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Objects and nothingness: Applicative-licensed nominal ellipsis*

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1 Introduction

This talk focuses on Mandarin null object constructions, mainly those resembling (2):[1]

(1) (John looks at **his date** with deep affection.)

Bill ye xihuan **e**.
Bill also like
✓Strict: 'Bill also likes **[John's date]**.'
✗Sloppy: ~~'Bill also likes **[Bill's date]**.'~~ (H.-J. G. Li 2002: 73)

(2) John kanjian-le **ta de mama**. Mary ye kanjian-le **e**.
John see-PFV 3SG POSS mother Mary also see-PFV
✓Strict: 'John$_i$ saw **his**$_{i/k}$ **mother**. Mary$_j$ also saw **[his**$_{i/k}$ **mother]**.'
✓Sloppy: 'John$_i$ saw **his**$_i$ **mother**. Mary$_j$ also saw **[her**$_j$ **mother]**.' (Huang 1992b: 64)

Y.-H. A. Li (2005, 2007, 2014), Aoun & Li (2008), and Li & Wei (2023) propose a *true empty category* (TEC) approach as laid out in (3).

(3) *TEC approach*
A TEC …

a. is a last resort that can only be introduced where no empty categories can be;
b. has a D categorial feature and an uninterpretable Case feature;
c. does not have any other syntactic feature, most crucially thematic features; and
d. acquires its content via LF copying.

I present both empirical and theoretical challenges for TEC and propose a newly developed *applicative-licensed nominal ellipsis* (ALNE) approach (4).

(4) *Applicative-licensed nominal ellipsis*
Mary ye [$_{\text{ApplP}}$ [$_{\text{NP}}$ ~~ta~~ ~~de~~ ~~mama~~] [$_{\text{Appl}^0}$ $\varnothing_{[E]}$] [$_{\text{VP}}$ kanjian-le]].
Mary also 3SG POSS mother see-PFV

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1 Glossing abbreviations: 1 = first person, 2 = second person, 3 = third person, CLF = classifier, EXP = experiential, PFV = perfective, PL = plural, POSS = possessive, PRF = perfect, SG = singular.

Roadmap

ii. Empirical foundation

iii. Theoretical implementation of TEC and its challenges

iv. New analysis

v. Conclusion

2 Empirical foundation

2.1 Subject-object asymmetry

Only null objects but not null subjects allow indefinite/sloppy readings:

(5) *Indefinite reading*

a. *Null subject:* ✗
Ta kandao **yi ge keren** dian-le longxia. Wo (ye) kandao *(**yi ge keren**) (ye) dian-le longxia.
3SG see one CLF guest order-PFV lobster 1SG also see one CLF guest also order-PFV lobster
'He saw that **a guest** ordered lobster. I (also) saw that **a guest** (also) ordered lobster.'

b. *Null object:* ✓
Ta kandao Zhangsan dailai-le **yi ge keren**. Wo (ye) kandao Lisi (ye) dailai-le (**yi ge keren**).
3SG see Zhangsan bring-PFV one CLF guest 1SG also see Lisi also bring-PFV one CLF guest
'He saw that Zhangsan brought **a guest**. I (also) saw that Lisi (also) brought **a guest**.'
(Li & Wei 2023: 14)

(6) *Sloppy reading*

a. *Null subject:* ✗
Zhangsan [yinwei **ta de erzi** jiao-guo shuxue] hen gaoxing. Lisi [yinwei **e** jiao-guo yuyanxue] hen deyi.
Zhangsan because 3SG POSS son teach-EXP math very happy Lisi because teach-EXP linguistics very proud
'Zhangsan$_i$ is happy because **his$_i$ son** has taught math. Lisi$_j$ is proud because **[he$_j$/his$_{i/*j}$ son]** has taught linguistics.'

b. *Null object:* ✓
Zhangsan [yinwei wo jiao-guo **ta de erzi**] hen gaoxing. Lisi [yinwei Zhangsan because 1SG teach-EXP 3SG POSS son very happy Lisi because wo mei jiao-guo **e**] hen bu gaoxing.
1SG not.PFV teach-EXP very not happy.
'Zhangsan$_i$ is happy because I have taught **his$_i$ son**. Lisi$_j$ is not happy because I have not taught **[him$_j$/his$_{i/j}$ son]**.'
(Li & Wei 2023: 15, adapted)

2.2 Possible null objects

Null objects can be direct or indirect objects in a double object construction (DOC):

(7) a. *Null direct object:* ✓
Wo gei-le yi ge nanhai **yi zhang piao**. Ta gei-le yi ge nühai **e**.
1SG give-PFV one CLF boy one CLF ticket 3SG give-PFV one CLF girl
'I gave a boy **a ticket**. He gave a girl **[a ticket]**.'

b. *Null indirect object:* ✓
Wo gei-le **yi ge nanhai** yi zhang piao. Ta gei-le **e** yi zhi bi.
1SG give-PFV one CLF boy one CLF ticket 3SG give-PFV one CLF pen
'I gave **a boy** a ticket. He gave **[a boy]** a pen.'
(Y.-H. A. Li 2014: 58)

2.3 Impossible null objects

2.3.1 Class 1: Objects in the presence of an additional argument

Unaccusative object Mandarin unaccusative verbs can take an additional experiencer argument which surfaces in the subject position:

(8) [$_{\text{experiencer}}$ Wang Mian] qi sui si-le [$_{\text{theme}}$ fuqin].
Wang Mian seven age die-PFV father
'Wang Mian experienced his father's death at the age of seven.'
Literal: 'Wang Mian at the age of seven died his father.' (Huang 2007: 8)

When an unaccusative has an experiencer subject, its object cannot be null:

(9) *Null unaccusative object:* ✗
Zhangsan si-le **yi zhi mao**. Lisi ye si-le (*e).
Zhangsan die-PFV one CLF cat Lisi also die-PFV
'Zhangsan experienced **a cat's** death. Lisi also experienced (***[a cat's]**) death.'
Literal: 'Zhangsan died **a cat**. Lisi also died (***[a cat]**).' (Y.-H. A. Li 2014: 59)

Affective inner object Mandarin transitive verbs can take an additional affected argument (*outer object*) which surfaces between the verb and the object (*inner object*):[2]

(10) Wo chi-le [$_{outer}$ ta] [$_{inner}$ san ge pingguo].
1SG eat-PFV 3SG three CLF apple
'I ate three apples from him.'
Literal: 'I ate him three apples.' (Lu 2002: 317, adapted)

When a transitive has an affected outer object, its inner object cannot be null:

(11) *Null affective inner object:* ✗
Wo chi-le ta **yi ge pingguo**. Ta ye chi-le wo (*e).
1SG eat-PFV 3SG one CLF apple 3SG also eat-PFV 1SG
'I ate **an apple from** him. He also ate (***[an apple from]**) me.'
Literal: 'I ate him **an apple**. He also ate me (***[an apple]**).' (Y.-H. A. Li 2014: 58)

2.3.2 Class 2: Objects in the presence of an additional predicate

Resultative object The construction of interest involves a causer subject as well as a causee object bearing the result of the causation:

(12) [$_{causer}$ Na ping jiu] he-zui-le [$_{causee}$ John].
that bottle wine drink-drunk-PFV John
'That bottle of wine made John drunk.'
Literal: 'That bottle of wine drank drunk John.' (J. Liu 2021: 115)

In this construction, the object cannot be null, as in (13).

2 The affective construction has a potential confound with the possessive construction, which can drop the possessive marker and yield a sequence phonologically identical to the postverbal content in (10):

(i) ta (de) san ge pingguo
3SG POSS three CLF apple
'his three apples'

Adding *yigong* 'altogether' can disambiguate the two due to its incompatibility with possessives (Lu 2002):

(ii) *'Altogether'*

a. *Possessee:* ✗
Ta *(de) yigong san ge pingguo hen haochi.
3SG POSS altogether three CLF apple very tasty
(Intended:) 'His three apples altogether are tasty.'

b. *Affective inner object:* ✓
Wo chi-le ta yigong san ge pingguo.
1SG eat-PFV 3SG altogether three CLF apple
'I ate three apples altogether from him.'

With 'altogether', the reported pattern still holds.

(13) *Null resultative object:* ✗
Zhe ping jiu he-zui-le **hen duo ren**. (*Na ping jiu ye he-zui-le **e**.)
this bottle wine drink-drunk-PFV very many person that bottle wine also drink-drunk-PFV
'This bottle of wine made **many people** drunk. (*That bottle of wine also made **[many people]** drunk.)' (Li & Wei 2023: 8)

Object preceding a secondary predicate When followed by a secondary predicate, an object cannot be null:

(14) *Null object followed by a secondary predicate:* ✗
Ta kandao **yi ge haizi** hen keai. (*Wo kandao **e** hen huopo.)
3SG see one CLF child very cute 1SG see very lively
'He saw **a child**, very cute. (*I saw **[a child]**, very lively.)' (Y.-H. A. Li 2014: 61)

2.3.3 Class 3: Nonreferential objects

Based on (15), Li & Wei (2023) claim that nonreferential DP (à la Landau 2021, 2023) objects cannot be null.

(15) a. *Null measure phrase:* ✗
Zhangsan gao-le **yi chi**. Lisi ye gao-le (***e**).
Zhangsan tall-PFV one foot Lisi also tall-PFV
'Zhangsan became **one foot** taller. Lisi also became (***[one foot]**) taller.'

b. *Null name in naming verbs:* ✗
Wo jiao **Binbin**. (*Ta ye jiao **e**.)
1SG call Binbin 3SG also call
'My name is **Binbin**. (*Their name is also **[Binbin]**.)'

c. *Null predicate nominal:* ✗
Zhangsan chengwei **yingxiong**. (*Lisi ye chengwei **e**.)
Zhangsan become hero Lisi also become
'Zhangsan became **a hero**. (*Lisi also became **[a hero]**.)'
(Li & Wei 2023: 10–11)

I improve this generalization in section 3.1.

2.4 Section summary

(16) *Possible null objects*

a. direct objects (in a DOC)

b. indirect objects in a DOC

(17) *Impossible null objects*

a. unaccusative objects
b. affected inner objects
c. resultative objects
d. objects preceding a secondary predicate
e. nonreferential objects

3 Theoretical implementation of TEC and its challenges

(18) *TEC approach*
A TEC …

a. is a last resort that can only be introduced where no empty categories can be (hence **the subject-object asymmetry**);
b. has a D categorial feature and an uninterpretable Case feature (which is why **class 3** objects are impossible);
c. does