). The other type of *de* forms part of a measure phrase (MeaP), and does not license topicalization consequently, as evidenced by (4b).

- (4) a. pijiu, Akiu y ikouqi he-diao [liu-guan-zhuang \*(de) <pijiu>]. (ModP)  
beer Akiu in.one.round drink-up six-can-pack DE  
'In one round, Akiu drank up a six-pack of beer.'
- b. \* pijiu, Akiu y ikouqi he-diao [[liu guan de] <pijiu>]. (MeaP)  
beer Akiu in.one.round drink-up six can DE  
'In one round, Akiu drank up beer in the quantity of six cans.'
- c. [pijiu], Akiu y ikouqi he-wan-le [liu guan <pijiu>]. (CIP)  
beer Akiu in.one.round drink-up-Prf six can  
'In one round, Akiu drank up six cans of beer.'

The question remains as to why (4b) can be improved simply by removing the measure *de*, as in (4c).

We suggest that this difficulty is only apparent: Here the relevant structure is actually a classifier phrase (CIP), where the classifier *guan* ‘can’ functions as the licensing head of the extraction site. Under this analysis, there is no place for *de* in the DP structure of (4c), and the interpretation is individual-counting instead of measurement (cf. Cheng & Sybesma 1999, a.o.). We therefore reach the conclusion that an overt head is essentially for the role of a formal licenser, as illustrated in (5a). For the measure phrase, it is situated in the Spec of ModP, and the Mod head is indeed silent. As a result, no extraction is allowed, as in (5b) ( $\emptyset$ : silent head). In the same light, the extraction is allowed in (4c) simply because the classifier head itself counts as a formal licenser. Hence the success of the topicalization from the object domain, as sketched in the diagram (5c).



Since the same pattern can be found in ellipsis and VP-fronting, it seems safe to assume that, under the copy theory, the “sisterhood” created by external merge between an overt head and its syntactic complement is the core property of internal merge, second only to c-command. We therefore do not submit to the claim that all heads are necessarily silent. Instead, we elect to think of the recoverability on deletion as a way to maintain this sisterhood as a constant during structural change, ostentatiously marked by an overt head at the PF interface.

Cheng, Lisa Lai-Shen and Rint Sybesma. 1999. Bare and Not-so-bare Nouns and the Structure of NP. *Linguistic Inquiry* 30:509–542. Cinque, Guglielmo. 2017. On the Status of Functional Categories (heads and phrases). *Language and Linguistics* 18:521–576. Kayne, Richard. 2016. The Silence of Heads. *Studies in Chinese Linguistics* 37:1–37. Rizzi, Luigi. 2004. Locality and the left periphery. In *Structures and Beyond. The Cartography of Syntactic Structures*, vol. 3, (ed.) Adriana Belletti, 223–251. New York: Oxford University Press. Tsai, Wei-Tien Dylan. 2015. *De Bu De, Fei Chang De -- Lun Mingcizunei Xuci Yu Quyuxianzhi De Liandong Guanxi* [Canonical *de* vs. Non-Canonical *de*: On Relationship between Functional Categories and Locality Conditions within Chinese NP]. *Zhongguo Yuwen* 4(367):315–328.



In **embedded clauses**, the matrix subject accordingly occupies [Spec, EvalP] as the **HOLDER**. Because [Spec, EvalP] is filled by the matrix predicate, the **HOLDER** in embedded clauses is a syntactic argument, not a discourse participant. This determines what information is available in the evaluation of epistemic authority. A person by default has epistemic authority over his/her own state of affairs, but authority over another person's states depends on pragmatic circumstances (e.g. personal acquaintance). Since the **HOLDER** in embedded clauses is not a discourse participant, such pragmatic information is not available to the evaluation. The evaluation of epistemic authority therefore depends entirely on whether the proposition concerns the **HOLDER**'s own states, i.e., whether the embedded subject is coreferential with the **HOLDER**. The result is a rigid valuation: [+EGO] for coreference, and [-EGO] for disjoint reference. In **root clauses**, [Spec, EvalP] is filled by the relevant speech act participant: the speaker. In the canonical case, speakers have epistemic authority over their own states but lack it over others'. Non-canonical patterns arise when this relation is disrupted: in dream and surprise contexts, for instance, the speaker disowns his epistemic authority, yielding [-EGO] even with first-person subjects. Conversely, if the speaker stresses personal knowledge of a third party's state of affairs, [+EGO] is used with third-person subjects to assert authority.

**Verb movement.** Because [=EGO] is bound morphology on the copula/existential (Wang 2025), it can only be realized if the copular/existential moves to Eval<sup>0</sup> cyclically from its base position in Pred<sup>0</sup>/Asp<sup>0</sup>. The interrogative marker *i-* provides direct evidence for this raising:

- (5) *mir.sges las.bya i bris (\*bris i)* (6) *mir.sges las.bya bris i yod.khu*  
 3SG.F.ERG homework Q write.PAST 3SG.F.ERG homework write Q have.NEGO  
 'Did she do the homework?' 'Has she done the homework?'

In (5), the verb *bris* 'write' appears right of *i-*, displaced from its base position, indicating movement. In (6), the existential verb *yod* 'have' occupies this position while the main verb *bris* 'write' remains in situ. *yod* surfaces as *yod.khu*, bearing [-EGO] morphology. This morphology can only be acquired at Eval<sup>0</sup>, confirming that *yod* has raised to this position. The movement is driven by morphological necessity: [=EGO] is a bound feature in Eval<sup>0</sup> that requires a verbal host, and only by raising can the copula/existential provide one. This raising requirement in turn explains why overt complementizers block the contrast: if the copula/existential must reach Eval<sup>0</sup>, any intervening head will prevent it from doing so. An overt complementizer occupies Comp<sup>0</sup>, which sits on the movement path between Pred<sup>0</sup>/Asp<sup>0</sup> and Eval<sup>0</sup>, blocking movement by the Head Movement Constraint (Travis 1984) and leaving [=EGO] unrealized (7):

- (7) [EvalP [Eval<sup>0</sup> [=EGO]]]...[CompP Comp ... [PredP COP/EXIST ...]] ← COP/EXIST blocked by Comp

**Cross-Tibetic predictions & Significance.** Since the Head Movement Constraint is insensitive to the category of the intervening head, the analysis predicts that any head on the movement path, not just complementizers, will block the contrast. This prediction finds cross-Tibetic support: in Lhasa Tibetan, complementizers block the contrast (Garrett 2001). In Gcig.sgril Amdo Tibetan, nominalizers produce the same effect (Tribur 2019), lending independent support to the head movement analysis proposed here. By locating [=EGO] in Eval<sup>0</sup> and deriving the root/embedded functional split from the identity of [Spec, EvalP], this study provides the first unified formal account of the distributional properties of egophoricity in Tibetan.

**Selected references** Garrett (2001). *Evidentiality and assertion in Tibetan* [Diss., UCLA]. | San Roque et al. (2018). Egophoricity. In Floyd et al. (Eds.), *Egophoricity*, 1–78. Benjamins. | Speas & Tenny (2003). Configurational properties of point of view roles. In Di Sciullo (Ed.), *Asymmetry in grammar*, 315–344. Benjamins. | Sun (1993). *The grammatical categories of Amdo Tibetan*. LTBA. | Travis (1984). *Parameters and effects of word order variation* [Diss., MIT]. | Tribur (2019). *Verbal morphology of Amdo Tibetan* [Diss., U of Oregon]. | Wang (2025). *Morphosyntax of egophoricity in Golog Tibetan* [Diss., CUHK]. | Wang & Cheung (2025). Egophoric and non-egophoric marking in Golog Tibetan. In Grzech & Bergqvist (Eds.), *Expanding the boundaries of epistemicity*, 137–175. De Gruyter Mouton.

## Mandarin Chinese Verbal Classifier Construction

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**Introduction.** Mandarin Chinese lexically distinguishes two counting levels in the verbal domain. It has two sets of verbal classifiers: one that counts individual events (event-internal classifiers), represented by *xia* ‘time<sub>int</sub>’ and another that counts occasions (event-external classifiers) consisting of events, represented by *hui* ‘time<sub>ext</sub>’ (Deng 2013; Liao 2018; Zhang 2017). This study reexamines and (partially) challenges two influential proposals concerning the (i) Category, (ii) Distribution, (iii) Base position(s) and (iv) Derivation of the two kinds of verbal classifier constructions, advanced by Deng (2013) and Zhang (2017) respectively. The central claim is that the numeral-verbal classifier sequence forms an independent constituent – a functional phrase adjoined as an adjunct at the V’ level.

Figure 1. Adapted from Zhang (2017).

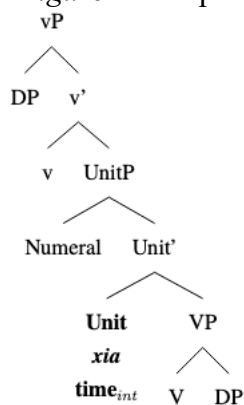
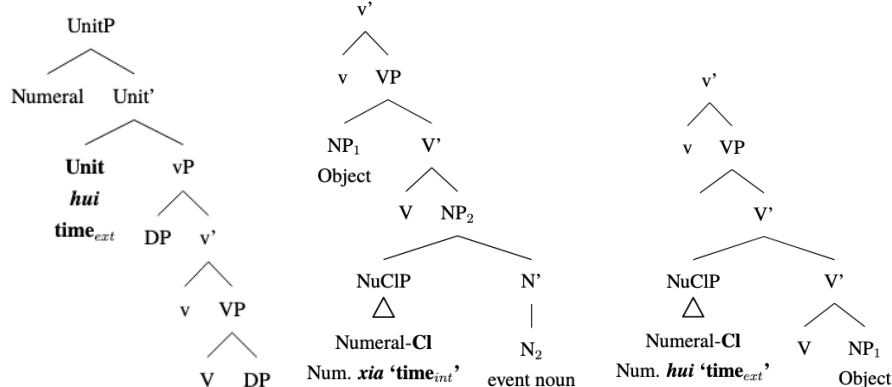


Figure 2. Adapted from Deng (2013)



**Headedness vs. Adjunct Hypothesis.** Zhang (2017) claims that a verbal classifier is the head of a functional phrase (UnitP) which takes a verbal complement (VP/vP), arguing for the Headedness Hypothesis. Zhang (2017) offers two arguments against treating the numeral-classifier sequence as an adverbial phrase adjunct. Firstly, the distribution between temporal adverbial phrases and verbal classifier constructions is different: the former does not occur between a verb and an object (see Example (1)), unlike the latter (2).

- (1) Dalin (jingchang) kan (\*jingchang) dianying.  
 Dalin often see often movie  
 ‘Dalin often sees movies.’
- (2) Dalin kan-guo san ci na bu dianying.  
 Dalin see-EXP see time<sub>ext</sub> that CL movie  
 ‘Dalin saw that movie three times before.’

Secondly, the temporal adverbial phrases cannot license VP ellipsis (3), whereas verbal classifier constructions can (4). This phenomenon suggests that the verbal classifier, as the head, is responsible for licensing VP ellipsis.

- (3) \*Dalin jingchang chidao, Yuru ouer ehidao.  
 Dalin often arrive.late Yuru occasionally arrive.late  
 Intended: ‘Dalin was often late, while Yuru was occasionally late.’
- (4) Dalin cengjing san ci chidao, Yuru liang ci ehidao.  
 Dalin before three time<sub>ext</sub> arrive.late Yuru two time<sub>ext</sub> arrive.late  
 ‘Dalin was late three times, and Yuru was late two times.’

However, this study challenges both arguments. Regarding the distribution argument, temporal adverbial phrases in fact share a preverbal position with verbal classifier constructions (5).

- (5) Dalin cengjing san **ci** da bai le Yuru.  
 Dalin before three **time<sub>ext</sub>** beat lose PFV Yuru  
 ‘Dalin once defeated Yuru on three occasions.’

In terms of the ellipsis argument, temporal adverbial phrases can exist without a VP, with the help of a focus element *zhishi* ‘just’ before *ouer* ‘occasionally’. Moreover, according to He and Tan (2019), the two derivation scenarios of the elided version with verbal classifiers are unmotivated, either assuming upward ellipsis, or raising a trace. Thus, the ellipsis phenomenon is not a good indicator of the headedness of verbal classifiers.

This study, therefore, argues that the numeral-verbal classifier construction is an independent constituent adjunct to the main tree, which is consistent with the traditional view (He & Tan 2019; Zhou 2007). One of the arguments is the presence of sentence initial verbal classifier constructions.

- (6) san **ci**, women chi wan le na xiang pingguo.  
 three **time<sub>ext</sub>** we eat finish PFV that CL<sub>box</sub> apple  
 ‘We finished eating that box of apples over three occasions.’

If assuming Zhang’s (2017) analysis, to derive this word order demands raising of three traces, i.e., subject, verb, object. Such movement lacks independent motivation. The Adjunct Hypothesis, by contrast – treating the numeral-classifier sequence as a constituent – allows a more straightforward derivation via fronting of the classifier phrase.

**Multiple vs. Unique Base Position.** As shown in Figure 1 and 2, Zhang (2017) and Deng (2013) claim that the two kinds of verbal classifiers have distinct base positions.

Zhang (2017) uses Cinque’s (1999, p. 27) English example *John twice knocked twice on the door* to suggest multiple base positions in Mandarin as well. Moreover, Zhang (2017) argues that there is a syntactic selection requirement from the classifier to the verbal element, thus the latter being the complement. Nevertheless, in the talk, challenges to the multiple base position hypothesis will be laid out, for example, the restriction is in reality a semantic one, not syntactic. More doubts on the derivation processes for different word orders will be presented.

Deng (2013) also argues that event-internal classifiers impose a selection requirement on the verb, thus proposing a null event noun which is cognate object of the verb. Yet, this study argues that the so-called event noun in Deng (2013) is not an event noun in the same sense as in English. Meanwhile, Deng (2013) puts forward that event-external classifiers are adjuncts attaching at the V’ level in either direction. Deng (2013) draws argument from the preservation versus disruption of an idiomatic interpretation. However, this study shows that this distinction does not result from syntactic requirement, but semantic incompatibility.

In summary, this study proposes a unified hypothesis for these two sets of verbal classifiers. Verbal classifier constructions are independent constituents adjoined to the main tree (Category). With simple predicates the two types of classifiers surface post-verbally, while with complex predicates, they are able to appear preverbally (Distribution). The two kinds are base generated in the same position (Base Position), and the corresponding derivations will present in the talk.

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## Flavors of telicity, quantization and semi-functionality: Lessons from Chinese

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**Introduction:** It has long been observed that Mandarin Chinese allows non-culminating accomplishment predicates (Martin, 2019; Soh & Kuo, 2005; Zhang, 2018, a.o.), whose telicity can be derived through completive particles such as *wan*, *diao*, *dao* and *zhu*. These items exhibit a property of semi-functionality: they serve as telicity markers while retaining lexical semantic residues, thus encoding telicity with idiosyncratic meaning. In this respect, they appear comparable to Slavic perfective prefixes (Borer, 2005; Filip, 2000; MacDonald, 2008; Slabakova, 2001), see (1-2):

- (1) a. Nana zai san-fenzhong nei chi-**diao** le yi-ge pingguo.  
Nana at three-minute in eat-COP PFV one-CL apple  
'Nana ate an apple in three minutes.'
- b. Ja **vy-pil** butylku vina za čas. (Russian)  
I PV-drink bottle wine.GEN in hour  
'I drank a bottle of wine in an hour.'
- (2) a. (chi)-**diao** mianbao (mai)-**dao** shu (kan)-**wan** dianying  
eat-COP bread buy COP book watch COP movie  
'eat up a bread (disappear)' 'buy a book (achieve)' 'watch a movie (finish)'
- b. **iz-jam** sandvič **pre-pisa** **pro-četa** kinga (Bulgarian)  
PV-eat sandwich PV-write PV-read book  
'eat up a sandwich' 'write (a copy)' 'read a book in full'

**In the literature**, Chinese completive particles are analyzed as inner aspect morphemes, akin to Slavic prefixes (Sybesma, 2017; Xuan, 2008). However, two empirical properties suggest that Chinese completive particles are not a uniform class, and challenge a straightforward assimilation to Slavic prefixes. **First**, while Slavic prefixes are typically associated with quantized themes in accordance with the Strict Incrementality Condition (Krifka, 1998), Chinese completive particles display variability: *wan* (and *hao*) allow non-quantized themes, whereas *diao* and *dao* impose maximal and minimal interpretations on the theme, respectively in (3).

- (3) a. Nana chi-**wan/hao** zaocan jiu qu shangban. (non-quantized theme)  
Nana eat-COP breakfast then go work  
'Nana will finish breakfast and go to work.'
- b. Nana he-**diao/dao** kafei jiu qu shangban. (quantized theme)  
Nana drink-COP coffee then go work  
'Nana will finish (all/a taste of) the coffee and go to work.'

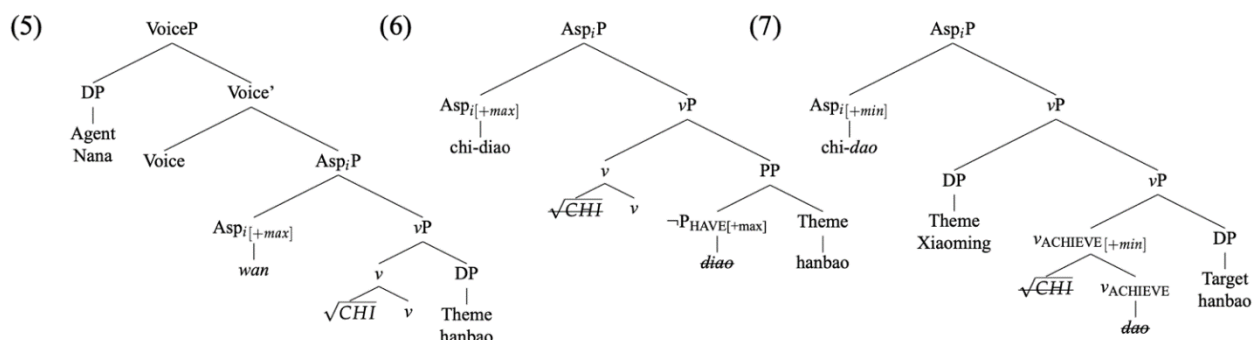
**Second**, Slavic prefixes are commonly analysed as yielding accomplishment predicates, Chinese completive particles give rise to both accomplishment and achievement readings, as evidenced by their different compatibility with progressive marking in (4):

- (4) a. \*Nana zhengzai chi-dao hanbao.  
 Nana PROG eat-COP hamburger  
 ‘(INT) Nana is having the first bite of a hamburger.’
- b. Nana zhengzai (yi kou kou) chi-diao hanbao  
 Nana PROG (one bite bite) eat-COP hamburger  
 ‘Nana is finishing the hamburger.’

**Research questions:** The current study aims to explore (1) the underlying telicity mechanism of Chinese completive particles; (2) the Chinese-Slavic differences in terms of telicity encoding; (3) the syntactic nature of telicity with reference to the semi-functionality of completive particles.

**Core assumptions:** We adopt the Neo-constructivist approach to argument structure and telicity encoding (Borer, 2005; Kardos and Farkas, 2022; MacDonald, 2008; Travis, 2010, a.o.). A syntactic functional head  $Asp_i$ , holding an uninterpretable telic feature [ $\mu$ telic], is projected above  $v$  to derive uncancelable telicity. Functional items in a language can carry [+max] or [+min], which are [itelic] with different flavors. Syntactically, they value the [ $\mu$ telic] by either merging or moving to  $Asp_i$ . Semantically, [+max] and [+min] are responsible for event type encoding (accomplishment and achievement) and the quantization of theme (maximality or minimality), which are determined in the  $vP$  domain, not directly related to  $Asp_i$ .

**The analysis:** Chinese completive particles are functional items that carry [+max] or [+min], valuing  $Asp_i$  with different flavors. There is a structural asymmetry between *wan/hao* and *diao/dao*, thus telicity is achieved either by merging or moving to  $Asp_i$ . *Wan/hao* is base-generated in  $Asp_i$  (see 5) and values the [ $\mu$ telic] with its [+max], encoding event-internal completion without referring to the maximalization of its argument. Its insensitivity to the quantization of the theme follows from its high position, which prevents direct interaction with the argument-structural domain. In contrast, *diao* and *dao* are base-generated within the  $vP$  domain, formulating the core of argument structure. Specifically, *diao* realizes a  $\neg$ PHAVE head (Harley, 2002, 2007; Myler, 2016) with [+max] feature (see 6), encoding an affected accomplishment event, and imposes a maximality condition on the theme. *Dao* is associated with a  $v$ Achieve and carries [+min] (see 7), introducing a minimal boundary and yielding achievement readings. Both particles subsequently undergo head movement to  $Asp_i$ , where they value [ $\mu$ telic] with different flavors. This derivational difference accounts for their sensitivity to theme interpretation and their distinct event-type effects.



**Theoretical implications:** Cross-linguistic variation in telicity encoding and quantization effect is boiled down to the functional lexicon of a language, in line with the BCC (Baker,

2008). Slavic constitutes a subset of Chinese as it only contains the *diao* type telic markers, i.e., telicity of the maximal flavor which is derived through head movement. The derivational bifurcation of telicity is attributed to different syntactic operations for Asp<sub>j</sub> valuation: merge or move. The notion of semi-functionality is thus recast as a consequence of syntactic mobility: elements originating in the argument domain can acquire aspectual functions through head movement.

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## Postsuppositional additives for listing interpretations

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**Background** Cross-linguistically, additive particles such as *also* and *again* require a contextually salient alternative in the prior discourse. As shown by (1), in English, out-of-the-blue uses sound odd. The same pattern is observed with the Mandarin additive particles *ye* (“also”) and *you* (“again”).

(1) a. -A: Who ran away? -B: # Dorj also ran away. -B’: Dulaan ran away. Dorj also ran away.

b. A: Has Dorj ever visited the museum?

B: # Yes, he went there again last week.

B’: Yes, he went there last summer, and he visited it again last week.

**Puzzle 1** However, it is unexpected that *ye* and *you* can appear in two parallel clauses of the form A-TOO/AGAIN B-TOO/AGAIN, where the first clause is able to find its antecedent in the following clause, as shown in (2).

(2) a. Who ran away?

A ye pao le, B ye pao le.

A too ran.away LE B too ran.away LE

“A and B ran away.”

b. What did Lisi do this afternoon?

Ta you xi le yifu, (ta) you zuo le fan.

he again wash LE clothes (he) again make LE meal

“He washed clothes and made meal.”

Brasoveanu and Szabolcsi (2013) analyze the A-TOO B-TOO construction in Dynamic Predicate Logic by treating additive particles as introducing a postsupposition—a delayed check evaluated after at-issue content. As illustrated in (3), postsuppositional updates are represented in a separate dimension. The additive requirement is satisfied via cross-resolution of  $x'$  with  $y$  and  $y'$  with  $x$ . The theory thus predicts that the postsupposition introduced by A-TOO/AGAIN can be satisfied by a following B, incorrectly licensing **A-TOO B**, a pattern unattested.

(3)  $[x|run(x)] \wedge [y|run(y)] \wedge [x' \neq x, run(x')] \wedge [y' \neq y, run(y')]$

**Resolve Puzzle 1** We argue that the overgeneration of A-TOO B is not a flaw of postsupposition itself, but this structure is independently banned by exhaustivity. We assume sentences are exhaustively interpreted relative to the QUD unless marked otherwise (Scharten 1997; Magri 2009). Additive particles are salient non-exhaustive markers. As in (4), with *ye* in the first clause, [A ran away] is not exhaustified; without an additive in the second clause, [B ran away] is exhaustified relative to [A ran away]. The resulting implicature, B ran away and A did not, contradicts the first clause. Following Bade (2016) and Bade & Renans (2021), an additive particle is therefore obligatorily used to prevent this contradiction.

(4)  $[A_F \text{ ye ran away}], \text{exh } [B_F \text{ ran away}] \rightarrow [A \text{ ran away}] \wedge [B \text{ ran away} \wedge \neg A \text{ ran away}]$

**Puzzle 2** We further observe a pragmatic contrast between A-TOO/AGAIN B-TOO/AGAIN and A B-TOO/AGAIN. The former yields a symmetric interpretation: A-TOO/AGAIN B-TOO/AGAIN and B-TOO/AGAIN A-TOO/AGAIN are pragmatically equivalent. The latter, by contrast, is order-sensitive: as shown in (5–6), A B-AGAIN requires A to be not later than B, whereas A-AGAIN B-AGAIN necessarily disregards temporal sequencing.

(5) a. Zhangsan zuo le ge dangao, you chi le yi da kuai.

A B-

AGAIN

Zhangsan make LE CL cake again eat LE one big CL

“Zhangsan made a cake and ate a big piece of it.”

b. #Zhangsan you zuo le ge dangao, you chi le yi da kuai. A-AGAIN B-AGAIN

- Zhangsan again make LE CL cake again eat LE one big CL
- (6) a. Context: This afternoon, Xiaoming played soccer from 1-2pm, then he played chess from 2-4pm, then he played soccer again from 4-5pm, then he played chess again from 5-6pm.  
 b. Context: This afternoon, Xiaoming played soccer and played chess. We don't know what he did first. We can use A-AGAIN B-AGAIN to report what Xiaoming did:  
 Jintian xiawu Xiaoming you xia le xiangqi, you ti le zuqiu.  
 today afternoon Xiaoming again play LE chess again kick LE soccer  
 "This afternoon Xiaoming played football as well as played chess."

Example (7-8) shows that in A B-TOO construction, A is preferred to be more relevant to the QUD or a more likely answer to the QUD than B, whereas no such constraint holds for A-TOO B-TOO. Rather, in A-TOO B-TOO, A and B are unordered with respect to QUD relevance or answer probability. The puzzle, then, is how to derive this symmetric interpretation for A-TOO/AGAIN B-TOO/AGAIN?

- (7) Who were at the graduation ceremony?
- a. # Xuesheng jiazhang lai le, xuesheng men ye lai le. A B-TOO  
 student parent come LE student PL also come LE  
 "Students' parents came, and students also came."
- b. Xuesheng jiazhang ye lai le, xuesheng men ye lai le. A-TOO B-TOO  
 student parent also come LE student PL also come LE
- (8) a. A zou le, B keneng ye zou le. A B-TOO  
 A leave LE B possibly also leave LE  
 "A left, and B possibly also left."
- b. ?? A ye zou le, B keneng ye zou le. A-TOO B-TOO  
 A also leave LE B possibly also leave LE

**Resolve Puzzle 2** We argue that the symmetric interpretation of A-TOO/AGAIN B-TOO/AGAIN follows naturally from postsupposition. To give the general idea, TOO requires a salient alternative not less probable than its prejacent; when TOO appears in both clauses, each is required to be not less probable than the other, yielding a probability equivalence (9a). Likewise, AGAIN presupposes an alternative event not later than its prejacent; when AGAIN occurs in both clauses, each event is required to be not later than the other, eliminating any temporal ordering (9b).

- (9) a. Since in [A B-TOO],  $Pr(A) \geq Pr(B)$ ; In [A-TOO B-TOO],  $Pr(A) \geq Pr(B)$  and  $Pr(B) \geq Pr(A)$ . Thus,  $Pr(B) = Pr(A)$ .  
 b. Since in [A B-again],  $e(A) \lesssim e(B)$  ( $\lesssim$  represents temporal precedence); In [A-again B-again],  $e(A) \lesssim e(B)$  and  $e(B) \lesssim e(A)$ . Thus,  $e(B) \simeq e(A)$ .

**Cross-linguistic comparison** The analysis above identifies one pathway to symmetric listing and explains why additive particles are widely used across languages to express listing interpretations (e.g. Mandarin, Mongolian, Hungarian, Russian, Japanese, Avar (Mitrović & Sauerland 2016)): reiterated additives trigger postsuppositions, which are computed symmetrically and no ordering can be inferred. It is, however, an open question why this mechanism is not universally available. In English, repeating *also/too/again* across parallel clauses is marked or ungrammatical; listing instead requires the coordinator *and*, whose omission yields oddness (e.g. *A came, #(and) B came*). By contrast, languages that permit A-TOO B-TOO coordination between finite clauses do not require or even reject an overt coordinator (e.g. Mandarin: *A ye lai le, (#bingqie) B ye lai le*). This contrast may reveal a complementary distribution of the two structures for listing. It is also predicted that scalar additives like *even* should also be naturally available for listing. This prediction is borne out: in many of these languages, the same particle is used for both a TOO and an EVEN meaning; in Old English *ge...ge* conjunction, *ge* can also be used as *even*.

## Name-based Analysis of Verbs with Peripheral Arguments in Mandarin Chinese

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Verb + peripheral argument (VPA), exemplified by transitive form *chī shítáng* ‘canteen-eating’ and the intransitive form *shuì shāfā* ‘sofa-sleeping’, (see Example 1 and 2 for details), exhibit a marginal pattern in which a bare noun (BN) appears postverbally without overt marking while receiving non-canonical thematic interpretations. This phenomenon is also referred to as ‘oblique objects’, ‘non-canonical objects’ and have been variously analyzed in terms of omission, covert case marking, bare noun (pseudo-)incorporation (BNI), and other pragmatic inference. These approaches derive the PA from a canonical underlying structure with an implicit case assigning mechanism, thereby deriving valency increase via argument augmentation. Adopting the BNI view that BNs refine the event, this paper analyzes VPA in terms of name-denoting as a reference type, given that it differs from BNI in other languages, particularly with respect to object compatibility. In addition, as an economical expression with formal reduction, VPA formation is supported by information structure and prosodic factors.

**Data and Properties of VPA:** (i) **Complementary to objects:** the presence of only one BN regardless of verb transitivity and incompatibility with the object (see example 1), which counter with typical BNI patterns that can co-occur with the object, such as Yucatec Maya (cf. Lehmann & Verhoeven 2020). (ii) **Interpretation:** wh-tests ‘what /where do you plan to eat’ show that VPA can answer *what-* rather than *where-*, suggesting that the post-verbal noun is interpreted with a covert object, such as ‘eat canteen’s food’. (iii) **Non-finite slot:** VPA is not compatible with progressive aspectual markers (see example c) and can appear in embedded nonfinite positions without overt (gerund) marking (see example a). (iv) **Pan-nominlazed slot:** VPA can function as an argument without overt nominalizing marking (see example b).

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|--|---|
| <p><b>1a.</b> <i>lisi xihuan chi shitang*(fan).</i><br/>John like eat canteen (meal)<br/><i>‘John likes to canteen-eating.’</i></p>  | <p><b>2a.</b> <i>lisi xihuan shui shafa.</i><br/>John like sleep sofa<br/><i>‘John likes to sofa-sleeping.’</i></p>               |
| <p><b>1b.</b> <i>chi shitang shi shouxuan.</i><br/>eat canteen COP first.choice<br/><i>‘Canteen-eating is the first choice.’</i></p>   | <p><b>2b.</b> <i>shui shafa shi shouxuan.</i><br/>sleep sofa COP first.choice<br/><i>‘Sofa-sleeping is the first choice.’</i></p> |
| <p><b>1c.</b> <i>*lisi zhengzai chi shitang.</i><br/>John PROG eat canteen<br/><i>Intended: ‘John is canteen-eating.’</i></p>  | <p><b>2c.</b> <i>*lisi zhengzai shui shafa.</i><br/>John PROG sleep sofa<br/><i>Intended: ‘John is sofa-sleeping.’</i></p>        |
| <p><b>3</b> <i>fenbi xie heiban, shuibi xie baiban.</i><br/>chalk write blackboard pen write whiteboard<br/><i>‘Chalk to write on blackboard, water pen to write on whiteboard.’</i> (Sun &amp; Li 2020)</p> |   |

**Discussion** The proposed name type is a further development of the kind type, distinguishing individual-based kinds (Chierchia 1998) from taxonomic kinds (Dayal 2004) and developing the latter into a name type grounded in an encyclopedic system of classification and referring to abstract labels rather than sets of entities. This proposal is based primarily on the non-

referential BNs in VO structures in Chinese and the BN objects in article languages (such as ‘attend school’ in English). Here, BNs denote an abstract name of kind, which is instantiated in actual use as concrete entities, as shown in (1). To distinguish these abstract pan-nominalized uses from original types, the capitalized subscript is used to mark such abstract categories:  $E$  denotes an abstract individual corresponding to  $e$ , and  $V$  an abstract event corresponding to  $v$ . Name type also align with the pan-nominalization uses of VO phrase. The VO phrase as a whole likewise forms a unique name  $N$  by iota operator, and refer to the name of a subevent, as shown in (2). On this view, a general event such as *attending* may be further specified as a refined event name such as *school-attending*.

- (1)  $[[N_{NAME}]] = \lambda x. \text{Inst}(x, N)$   
 (2)  $[[VO_{NAME}]] = \lambda P \lambda M_E. \iota N_V [\forall e_v (\text{Inst}(e, N) \rightarrow P(e)) \wedge \forall x. [\text{Theme}(e, x) \rightarrow \text{Inst}(x, M)]]$

Building on this theoretical framework, the present study extends the name-type analysis to VPA as well. This is supported by the properties above: the BN is also non-referential and does not allow pronominal anaphora. With respect to VPA, although syntactically a predicate phrase, is incompatible with aspectual marking and typically occurs in pan-nominalized slots, such as non-finite and argumental environments. At the same time, drawing on the well-established hypothesis of dummy objects in Chinese, together with the fact that VPA does not co-occur with canonical objects, the analysis assumes that the verb is already saturated in its argument structure. A covert object, represented as  $M_0$ , is therefore posited as the underlying internal argument, as shown in (3), while the PA modifies this covert object, such as ‘eat canteen’s meal’, thereby yielding the range of non-canonical thematic interpretations attested in VPA.

- (3)  $[[V_iPA_{NAME}]] = \lambda P_{\langle v, t \rangle} \lambda Q_{\langle e, t \rangle}. \iota N_V [\forall e_v (\text{Inst}(e, N) \rightarrow [P(e) \wedge \forall x_e \exists M_{0E}. [\text{Theme}(e, x) \rightarrow \text{Inst}(x, M_0) \wedge Q(x)]]])]$   
 (4)  $[[V_iPA_{NAME}]] = \lambda P_{\langle v, t \rangle} \lambda M_E. \iota N_V [\forall e_v (\text{Inst}(e, N) \rightarrow [P(e) \wedge \text{TO/AT}(e, x) \rightarrow \text{Inst}(x, M)]]])]$

Intransitive verbs can only receive locative case from the nominalization assigned at the event-phrase level. Due to constraints imposed by the non-marked form, BNs can only receive a bleached and generalized locative interpretation, conveying either a dynamic ‘to’ or a static ‘at’. Due to space limitations, a selected example is provided here to illustrate the restricted locative interpretation: the contrast between unacceptable forms such as *fēi (wǒ) jiā* ‘fly (my) home’, with the intended meaning ‘fly (back) home’, which remains unacceptable even when the disyllabic form *wǒ* ‘my’ is inserted, and acceptable forms such as *fēi shànghǎi* ‘fly Shanghai’, shows that the construction encodes only a goal-oriented *toward* reading rather than a return-path interpretation. In sum, VPA with intransitive verbs, like its transitive counterpart, refines the event by having the BN contribute a restricted locative interpretation.

VPA thus functions to refine the event and yielding a name of subevent. In addition, contrastive contexts facilitate its formation, as shown in (3), parallel contrastive contexts provide an alternative set that enhance the acceptability of event names. Contrastive contexts are a major source of VPA, with many attested examples used independently on this basis. As an economical use, it also required to achieves maximal informational efficiency. In VN order, the event-refining BN occupies the natural focus position, match with prosodic requirements.

**Conclusions** The name-based analysis captures the pan-nominalized use of VPA by treating the PA as modifying a covert object or received locative interpretation and thereby refining the event. It consist with the research on dummy objects of verbal saturation, and the pan-nominalized behavior of VO, while also acknowledging the role of information structure and prosodic focus in such economical constructions. In this way, VPA is integrated into a broader framework: same as the name-type VO, it also functions as event refinement, yielding a label for a subevent and thus a form of event classification, parallel to verb classifiers.

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## Varieties and (de)composition of TRY in Mandarin SEE-as-TRY constructions

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**BACKGROUND** Mandarin expresses the concept of ‘trying’ as a combination of the vision verb

*kan* ‘see, check’ and an action-denoting predicate. Despite consensus on associating *kan* with TRY, it is controversial if *kan* lexically encodes ‘try’ (*tentative particle* in Lu, 1959, Sui and Hu, 2019, a.o.), or arises compositionally (Tang & Shi, 2021). It also goes largely unnoticed that systematic structural and interpretational distinctions arise when *kan* combines with predicates in different forms. In descriptive terms, *kan* behaves like either a suffix in-between the verb and the object (1), or a serial verb following a V-O sequence and optionally introducing a question (2):

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|--|--|
| <p>(1) <u>Suffixal <i>kan</i></u>: V-<i>kan</i>-Object</p> <p>a. Wo guan-guan kan na-shan men.<br/>1SG close-close SEE that-CL door<br/>‘I’ll do a bit closing on that door and see.’</p> <p>b. Ni he-he kan zhe-bei cha.<br/>2SG drink-drink SEE this-CL tea<br/>‘You drink a bit this cup of tea and see.’</p> | <p>(2) <u>Serial Verb <i>kan</i></u>: V-Object-<i>kan</i>(-Q)</p> <p>a. Wo guan na-shan men kan (you-mei-you yong).<br/>1SG close that-CL door SEE have-NOT-have use<br/>‘I’ll close that door and see (if it helps).’</p> <p>b. Ni he zhe-bei cha kan (ganjue ruhe).<br/>2SG drink this-CL tea SEE feel how<br/>‘You drink this cup of tea and see (how it feels).’</p> |
|--|--|

TRY-predicates across languages also manifest interpretational differences in connection with structural properties. For example, in English the flavours of *try* seems tied to its complement type (infinitive v.s. gerund), as in (3) (Arsenijević & Kaufmann, 2024; Huddleston & Pullum, 2017):

- (3) a. Try *to read a book*. ~ ‘endeavor to read...’ b. Try *reading a book*. ~ ‘test the effectiveness of reading...’

Our **GOAL** is twofold: i) Scrutinize the connection between Mandarin *kan* and varieties of TRY, contributing to a general theory of TRY; ii) Derive the structural and interpretational properties on which Suffixal and Serial Verb *kan* come apart. We argue that the SEE-TRY affinity arises because

TRY-events are complex, consisting of an action component and an attitude component (Jones, 1983; Sharvit, 2003; Grano, 2017; Arsenijević and Kaufmann, 2024). Mandarin *kan*-constructions are transparent realizations of these components. The contrast between Suffix/Serial verb *kan* arises because of the aspectual properties of the eventuality that *kan* combines with.

**Suffixal *kan* ≠ Serial Verb *kan* #1.** Suffixal *kan* cannot appear with a bare verb and seems to require verbal reduplication (henceforth VV), or its near functional equivalents that quantify over the event denoted by V, such as V-*yi-xia* ‘V one time’, see Wu (1995), S&H (2019), T&S (2021). (4) shows that Suffixal *kan* rejects a bare *guan* ‘close’ or *he* ‘drink’ without the reduplication. Serial Verb *kan* does not put restriction on verb form, nor does it have to combine with VV, cf. (2).

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|--|---|
| <p>(4) a. #/*Wo guan kan na-shan men.<br/>1SG close SEE that-CL door</p> | <p>b. #/*Ni he kan zhe-bei cha.<br/>2SG drink SEE this-CL tea</p> |
|--|---|

**#2.** The object of Suffixal *kan* has to be interpreted referentially, in the sense of Zhang (2020): An indefinite, non-specific object is rejected by Suffixal *kan* (5a), but goes well with Serial Verb *kan* (5b).



- (9) Mado-o toji-te -mi-masu. (10) Wo he{#-he} bei cha.  
 window-ACC close-INF-SEE-NONPAST 1SG drink{-drink} CL tea  
 ‘I’ll close the windows and see.’ ‘I’ll drink (#a bit of) some cup of tea.’  
 (# but/because I don’t know if it can close)

Finally, the reason for the unacceptability of (4) is a work-in-progress. Attaching an emerging suffix to a bare verb in Mandarin may be degraded because of the language’s constraint on unmarked predicates (H. Sun, 2014; Y. Sun, 2022). We hope to fully address this issue in the future.

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## No reason *why*: Chinese *wh*-expressions in embedded contexts

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**Synopsis.** The interpretation of *wh*-expressions in Chinese hinges on syntactic environments, which may convey interrogative, existential and universal meanings. Recent studies reveal additional uses relating to disapproval, denial, and mirativity (see Tsai 2020; Tsai & Yang 2022; Chen 2023; Tang 2025, 2026). This study uncovers a novel usage of *why*-related *wh*-expressions when embedded, e.g., Mandarin *weishenme* ‘why’ and *zenme* ‘how come’, Cantonese *dimgaai* ‘why,’ *zou-mat* ‘do-what,’ and Sichuanese *zhage/langge* ‘how come’. (1) and (2) illustrate this usage, where their presence makes no contributions to propositional meaning. For example, the (a) and (b) sentences are truth-conditionally identical. We argue that Chinese *whys* can be used vacuously, based on ❶-❹. We propose that the **vacuous *why*** is a case of **concord phenomenon**, derived via an agreement dependency with certain embedding predicates that render the *whys* vacuous.

- (1) a. Zhangsan **manyuan** Lisi **weishenme** touchi lingshi. (2) a. Zhangsan **taoyan** Lisi **zenme** zongshi chidao.  
 Zhangsan blame Lisi why steal.eat snack Zhangsan hate Lisi how.come always late  
 ‘Zhangsan blames Lisi for stealing the snacks.’ ‘Zhangsan hates that Lisi is late all the time.’  
 = b. Zhangsan **manyuan** Lisi touchi lingshi. = b. Zhangsan **taoyan** Lisi zongshi chidao.

❶ **Non-interrogative *whys*.** The *whys* in (1/2) are immune to selectional requirements of the embedding predicate. Clause-taking verbs such as *manyuan* ‘blame’ and *taoyan* ‘hate’ do not take interrogative complements as shown in (3), but they take declarative ones (=1b)/(2b)). The acceptability of (1a) and (2a) thus indicates that the presence of *whys* does not turn the complements into an interrogative one, i.e., they remain declarative.

- (3) a. \*Zhangsan **manyuan** Lisi **zainali** touchi lingshi. b. \*Zhangsan **taoyan** Lisi zuo **shenme**.  
 Zhangsan blame Lisi at.where steal.eat snack Zhangsan hate Lisi do what  
 ‘Zhangsan blamed Lisi for where he stole the snacks.’ ‘Zhangsan hates what Lisi does.’

❷ **Non-truth-conditional *whys*.** The truth-conditional equivalence of (1a) and (1b) can be shown by a contradiction test. Typically, a complement clause with and without a *why* differs substantially in meaning under other types of predicates such as *zhidao* ‘know’. The contrast between (4a) and (b) can be shown in (5), where (4a) and the negated counterpart (=4b) can hold true at the same time. No contradiction results from conjoining these sentences.

- (4) a. Zhangsan **zhidao** Lisi touchi lingshi. b. Zhangsan **zhidao** Lisi **weishenme/zenme** touchi lingshi.  
 Zhangsan know Lisi steal.eat snack Zhangsan know Lisi why / how.come steal.eat snack  
 ‘Zhangsan knows that Lisi stole the snacks.’ ‘Zhangsan knows why/how come Lisi stole the snacks.’  
 (5) <sup>OK</sup> Zhangsan **zhidao** Lisi touchi lingshi, dan ta **bu zhidao** Lisi **weishenme/zenme** touchi lingshi.  
 Zhangsan know Lisi steal.eat snack but 3SG NEG know Lisi why / how.come steal.eat snack  
 ‘Zhangsan knows that Lisi stole the snacks, but he does not know why/how come Lisi did so.’

However, (6) shows that the conjunction of (1a) and (1b) gives rise to contradiction, and hence infelicity. The contrast between (5)/(6) follows if *whys* in (6) are semantically vacuous. The contradiction then arises from the conjunction of a sentence with its negated counterpart.

- (6) # Zhangsan **manyuan** Lisi touchi lingshi, dan ta **meiyou manyuan** Lisi **weishenme/zenme** touchi lingshi.  
 Zhangsan blame Lisi steal.eat snack but 3SG NEG blame Lisi why / how.come steal.eat snack  
 ‘Zhangsan blamed Lisi for stealing the snacks, but he did not blame Lisi for stealing the snacks.’

③ **Resistance to contrastive focus interpretation.** Vacuous *whys* resists contrastive focus reading contributed by *shi* ‘be’ as illustrated in (7).

- (7) \* Wo zhishi **henjingya** Zhangsan **shi weishenme<sub>F</sub>** hui zheme reai yuyanxue,  
 1SG only surprised Zhangsan FOC why will so love linguistics  
 er bushi **shi shenmeshihou<sub>F</sub>** ta kaishi zheme reai yuyanxue.  
 CONJ NEG FOC what.time 3SG begin so love linguistics  
 ‘I’m surprised that Zhangsan is so fond of linguistics, rather than when he began to love  
 In contrast, non-vacuous *whys* as in (8) and (9) can be contrastively focused by *shi*.

- (8) <sup>OK</sup> **Shi weishenme<sub>F</sub>** ta de huanqiu jineng keyi zheme duo? [[Internet](#)]  
 FOC why 3SG GEN globe skill can so many  
 ‘Why is it that he has so many global skills?’  
 (9) <sup>OK</sup> Wo **xiangzhidao shi weishenme<sub>F</sub>** Zhangsan lai-le, er bushi **shi shenmeshihou<sub>F</sub>**.  
 1SG wonder FOC why Zhangsan came CONJ NEG FOC what.time  
 ‘I wonder why Zhangsan came, rather than when he came.’

The contrast follows if we propose, *weishenme* is vacuous in cases like (7), which cannot receive a contrastive focus reading, due to its semantically vacuous nature.

④ **No denial/mirative interpretation.** *Manyuan* ‘blame’ and *taoyan* ‘hate’ are object control verbs taking TP complements (Huang 2022; Lam 2023, 2025). However, it is widely assumed that denial and mirative *wh*-constructions project a Speech Act Phrase (or ForceP), as they encode illocutionary force and speaker attitudes (Pan 2015; Tsai 2020; Tsai & Yang 2022). Consequently, denial and mirativity *whys* cannot be hosted by these predicates.

**Proposal.** We propose that the dependency between the vacuous *why* and the embedding predicates like *manyuan* ‘blame’ represents an unrecognized type of **concord phenomenon** in Chinese, alongside universal concord (Yip 2022), ‘only’ concord (Yip 2025), modal concord (Liu 2015). In predicate-*why* concord, the occurrence of *why* is optional, whereas the predicate is obligatory. This asymmetry patterns with Italian negative concord, as in (11), where the negative marker *non* is obligatory while the n-word *nessuno* is optional. As with many other concord phenomenon, the dependency between *why* and the predicate is clause-bound, as shown in (10). The vacuous *why* must be strictly local to its licensing predicate, and this dependency cannot cross more than one clausal boundary (i.e., CP, TP, or *v*P) within a single head-complement domain.

- (10) Zhangsan **houhui** [<sub>TP</sub> (<sup>OK</sup> **weishenme**) **renwei**] [<sub>CP</sub> Lisi ( **\*weishenme**) shi xiaotou].  
 Zhangsan regret why think Lisi why COP thief  
 ‘Zhangsan regrets thinking Lisi is a thief.’  
 (11) Gianni **\*(non)** ha telefonato a **nessuno**. [Italian]  
 Gianni NEG has called to n-body  
 ‘Gianni didn’t call anybody’ (Zeijlstra 2008: 2)

**Implementation.** We propose a new type of Agree operation, i.e., **Agree Delete**: Values are deleted upon Agree. Before spell-out, the adverbial interrogative *why* merges into the CP domain. However, at the syntax–semantics interface, since *why* bears the feature [WHY], it is checked and deleted because the predicate also carries the same [WHY] feature. Consequently, after the checking by value deletion, *why* becomes vacuous, losing its interrogative force.

**The empirical landscape of *wh*-expressions in embedded contexts.**

The predicates that license vacuous *why* are summarized in Table 1, call them *Grumble Predicates*. They indicate that the experiencer adopts an affective/emotive stance toward a proposition they find difficult to understand/accept. Also, they represent yet another type of predicates that contribute to a particular meaning of *wh*-expressions, and they are in complementary distribution with other embedding predicates, as in Table 2. Vacuous *whys* inform theories relating to *wh*-interpretation and the lexical semantics of embedding predicates.

Agree deletion in predicate-*why* concord:

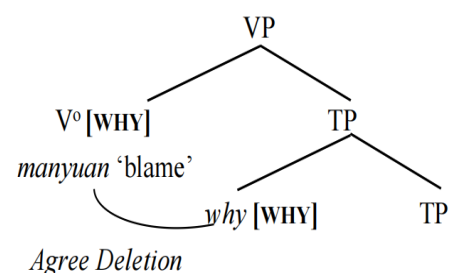


Table 1. *Grumble Predicates* licensing vacuous *why*

<i>shengqi</i> ‘angry’	<i>henyumen</i> ‘depressed’
<i>neijiu</i> ‘guilty’	<i>henyihan</i> ‘regretful’
<i>zhiyi</i> ‘doubt’	<i>henjingya</i> ‘very surprised’
<i>taoyan</i> ‘dislike’	<i>manyuan</i> ‘blame’

Table 2. Different types of predicate-*wh* dependencies:

<i>Wh</i> types	Predicate types	Representative examples
Indirect Q	[+WH] Verb	<i>haoqi</i> ‘curious’, <i>wen</i> ‘ask’
Direct Q	[-WH] Verb	<i>renwei</i> ‘think’, <i>jude</i> ‘feel’
Both direct and indirect Q	Factive Verbs	<i>zhuyidao</i> ‘notice’
Indefinite <i>wh</i> -nominals	Modal Verbs	<i>keneng</i> ‘may’, <i>yinggai</i> ‘should’
Vacuous <i>why</i>	Grumble Predicates	<i>manyuan</i> ‘complain’

## Revisit Mandarin A-not-A questions: adverbials and cartography

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**BACKGROUND:** In Mandarin Chinese, A-not-A questions (specifically, the A-not-AB type *à la* Huang 1991) are formed by (partially) reduplicating the predicate and inserting a negative element *bù* or *méi* in between, as illustrated in (1).

- (1) Zhāngsān **xǐ(huān)-bù-xǐhuān** Běijīng?  
 Zhangsan like-NEG-like Beijing ‘Does Zhangsan like Beijing?’

**OBSERVATIONS (i)** Aside from verbs and adjectives, certain adverbials can enter the A-not-A form as well (Wang & Chen 2020), and they then serve as the narrow focus (Simpson 2014), e.g., the frequency adverb *jīngcháng* ‘often’ in (2a). However, not all adverbs can have the A-not-A form, e.g., degree adverb *fēicháng* ‘very’, as shown by the ungrammaticality of (2b).

- (2) a. Zhāngsān **jīng-bù-jīngcháng** qù xuéxiào?  
 Zhangsan often-NEG-often go school ‘Does Zhangsan go to school OFTEN?’  
 b. \*Zhāngsān **fēi-bù-fēicháng** rènzhen?  
 Zhangsan very-NEG-very serious (Intended. ‘Is Zhangsan VERY serious?’)

**(ii)** Certain adverbs can precede the A-not-A predicate, e.g., temporal adverbial *míngtiān* ‘tomorrow’ in (3a); while others, such as frequency adverb *jīngcháng* ‘often’, cannot, as shown in (3b). The ungrammaticality of (3b) is explained under the assumption that these adverbs are interveners, blocking LF-movement of the A-not-A operator (Ernst 1994; Soh 2005; Law 2006; Huang 2008; a.o.).

- (3) a. Zhāngsān **míngtiān** lái-bù-làì?  
 Zhangsan tomorrow come-NEG -come ‘Will Zhangsan come tomorrow?’  
 b. \*Zhāngsān **jīngcháng** tiào-bù-tiàowǔ?  
 Zhangsan often dance-NEG-dance (Intended. ‘Does Zhangsan often dance?’)

Based on the two positions, we classify adverbials into four types regarding their possible distribution in A-not-A questions (except *shì-bù-shì* ‘be-not-be’, which will be discussed later). We will provide a unified explanation for the distribution of adverbs in A-not-A questions.

	Precede A-not-A	Form A-not-A itself	Examples
1	✓	✓	locative <i>zàijiālǐ</i> ‘at home’
2	✗	✓	frequency <i>jīngcháng</i> ‘often’
3	✓	✗	temporal <i>míngtiān</i> ‘tomorrow’
4	✗	✗	manner <i>zìxìde</i> ‘carefully’, degree <i>fēicháng</i> ‘very’, speaker-oriented <i>dàgài</i> ‘probably’

**THEORETICAL ASSUMPTIONS:** (i) The A-not-A form is the overt realisation of a [Q] feature on a TP-internal functional head through morphological reduplication and negative element insertion (Huang 1991; Huang, Li & Li 2009). (ii) The negative element in A-not-A form carries real negation (Huang 1982; McCawley 1994; a.o.). (iii) Following the cartography approach (Cinque 1999), we assume each adverbial holds an independent functional projection located at a fixed position.

**PROPOSAL (I) FREQUENCY, DEGREE AND MANNER ADVERBS:** The functional projection holding the A-not-A form (we name it “PolP” following Holmberg 2016) occupies a high TP-internal position, with the hierarchy shown in (4). The Pol head triggers the A-not-A form of its adjacent element through a phonological rule that operates at externalisation. Since this rule is subject to minimality, the hierarchy in (4) explains the so-called “intervention effect” of manner, degree and frequency adverbs such as (3b): these adverbs are structurally lower than PolP, therefore they cannot precede elements that bears A-not-A form.

- (4) [Adv<sub>temporal/locative</sub> [TP [PolP Pol [Adv<sub>temporal/locative</sub> [Adv<sub>frequency</sub> [ModP [Adv<sub>degree</sub> [Adv<sub>manner</sub> [vP ...]

Second, we assume that the negative element *bù* ‘not’ is a constituent negation (Huang 1988; Ernst 1995; Hsieh 2001; a.o.). We observe that adverbs that cannot form A-not-A themselves (i.e., types 3 and 4 in the above table) resist the negation *bù* ‘not’ in nature, which we take to be a lexical property: the negative forms, *\*bù-zìxìde* ‘uncarefully’, *\*bù-fēicháng* ‘not very’ and *\*bù-míngtiān* ‘non-tomorrow’ are ungrammatical. Therefore, given that the negation *bù* ‘not’ in A-not-A questions is a real negation, it follows that these adverbs cannot bear the A-not-A form themselves, because they are incompatible with the negative element *bù* ‘not’.

**(II) TEMPORAL AND LOCATIVE ADVERBS:** The reason why temporal and locative adverbials can precede A-not-A form is that they are flexible in syntactic positions (presumably topicalization, Bayer 2012, Paul & Yan 2026, a.o.), whereas other adverbs such as *fēicháng* ‘very’ are banned from occurring in the sentence-initial position, as shown in (5).

- (5) a. {Míngtiān<sub>1</sub>} Zhāngsān {míngtiān<sub>2</sub>} yào {míngtiān<sub>3</sub>} qù xuéxiào.  
 tomorrow Zhangsan tomorrow need tomorrow go school  
 ‘Zhangsan needs go to school tomorrow.’  
 b. {\*Fēicháng<sub>1</sub>} Zhāngsān {\*fēicháng<sub>2</sub>} yào {fēicháng<sub>3</sub>} rènzhēn.  
 very Zhangsan very need very seriously  
 ‘Zhangsan needs to be very serious.’

**(III) SHÌ-BÙ-SHÌ ‘BE-NOT-BE’ QUESTIONS:** The distribution of adverbials is different in a special type of A-not-A question formed by the copula *shì* ‘be’, i.e., *shì-bù-shì* ‘be-not-be’ (Law 2006; Tsai & Yang 2026; a.o.). Assuming that the A-not-A operator undergoes LF movement to C, Tsai & Yang (2026) observe that frequency and manner adverbs “intervene” in general A-not-A questions but not in *shì-bù-shì* questions, as shown in (6). Therefore, they propose that *shì-bù-shì* ‘be-not-be’ questions are “outer” A-not-A that in the CP level, while other “inner” A-not-A questions are within the TP.

- (6) a. \*Akiu chángcháng/quánshéngguànzhùdi kàn-bù-kàn diànshì?  
 Akiu often /attentively watch-NEG-watch TV  
 ‘Did Akiu watch TV often/attentively?’  
 b. Akiu shì-bù-shì chángcháng/quánshéngguànzhùdi kàn diànshì?  
 Akiu be-NEG-be often /attentively watch TV  
 ‘Isn’t it the case that Akiu watched TV often/attentively?’ (from Tsai & Yang 2015)

We propose an alternative analysis to this contrast, taking *shì* ‘be’ as a verb that takes a clausal complement (e.g., Pan 2019) rather than a focus marker. First, the ungrammaticality of (6a) is expected due to the hierarchy in (4), as mentioned previously.

(7) [TP Akiu [PolP Pol [AdvPfrequency/manner often/attentively [vP watch TV]]]].

Then, under our analysis, (6b) is bi-clausal, with the structure shown in (8):

- (8) [CP1 Akiu [PolP Pol [vP shì-bù-shì [CP2 chángcháng/quánshéngguànzhùdi kàn diànshì]]]]?  
 Akiu be-NEG-be often /attentively watch TV  
 ‘Isn’t it the case that Akiu watched TV often/attentively?’

In (8), the PolP is in the matrix clause CP1, triggering the A-not-A form of the adjacent matrix predicate *shì* ‘be’. The adverbs occur in the embedded clause CP2, thus do not interact with the matrix PolP. In fact, we observe that, except for speaker-oriented adverbs that are PPIs, all the other adverbs can occur in the embedded clause, even those that cannot have the A-not-A form in a single clause, as shown in (9). This occurrence is predicted by the bi-clausal analysis: since *bù* ‘not’ is constituent negation, it does not influence the element within the embedded clause.

- (9) a. Zhāngsān shì-bù-shì [zìxìde xiě wán zuòyè le]?  
 Zhangsan be-NEG-be carefully write finish homework SFP  
 ‘Is it the case that Zhangsan has finished his homework carefully?’  
 b. Zhāngsān shì-bù-shì [míngtiān huì qù Běijīng]?  
 Zhangsan be-NEG-be tomorrow will go Beijing  
 ‘Is it the case that Zhangsan will go to Beijing tomorrow?’

**SELECTED REFERENCE:** **Huang, C.-T. James.** 1991. *Modularity and Chinese A-not-A questions.* **Pan, Victor Junnan.** 2019. *The architecture of periphery in Chinese cartography and minimalism.* **Tsai, Wei-Tien Dylan & Ching-Yu Helen Yang.** 2026. *On the inner–outer dichotomy of A-not-A questions: A minimalist–cartographic account.*

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## Scalar inferences of *jiu* are constrained by modes of predication

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Mandarin *jiu* is a multi-functional focus particle whose meaning is, among many other factors, dependent on the type and the position of the focus associate. This paper focuses on the case where *jiu* associates with nominals to its left. Under such a use, *jiu* typically gives rise to a scalar inference that the referent of the focus associate ranks low on a contextually-salient scale (Hole 2004, Wimmer 2021 a.o.). For instance, *jiu* in (1) can be used to express that John takes the least effort for you to find compared with the other French speakers in the domain.

- (1) [YUEHAN]<sub>F</sub> jiu hui shuo fayu. 'John can speak French.'  
 John JIU can speak French (↗ John is pretty easy to get hold of.)'

**The phenomenon:** In his paper that aims to unify various uses of *jiu*, Liu (2017) establishes a generalization that the scalar inference of left-associating *jiu* goes hand in hand with (non)distributivity. To see this, consider (2). Under the collective reading (2a), the most salient scalar inference is that John and Mary *as a group* are physically weak or small in number. Under the distributive reading (2b), the scalar inference applies to John and Mary *individually*; it says that they are each pretty easy to get hold of e.g. to help you on move-in day. Importantly, **modes of predication and scalar inferences never get mixed**: distributive predication always comes with individual-level scalarity, and collective predication with group-level scalarity.

- (2) [YUEHAN he MALI]<sub>F</sub> jiu taiqi le gangqin.  
 John and Mary JIU lift ASP piano  
 a. Collective: 'Just J and M lifted the piano together (↗ J&M are a very small group).'

b. Distributive: 'J and M each lifted the piano (↗ J&M are both easy to get hold of).'

Apart from distributive and collective readings, predicative sentences may also receive **cumulative readings** when they contain two or more plural DPs (Kroch 1974 a.o.). For instance, (3a) has a cumulative reading that is true in Context (3b), which can be paraphrased as 'John and Bill each fed at least some of the 3 dogs, and the 3 dogs were each fed by either John or Bill'. Note that in this context, the distributive and the collective readings are both false.

- (3) a. The two kids fed the three dogs.  
 b. Context: John fed Milo. Bill fed Benji and Lulu.

The new observation is that **in cumulative sentences, *jiu* obligatorily gives rise to group-level scalar inferences**. Consider (4), and suppose it is uttered in Context (5). Intuitively, the sentence implies that the 4 people make up a small group for 10 dishes; it doesn't give rise to individual-level scalarity, e.g. the 4 people are sitting right next to me and are thus each pretty easy to get hold. See Table 1 for a summary of the observed predication-scalarity correlation.

- (4) *Wa, pangbian na yi-zhuo, [SI-ge ren]<sub>F</sub> jiu xiang dian shi-ge cai!*  
 wow next that one-CL four-CL people JIU want order ten-CL dish  
 'Just the 4 people at that table wanted to order 10 dishes (↗ They're a small group)!'  
 (5) Context: John wanted to order four dishes. Mary wanted to order four more. Bill and Sue each wanted to order one. That's a lot of food for the table.

**Why is this a problem:** One might think that (4)'s requirement for individual-level scalarity could be attributed to the fact that Context (5) provides a partition of the four people  $j \oplus m \oplus b \oplus s$  into a set of atomic entities, i.e.  $\{j, m, b, s\}$  (cf. Schwarzschild 1996)—after all, in this context, we count the number of dishes *each person* wanted to order and sum them up. If scalar inference is required to respect such contextual partitions, it would be unsurprising that (4) disallows group-level scalarity in this context. However, cumulative readings are also attested in contexts that provide non-atom-based partitions. Consider Context

Mode of predication	Scalarity
Distributive	Individual-level
Collective	Group-level
Cumulative	Group-level

Table 1: Correlation observed

(6), where  $j \oplus m \oplus b \oplus s$  is intuitively partitioned into a set of subpluralities, i.e.  $\{j \oplus m, b \oplus s\}$ . Crucially, in this context, too, (4) obligatorily gives rise to a group-level scalar inference that the entire four-people group is too small for ten dishes; it does not have a reading that each relevant subgroup ( $j \oplus m$  and  $b \oplus s$ ) is too small for their respective number of dishes.

(6) Context: *John and Mary wanted to order seven dishes together. Bill and Mary wanted to order three dishes together. That's a lot of food for the table.*

Alternatively, Liu (2017) proposes a scope-based analysis for his observation of (2), and it is tempting to see whether his idea can be extended to cumulative sentences. Recall that (2) shows that *jiu* always exhibits *individual-level* scalarity under *distributive* readings, and *group-level* scalarity under *collective* readings. To explain the correlation, Liu assumes a movement derivation for distributive sentences, where the plural subject is QR-ed and a distributive operator DIST is attached to the resulting constituent, cf. (7). He further assumes that after movement, it is no longer *John and Mary*, but rather the trace  $t_1$  that *jiu* associates with. Since  $t_1$  is in the scope of DIST, the sentence essentially reduces to 'John<sub>F</sub> can speak French and Mary<sub>F</sub> can speak French', from which it follows that the scalar inference arises at the individual level. As for the collective reading, Liu simply assumes that the plural subject denotes groups (Landman 2000), hence predicting correctly that the scalar inference arises at the group level.

(7) [John and Mary]<sub>1</sub> [DIST [ $t_1$ <sub>F</sub> *jiu* speak French]]

However, this idea does not extend to cumulative sentences. Just like Liu's derivation of distributivity, cumulativity can also be analyzed by applying QR and a cumulative operator CUMUL, cf. (8) for (4) (Beck and Sauerland 2000). Specifically, CUMUL in (8) relates the two pluralities denoted by *the four people* and *ten dishes* cumulatively: i.e. it makes sure that all c(ontextually)-relevant parts of the four people wanted to order some c-relevant parts of ten dishes, and all c-relevant parts of the ten dishes are desired by some c-relevant parts of the four people (cf. also Haslinger 2021). Now, since for Liu, the scalar inference of *jiu* is interpreted at the level of the trace  $t_1$ , this means that the scalar inference of (4) is predicted to be interpreted within the scope of CUMUL. That is, it is predicted to arise at the individual level when the context provides an atom-based partition (Context (5)), and at the subgroup level when the context provides a subplurality-based partition (Context (6)). As we have observed, this prediction is incorrect, since *jiu* in cumulative sentences always give rise to group-level scalar inferences. **The generalization in Table 1, therefore, still awaits an explanation.**

(8) [the four people]<sub>1</sub> [ten dishes]<sub>2</sub> [CUMUL [ $t_1$ <sub>F</sub> *jiu* wanted to order  $t_2$ ]]

**Toward a new solution** A solution may be possible once we acknowledge two uses of left-associating *jiu* that have been discussed in the literature only separately: **the minimal sufficiency use** (Wimmer 2021 a.o.) and **the example-giving use** (Zhang and Ling 2017). Intuitively, *jiu* in the collective (2a) and cumulative examples (4) express that the relevant plurality *minimally suffices* to get the table lifted or to get ten dishes ordered. By contrast, in the distributive example (1), *jiu* does not mean that John minimally suffices to be counted as a French speaker (1); rather, it simply expresses that John *is an example* of French speakers in the domain. Incidentally, minimal sufficiency has been observed to be generally incompatible with distributivity (Panizza and Sudo 2020 a.o.). In the full talk, I will draw on insights from the literature on English *just*, and sketch an account of why the minimal sufficiency use of *jiu* is constrained by (non-)distributivity. I will also present some ideas about extending the account to the correlation between predication and scalarity as observed in Table 1.

**Selected refs:** Liu (2017) *Varieties of alternatives, L&P*. Panizza and Sudo (2020) *Minimal sufficiency with covert even, Glossa*. Wimmer (2021) *Flavors of scalar lowness, Proceedings of IATL*. Zhang and Ling (2017) *Mandarin Chinese particle jiu: A current question restrictor, Slides at TEAL 11*.

## The Semantics of Approximative *mianqiang* in Mandarin Chinese

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### 1. Background

Mandarin Chinese *mianqiang* exhibits a semantic pattern that poses a non-trivial descriptive challenge. However, the semantics of Mandarin *mianqiang* has received relatively little attention in the formal literature, being discussed mainly in descriptive grammatical works (Lü 1999). The use of *mianqiang* is highly flexible: it can appear in causative constructions (e.g. *buyao mianqiang ta* ‘don’t force him’), in resultative or depictive expressions (e.g. *xiao de hen mianqiang* ‘smile in a forced way’). It also functions very commonly as an adverbial modifier, and it is this use exclusively that the present paper seeks to analyze. Consider the following examples:

- (1) a. Zhe ci kaoshi wo mianqiang jige le.  
This time exam I barely pass ASP.  
‘I barely passed the exam this time.’  
b. Zhe dian gongzi mianqiang gou fu fangzu.  
This CL salary barely enough pay rent.  
‘This salary just suffices to cover the rent.’  
c. Ta zuizhong mianqiang jieshou le zhege tian.  
He finally barely accept ASP this proposal.  
‘He reluctantly accepted the proposal in the end.’

These examples correspond to three commonly recognized uses of *mianqiang*: (i) acting despite insufficient ability, (ii) barely meeting a minimal requirement, and (iii) acting against one’s will (Lü 1999). Despite their apparent heterogeneity, these uses share a core semantic property: the described event is in a borderline state. That is, the proposition *p* is true, but its truth is achieved only at a minimal level, typically under conditions that are in some sense suboptimal or difficult. It is precisely this property that allows *mianqiang* to function as an approximative expression in such cases, conveying a meaning roughly paraphrasable as “just barely, and almost not enough.”

On this basis, this paper aims to provide a systematic semantic analysis of *mianqiang* in its approximative use and to address the following questions:

- (1). What is the precise semantic contribution of *mianqiang* in these cases?  
(2). How does *mianqiang* relate to existing analyses of approximative expressions, such as scalar proximity and modal proximity?

### 2. Problems in Existing approaches

The semantics of approximative expressions has long posed challenges for formal analysis, with much of the literature focusing on items such as *almost*. Two major approaches have been proposed. The first is a scalar approach (Hitzeman 1992; Sevi 1998; Horn 2002; Penka 2006; Amaral & Del Prete 2010), under which “almost *p*” holds when *p* is false, but some close alternative proposition *q* is true. The second is the modal approach (Sadock 1981; Rapp and von Stechow 1999; Morzycki 2001; Nouwen 2006; etc.), which suggests that “almost *p*” is true in a world *w* when *p* is false in *w*, but true in a close accessible world *w*’.

Within this line of work, *barely* and *almost* have often been analyzed as a polarity pair, marking proximity to a threshold from opposite directions (Rullmann 1997; Sevi 1998; Baron 2022). While this mirror-image treatment captures the basic scalar contrast between the two items, subsequent research has shown that the symmetry is at best partial, such as Amaral (2007) treating *barely* as a scalar operator that assigns a low degree on the scale associated with the predicate, placing the predicative relation near the minimum threshold. Crucially, the

“closeness” encoded by *barely* is not a symmetric counterpart to *almost*'s approximation, but a formally distinct low-degree scalar value with its own inferential and discourse consequences.

However, Mandarin *mianqiang* does not pattern with English *barely* in a straightforward way. Although both expressions convey a lower-bound interpretation, their linguistic behavior diverges systematically across collocational, semantic, and pragmatic aspects: (i) *barely* can occur in different kinds of projections like DPs (*barely any*), NPs (*barely a minute*), VPs, Adjs (*barely wet*) and so forth, while *mianqiang* can only modify VP when expressing proximity reading; (ii) when modifying the same VP, the two behaves different in acceptability (see (2)) ; (iii) *barely* describes a state of minimal sufficiency, which locates the relevant parameter just at the threshold required for *p* while *mianqiang* lexically encodes that the achievement of *p* was effortful or came at a cost, foregrounding the difficulty of the process.

(2) a. We won it three years ago and just barely lost two times.

b. ?? Wo men mianqiang shu le laingci bisai.

We CL barely lost PERF twice race.

‘We just barely lost two times.’

(3) Context: An event is officially classified as successful if it attracts at least 10,000 visitors. The final report shows that the fair attracted exactly 10,000 visitors.

a. The fair barely met the attendance threshold.

b. #Zhe ci bolan hui mianqiang dadao le cangan renshu de biao zhun.

This CL exposition barely reach ASP visit number DE standard.

‘The fair just barely met the visitor-number requirement.’

### 3. Proposal

In this paper, we argue that the semantics of *mianqiang* cannot be reduced to lower-bound scalarity of the kind proposed for *barely*. While *barely p* locates the value of a degree argument in the immediate vicinity of the threshold required for *p* to be true, *mianqiang p* encodes that *p* is true in virtue of the minimal satisfaction of a contextually selected enabling condition relevant to the attainment of *p*. Crucially, the lower bound is evaluated not over the realized outcome itself, but over a parameter, such as ability, available resources, or willingness that enables the outcome to obtain. It is this shift in the locus of evaluation, from outcome to enabling condition, that distinguishes *mianqiang* from a simple lower-bound scalar expression and motivates a formally distinct treatment. This account also has implications for the broader study of approximative semantics. While scale and modal approaches have typically been treated as independent analytical frameworks, *mianqiang* shows that scalar minimality can give rise to a systematic sensitivity to counterfactual decrease within a single factive expression, which can provide a new perspective for the semantics of approximators.

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## Juxtaposition and Ellipsis: A Syntactic and Semantic Study of the “NP+VP+de” Construction

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### Abstract

The *NP+VP+de* construction in Mandarin Chinese, also known as the *de*(的) phrase functioning as a postposed relative clause, primarily refers to a configuration in which a *de* phrase that would ordinarily serve as a relative clause unexpectedly appears after the nominal head. A review of previous analyses in the literature reveals two main approaches: the postposed attributive analysis and the topic–comment analysis. The former analyzes *VP+de* as a relative clause attributive to the preceding NP, while the latter treats NP as the topic and *VP+de* as the comment. Each account has both strengths and limitations. Although the postposed attributive analysis conforms to the word-order constraints of SVO languages (Dryer 1992), it contradicts the general tendency in Mandarin Chinese that modifiers uniformly precede their heads. The topic-comment analysis successfully captures the pragmatic characteristics of the construction but remains controversial regarding its syntactic source—for instance, whether the structure qualifies as a subject-predicate sentence or a pivotal construction.

Recent studies within Generative Grammar have provided novel theoretical perspectives. For example, both NP and *VP+de* bear discourse information typically associated with CP-level projections, making the construction comparable to split topics in German. NP exhibits a strong aversion to indefinites and can be analyzed as a topic, while *VP+de* may function either as a subtopic or as an exclusive focus. Moreover, a genus–species semantic relation holds between NP and *VP+de*. The problem is that the classical extraction analysis, which derives *NP+VP+de* by splitting a complex noun phrase *VP+de+NP*, fails to apply to cases involving subsequent clause saturation. Furthermore, splitting a noun phrase would violate the Freezing Principle, and moving the remnant would require a dedicated [TOP] feature to drive the operation. An analysis based on Labeling Theory avoids the problems of the extraction approach by treating NP and *VP+de* as an unlabelable symmetric structure {NP, DP}.

However, the labeling analysis cannot explain why *VP+de* must still undergo movement after the structure has received a label, nor does it account for the fact that the constituent merged with *VP+de* is not restricted to NP; in some cases it can be DP, as in {DP, DP} (那些宫女太监晓得规例的). Such a configuration is disallowed under Ott’s (2015) analysis. Moreover, according to Bošković (2018), when two DPs share identical  $\phi$ -features, they can be labeled via feature sharing, thereby eliminating the theoretical motivation for movement that was originally driven by labeling failure.

This study proposes that an analysis based on juxtaposition and ellipsis can avoid the above derivational difficulties. Juxtaposition is defined as the merger operation applying to two independent root clauses, CP1 and CP2, which are not in a relation of subordination or dependency; ellipsis is an operation that adjusts the phonological realization of constituents in the two root clauses after juxtaposition (Ott & de Vries 2016, Ott 2018). All naturally occurring corpus examples show without exception that NP and *VP+de* cannot be semantically unrelated — otherwise the sentence is ungrammatical — nor can they be base generated as left periphery constituents, which would conflict with Chomsky’s (2007, 2008) assumption that External Merge is responsible for theta relations while Internal Merge derives discourse-related “surface” properties (cf. Ott 2015). Consequently, a more viable approach is to treat NP and *VP+de* as constituents of CP1, with the subsequent clause as part of CP2,

where NP and *VP+de* occupy the CP periphery of CP1 as topic and focus, respectively. Wang & Wu (2023) distinguish two types of *NP+VP+de*: one that can stand alone as a complete sentence (孔乙己站著喝酒的) and another that requires a subsequent clause for sentential completeness (犯人違反紀律的). This study argues that these two types correspond to distinct syntactic derivation patterns. The type that can stand alone is a copular sentence, with derivation taking place at the TP level — a claim that can be evidenced by positive-negative reduplication and insertion of *bu*(不). The type that cannot stand alone is a topic-focus sentence, with derivation taking place at the CP level — evidenced by the possibility of adding a focus marker. After NP and *VP+de* undergo Internal Merge to the CP layer, an ellipsis operation applies. This ellipsis is non-operator ellipsis, rather than TP/IP ellipsis: only operator-level constituents at the CP layer are retained phonologically, while all non-operator constituents are deleted (Ott 2014). This accounts for the non-autonomous nature of the construction. Within CP1, NP and *VP+de* are two distinct noun phrases linked by a covert predicate Pr, which assigns case to both and explains why in some examples Pr can receive overt phonological realization, such as *you*(有) as in 犯人中有違反紀律的 or *shi*(是) as in 犯人若是違反紀律的. Furthermore, the covert predicate imposes no special requirements on the label of the noun phrases — both DP and NP are licensed. Hence, the analysis derives not only *NP+VP+de* and *DP+VP+de* but also *VP+de+NP* (i.e., swapping the positions of NP and *VP+de* remains legitimate in some examples, such as 違反紀律的, 犯人, 一律關禁閉).

**Keywords:** *NP+VP+de*; juxtaposition; ellipsis; split topic; syntax

## Chinese *gèng* and its norm-sensitive inference

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**Overview** Chinese *gèng* is a degree modifier that can be optionally inserted in sentences expressing comparison (see (1)). Its presence often give rise to a **norm-sensitive inference**: the comparison standard already exceeds the positive norm (or threshold). For example, with *gèng*, (1) yields the inference that Mika (the comparison standard) is already tall. Is this norm-sensitive inference brought by *gèng* a presupposition (e.g., Liu 2010, Zhang 2019, Chen 2023, Chen & Greenberg 2024) or an implicature (Guo 2022, Zhang & Zhang 2025)? We argue that it is **not a presupposition, but an implicature**.

- (1) Naomi bǐ Mika (gèng) gāo  
 Naomi COMP Mica (GÈNG) tall(er)  
 ≈ ‘Naomi is (even) taller than Mika.’ ***Gèng* brings a norm-sensitive inference**

**Empirical evidence** In English, the use of *even* in comparatives also brings a norm-sensitive inference (see (2); Greenberg 2018, 2022, Zhang 2022): the comparison standard (here Mika’s height) already reaches the norm for being tall. This inference is neither suspendable (see (3)) nor cancellable (see (4)), suggesting that it is a presupposition, rather than an implicature.

- (2) Naomi is even taller than [Mika]<sub>F</sub>. **Presupposition:** Mika is already tall.  
 (3) I don’t know whether Mika is tall or not, but Naomi is (#even) taller than Mika.  
 (4) Naomi is even taller than [Mika]<sub>F</sub>. (#But in fact, Mika is {not tall / short}.)

Chinese *gèng*, however, behaves differently. **First, its norm-sensitive inference is suspendable.** In (5), *gèng* is optional yet fully felicitous (cf. (3)).

- (5) wǒ bù zhīdào Mika gāo bù gāo, dan Naomi kěndìng bǐ Mika (gèng) gāo  
 I NEG know Mika tall NEG tall but Naomi definitely COMP Mika (GÈNG) tall  
 ‘I don’t know whether Mika is tall or not, but Naomi is definitely taller.’

**Second, its norm-sensitive inference can be implicitly cancelled.** In both (6) and (7), the comparison standard (Mika’s share of cake in (6) and the store’s current level of deliciousness in (7)) is suggested to fall **below the norm** (cf. the above-norm inference in (1); see also Sawada 2014 for a similar observation on Japanese *motto*), yielding a complaint-like interpretation. In (6) and (7), the presence of *gèng* is also optional yet fully felicitous.

- (6) Context: Naomi divides a cake into two parts to distribute between her and Mika. Mika complains that the part Naomi takes is significantly larger.  
 ‘bù gōngpíng. [nǐ]<sub>F</sub>-de bùfèn (gèng) dà.’  
 NEG fair your part (GÈNG) big  
 ‘It’s unfair. Your part is significantly larger.’ ~> My share is too small (below norm)  
 (7) zhè-jiā diàn-de dāngāo [yǐqián]<sub>F</sub> (gèng) hǎochī  
 this store-GEN cake before (GÈNG) delicious  
 ‘This store’s cakes used to be more delicious.’ ~> not delicious now (below norm)

**Third, its norm-sensitive inference can be explicitly cancelled.** As illustrated in (8), here the presence of *gèng* is again optional yet fully felicitous.

- (8) Naomi zuò-de bù hǎo, dàn yě méi rén zuò-de bǐ tā (*gèng*) hǎo.  
 Naomi do-LNK NEG good but also no person do-LNK STDD her (*GÈNG*) good  
 ‘Naomi didn’t do well, but no one did better than her.’ ↗ Naomi already did well.

**Proposal: Deriving the norm-sensitive implicature** We propose that, for a comparison sentence like (1), its *gèng*-less and *gèng*-ful versions pattern with English explicit and implicit comparisons, respectively. (9a) and (9b) share the same truth-conditional semantics. However, only (9b) (implicit comparison), but not (9a) (explicit comparison), gives rise to a norm-sensitive inference (see also Sawada 2009’s discussion of implicit comparison).

- (9) a. Without *gèng*: [(1)] ≈ Naomi is taller than Mika. **Explicit comparison**  
 b. With *gèng*: [(1)] ≈ Compared to Mika, Naomi reaches a new height. **Implicit**

This analysis is supported by the incompatibility of *gèng* with numerical differentials. Only *gèng*-less comparisons (explicit comparisons) can optionally include them.

- (10) Naomi bǐ Mika (\**gèng*) gāo wǔ límǐ  
 Naomi COMP Mica (\**GÈNG*) tall(er) 5 cm  
 Without *gèng*: ✓ ‘Naomi is 5 cm taller than Mika.’; with *gèng*: #numerical differential

We propose to derive the norm-sensitive inference of (9b) as a Gricean or RSA implicature (see e.g., Lassiter & Goodman 2017). Upon hearing an utterance, a listener forms a probability distribution over possibilities in the meaning space. A pragmatic speaker selects the utterance that is maximally informative for identifying the targeted possibility, and a pragmatic listener makes use of this utility estimation to update probability distribution.

The Maxim of Relation is reflected in that the utterances  $U_{POS}$ ,  $U_{COMP}$ , and  $U_{GÈNG}$  all address the QUD *How tall is Naomi* (i.e., a greater height corresponds to higher informativeness). Further implicatures arise from the interaction among the Maxims of Quality (truthfulness), Quantity (informativeness), and Manner (economy).

If the target meaning is  $M_2$ ,  $U_{POS}$  is true, maximally informative (not less informative than  $U_{COMP}$  or  $U_{GÈNG}$ ), and most economic. Thus a pragmatic speaker chooses  $U_{POS}$ .

If the target meaning is  $M_1$ ,  $U_{POS}$  is false and violates the Maxim of Quality. Both  $U_{COMP}$  and  $U_{GÈNG}$  are true, but  $U_{COMP}$  is more economic. Thus a pragmatic speaker prefers  $U_{COMP}$ .

Thus,  $U_{GÈNG}$  is optimal only under  $M_3$  (where Naomi’s height exceeds Mika’s, and Mika’s already exceeds the norm of tallness), because its lower economy has to be offset by greater informativeness. In other words, while  $U_{COMP}$  can remain underspecified with respect to norm-sensitive inferences, the less economic utterance  $U_{GÈNG}$  has to be specific to be useful.

Meaning space (POS: norm of tallness)	Utterances		
	$U_{POS}$ :	$U_{COMP}$ :	$U_{GÈNG}$ :
	Naomi is tall	Naomi bǐ Mika gāo	Naomi bǐ Mika <i>gèng</i> gāo
$M_1$ : POS > HT(N) > HT(M)	False	True (preferred)	True
$M_2$ : HT(N) > POS > HT(M)	True (preferred)	True	True
$M_3$ : HT(N) > HT(M) > POS	True	True	True (preferred)

## Alternative Salience and Context Adaptation in Implicature Derivation: Experimental Evidence from Mandarin Chinese

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Scalar implicatures (SIs) arise when a speaker's use of a weaker scalar term (e.g., *some*) leads hearers to infer that the stronger alternative (e.g., *all*) does not hold. Such inferences depend on highly accessible lexical scales (e.g.,  $\langle all, some \rangle$ ; Horn, 1972), whose members are semantically and lexically comparable (Atlas & Levinson, 1981). In Mandarin, however, the universal quantifier *suǒyǒu* typically requires an additional operator *dōu*, resulting in a discontinuous construction,  $\langle suǒyǒu...dōu$  (all),  $yīxiē$  (some)  $\rangle$  (Jiang, 2016), potentially making the stronger alternative to Mandarin existential quantifiers inherently less salient than in English.

Two competing accounts of SI derivation are proposed based on priming studies. The Salience Hypothesis emphasizes the role of alternative salience (e.g., Bott & Chemla, 2016), and the Context Adaptation Hypothesis attributes SIs solely to expectations about the Question under Discussion (QUD; Marty et al., 2024). Mandarin quantifiers take non-partitive ( $yīxiē$ ) and partitive ( $yǒude/yǒuxiē$ ) forms, hence providing a key test case for these two accounts. Specifically, Degen and Tanenhaus (2015) showed partitive forms elicit higher SI rates than non-partitive forms, suggesting that partitives provide a more SI-conducive QUD. If context adaptation alone accounts for SI derivation, Mandarin partitives ( $yǒude/yǒuxiē$ ) should yield higher SI rates than the non-partitive ( $yīxiē$ ). By contrast, if alternative salience independently affects SI derivation, SI rates for all three quantifiers should be uniformly low, since the stronger alternative  $suǒyǒu...dōu$  presumably remains non-salient, due to its more complex structure (Jiang, 2016).

To evaluate these predictions, we conducted two experiments in Mandarin. Exp. 1 examined (i) whether Mandarin speakers derive SIs as readily as English speakers, and (ii) whether Mandarin partitive forms facilitate SI derivation. We adapted the (baseline) hidden card task from Marty et al. (2024, see Fig. 1), using Existential Quantifier ( $yīxiē$ ,  $yǒude$ ,  $yǒuxiē$ ) as a between-subjects factor ( $N = 105, 104, 105$ ), with 12 critical trials per participant. Participants were classified as Strong Responders if they derived SIs in over half of the critical trials, following Marty et al. (2024). Results revealed a much lower proportion of Strong Responders in Mandarin (33.3% for  $yīxiē$ , 28.6% for  $yǒude$ , 26.9% for  $yǒuxiē$ ) than English *some of* (55%; Marty et al., 2024). The less frequent SI derivation is likely due to the non-salience of stronger alternatives in Mandarin. Importantly, Mandarin partitive forms ( $yǒude/yǒuxiē$ ) elicit no higher SI rates than the non-partitive form ( $yīxiē$ ) (Fig. 2), contrary to the prediction of the Context Adaptation Hypothesis.

To probe the question of whether making alternatives more salient facilitates SI derivation in Mandarin, we conducted Exp. 2 ( $N = 182$ ), by adopting Marty et al. (2024)'s block design where Block 1 tested baseline SI rates (as in Exp. 1, but using only  $yīxiē$ ), while Block 2 included alternative primes to increase alternative salience (Fig. 3). Each block contained 6 critical trials. Results showed that SI rates were significantly higher in Block 2 than in Block 1 ( $z = 4.92$ ,  $p < .001$ ; Fig. 4). Consistent with the Salience Hypothesis, increasing alternative salience leads to a higher rate of SI derivation.

Taken together, this study provides evidence for the Salience Hypothesis, highlighting the crucial role of alternative salience in SI derivation while taking care of cross-linguistic variation in reduced salience of the stronger alternative to existential quantifiers in Mandarin.



Fig. 1: Sample target trial from Exp1 for *yǒude*. Participants who derive a *not-all* implicature should reject the visible card (left) and select the hidden card (right).

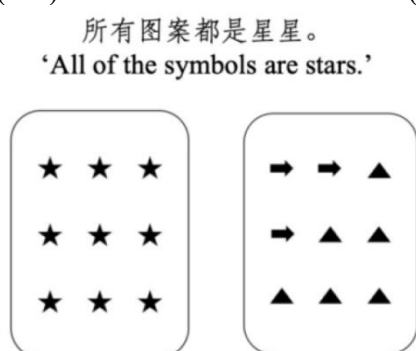


Fig. 3: Sample alternative prime (*suǒyǒu...dōu*) from Exp2 for *yīxiē*. Each target trial was preceded by two alternative primes.

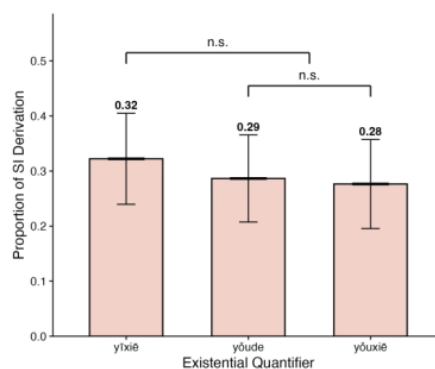


Fig. 2: Proportion of SI derivation in Exp1 by quantifier (*yīxiē*, *yǒude*, *yǒuxiē*). No significant differences were found among quantifiers.

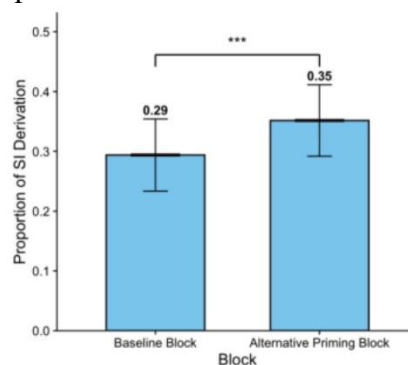


Fig. 4: Proportion of SI derivation for *yīxiē* in Exp2 by block (Baseline vs. Alternative Priming). The difference between blocks was statistically significant.

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## Non-coreferential sentence-final Noun-Copula in Korean revisited

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**Introduction.** This study focuses on non-coreferential sentence-final (NCSF) Noun-Copula in Korean. Korean NCSF Noun-Copula has also been referred to as Mermaid Construction (Kim 2020). An example is given in (1) and schematized in (2) following Kim (2020).

- (1) *Mina-ka kecismal-ul ha-nun sengkyek-i-ta.*  
 M.-NOM lie-ACC do-ADN personality-COP-DECL  
 ‘Mina has the personality that she likes lying.’
- (2) [<sub>Clause</sub> *Mina-ka kecismal-ul ha-nun*][<sub>Noun</sub> *sengkyek*][<sub>Copula</sub> *i-ta*]. (Superficially: Clause Noun Copula)  
 ↑ Non-coreferential ↓

Kim (2020) suggests that there are about 80 nouns attested in the Noun (Noun<sub>NCSF</sub>) slot in Korean NCSF Noun-Copula and argues that Korean NCSF Noun-Copula (i) allows a topic to be embedded in the Clause; (ii) disallows modification of Noun<sub>NCSF</sub>; (iii) disallows non-casemarked cleft when the Noun<sub>NCSF</sub> is a content noun while the acceptability of non-casemarked cleft depends on the Noun<sub>NCSF</sub> when the Noun<sub>NCSF</sub> is a non-content or defective noun. Kim (2020) thus argues for a mono-clausal analysis of Korean NCSF Noun-Copula by assuming that Noun-Copula and the predicate of the Clause form a compound predicate.

**Remaining Questions.** Note that (i) modification of Noun<sub>NCSF</sub> is not always disallowed in Korean NCSF Noun-Copula (see 3); (ii) the evidence given by Kim (2020) would fail to examine whether Korean NCSF Noun-Copula exhibits Complex NP Constraint (CNPC; Ross 1967) as non-casemarked cleft in Korean exhibits island-insensitivity (Cho et al. 2008).

- (3) *Mina-ka kacok-ul cwungsiha-nun cohun sengkyek-i-ta.*  
 M.-NOM family-ACC value-ADN good.ADN personality-COP-DECL  
 ‘Mina has a good personality that she values her family.’

This study aims at revisiting syntactic properties of Korean NCSF Noun-Copula.

**Proposal: A non-unified biclausal approach.** I argue for a non-unified biclausal approach to Korean NCSF Noun-Copula, as illustrated in (4). Specifically, I offer two pieces of evidence regarding the absence/presence of CNPC and (im)possibility of gap-filler dependency.

- (4) a. XP-NOM [<sub>DP</sub> ... [N (Noun<sub>NCSF</sub>)]]-Copula [N type]  
 b. [<sub>CP</sub> XP-NOM ... C (Noun<sub>NCSF</sub>)]-Copula [C type]

**Evidence 1: CNPC:** Given that PP topicalization in Korean involves overt movement (Cho 1994) while NP/DP topicalization in Korean is island-insensitive (Paul & Whitman 2017), I adopt long-distance scrambling and PP topicalization to show that Korean NCSF Noun-Copula would be syntactically heterogeneous regarding the presence/absence of CNPC (see 5).

- (5) a. \*<sub>[PP Cengchi-ey]<sub>i</sub>(-nun)</sub> *Yuna-ka Mina-ka ti pwulsinkam-ul phwumnun*  
 politics-DAT(-TOP) Y.-NOM M.-NOM distrust-ACC hold.ADN  
*sengkyek-ila ko malhayssta.*  
 personality-COP C say.PST  
 ‘Yuna said that Mina distrusts politics.’ [N type; CNPC observed]
- b. <sub>[PP Sewul-ey]<sub>i</sub>(-nun)</sub> *Yuna-ka Mina-ka ti phyenci-lul ponayl*  
 Seoul-DAT(-TOP) Y.-NOM M.-NOM letter-ACC send.ADN  
*cenmang-ila ko malhayssta.*  
 expectation-COP C say.PST  
 ‘Yuna said that it is expected that Mina will send a letter to Seoul.’  
 [C type; CNPC not observed]

**Evidence 2: Gap-Filler dependency:** The second piece of evidence comes from the (im)possibility of

gap-filler dependency, as illustrated in (6).

- (6) *Mina-ka e<sub>i</sub> cohun {sengkyek<sub>i</sub>-i-ta. / \*cenmang<sub>i</sub>-i-ta.}*  
 M.-NOM good.ADN personality-COP-DECL expectation-COP-DECL  
 ‘Mina has a good personality.’ / Intended: ‘Mina has a good expectation.’  
 [N type: Gap-Filler✓; C type: Gap-Filler✗]

This observation also accounts for the asymmetry between (3) and (7).

- (7) \**Mina-ka chayk-ul sa-l e<sub>i</sub> cohun cenmang<sub>i</sub>-i-ta.*  
 M.-NOM book-ACC buy-ADN good.ADN expectation-COP-DECL  
 Intended: ‘It is expected that Mina will buy a book.’ [C type]

Locus of the nominative subject: Now I examine the locus of the nominative subject in the case of N type and C type. First, consider the following cases of subject honorification in (8).

- (8) a. *Kyoswu-ka/kkeyse kacok-ul cwungsiha-nun sengkyek-isipnita.*  
 professor-NOM/NOM.HON family-ACC value-ADN personality-COP.HON  
 (Lit.) ‘The professor values his/her family.’ [N type; Subject honorification✓]  
 b. \**Kyoswu-ka/kkeyse chayk-ul sa-l cenmang-isipnita.*  
 professor-NOM/NOM.HON book-ACC buy-ADN expectation-COP.HON  
 ‘It is expected that the professor will buy a book.’ [C type; Subject honorification✗]

Building on the Phase Impenetrability Condition (PIC; Chomsky 2000) and the bidirectional agreement analysis of honorification in Korean proposed by Jou (2024), examples in (8) make it well-motivated to assume that (i) in (8a), the nominative subject is not located within the DP domain but should be in the matrix clause; (ii) in (8b), the nominative subject checks EPP at Spec, TP, which is lower than CP, and the agreement is thus unsuccessful due to PIC. Further consider the following case of scrambling in (9).

- (9) \**Kecismal-ul<sub>i</sub> Mina-ka t<sub>i</sub> ha-nun sengkyek-i-ta.*  
 lie-ACC M.-NOM do-ADN personality-COP-DECL  
 (Lit.) ‘Mina likes lying.’ [N type]

The ungrammaticality of (9) suggests that scrambling in (9) is not clause-internal. I follow Bowers (1993) by assuming the subject of a copular sentence to be merged at Spec, PredP and assume that the subject moves to Spec, TP to check EPP.

Meanwhile, scrambling in (10) exhibits scope ambiguity (see Miyagawa 2001), which suggests that scrambling in (10) should be clause-internal.

- (10) [*Ku theysuthu*]-lul<sub>i</sub> cenwen-i t<sub>i</sub> patci-anh-ul cenmang-i-ta.  
 that test-ACC everyone-NOM take-NEG-ADN expectation-COP-DECL  
 ‘It is expected that that test, everyone will not take.’ [C type; **all > not; not > all**]

Following Miyagawa (2001), I assume that in (10), (i) for ‘all > not’ reading, the subject moves to a lower Spec, TP and the scrambled object moves to a higher Spec, TP; (ii) for ‘not > all’ reading, the subject stays at Spec, vP and the scrambled object moves to Spec, TP.

Topic marking: Note that (i) in (4a), a topic, which is higher than the nominative subject, is in the matrix clause; (ii) in (4b), as Kim (2020) notes that Korean NCSF Noun-Copula always requires the Clause to be the adnominal form, it is plausible to assume that a topic is licensed in the matrix clause as the C head in (4b) would be lower than reportative/quotative *ko*.

**N/C ambiguity as a result of ongoing grammaticalization**. Note that there are cases in which the categorial status of Noun<sub>NCSF</sub> might be ambiguous. Consider *moyang* ‘appearance’ (see 11).

- (11) *Mina-nun kecismal-ul ha-n moyang-i-ta.*  
 M.-TOP lie-ACC do-ADN appearance-COP-DECL  
 ‘Mina has the appearance indicating that she lied.’ N reading✓  
 ‘It seems that Mina lied.’ C reading✓

It seems plausible to assume that the N/C ambiguity in (11) is a result of ongoing grammaticalization in the sense of Heine (2002).

**Conclusion.** This study argues for a non-unified analysis of NCSF Noun-Copula in Korean and suggests that the asymmetries regarding CNPC and gap-filler dependency are due to the categorial status of the “Noun<sub>NCSF</sub>” as an N head or a C head.

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## The licensing of Mandarin non-canonical objects

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**1. Introduction.** This study argues that Mandarin non-canonical objects (NCOs; examples below) are canonical after all. Their distribution and argument-hood fall from general constraints of argument structure and nominal licensing in Mandarin syntax. The semantic idiosyncrasy arises from the capacity of the categorizing *v* head to function as a mediating function and introduce an underspecified theta assignment (à la MacKenzie 2022).

(1) *shui shafa* ‘Lit. sleep sofa; sleep at a sofa’; *chi shitang* ‘Lit. eat canteen; eat at a canteen’; *qie naba dao* ‘Lit. cut that knife; cut using that knife’

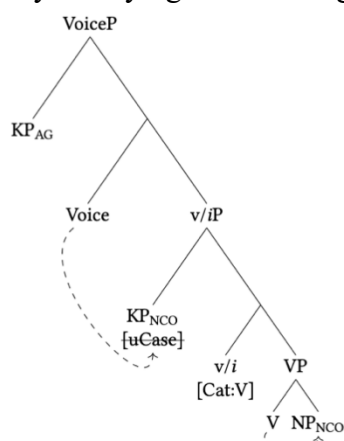
**2. Desiderata.** The primary point of interest concerns the distribution of NCOs. An NCO and a canonical object cannot cooccur. An NCO occupies the post-verbal position, where it does not receive a Theme/Patient interpretation but nevertheless blocks the presence of a canonical object.

(2) \*Zhangsan chi shitang pisa/pisa shitang Intended: ‘Zhangsan eats Pizza at a canteen’.

Naturally, the argument status of an NCO is a matter of debate. The example above seems to suggest that NCOs are true arguments of the verb, saturating the Theme/Patient ‘slot’ of the predicate. Li (2014), Barrie & Li (2015) provide further evidence: like canonical objects, NCOs can combine with *V* to take an affected outer object, and they can occur in the relativization construction. On the other hand, Zhang (2018) suggests that NCOs appear in intransitive contexts. Zhang (2022) further locates NCO phrases outside the base VP, based on their interaction with *you* ‘again’ and the availability of agent-less presuppositions.

**3. Nominal licensing.** Mandarin NCOs are subject to nominal licensing requirement just like any other nominal phrases. It has long been observed that NCOs syntactically resemble noun incorporation (Barrie & Li 2015). Following H.-L. Huang (2018), I suggest that non-referential, bare nominals in Mandarin are licensed via recategorization by a verbalizing head, thereby vacuously satisfying the licensing filter (Levin 2015).

(3)



Only bare nominals can be licensed *in situ* as complements of *V* through pseudo noun incorporation (PNI). Other types of nominals must scramble out of the base VP to be syntactically licensed. Assuming Mandarin lacks phi-agreement, this licensing is achieved checking [uCase] on KP. Since there is only one available licenser, assumed to be Voice in this case, the construction cannot license any additional nominals. This accounts for the complementary distribution between NCOs and canonical objects. Surface order is consistently SVO regardless of whether the internal argument remains within or out of VP, since *V* undergoes ‘short’ head movement (i.e. not to *T*) in Mandarin, as is standardly assumed (see, e.g., C.-T. J. Huang 1991, S.-W. Tang 1998).

**4. Semantic idiosyncrasy.** The idiosyncratic property of NCO constructions, which gives rise to the impression of a syntax-semantics mismatch, stem from whether an argument introducer, *i* (Wood & Marantz 2017) is merged on top of VP, denoting a mediating function and an underspecified theta-role (MacKenzie 2022). This configuration arises when a KP occupies Spec,*i*P and is licensed by Voice. The denotation of *i* is given below, where *Role* stands for a choice function over theta roles, accounting for the thematic flexibility of the internal argument.

$$(4) \quad \llbracket i \rrbracket = \lambda P. \lambda e. \lambda w. \exists y [P(y)(w) \wedge \text{Role}(y, e, w)]$$

In case of vacuous licensing via PNI, the head functions simply a verbalizer. It takes a verb relating entities to events and returns a property of events, as shown below. The complement NP functions as the domain restrictor.

$$(5) \quad \llbracket v \rrbracket = \lambda P. \lambda e. \lambda w. \exists y [C(y)(w) \wedge P(y)(e)(w)]$$

**5. Conclusion.** In a narrow sense, this proposal offers a unified analysis of NCO constructions, tying together loose ends in the literature. If on the right track, it further suggests that nominal licensing is operational in Mandarin Chinese (see also Sheehan & van der Wal 2018). The language does not constitute an oddity in this respect, although it remains to be seen whether the licensing of full referential nominals indeed follows the mechanism of abstract Case.

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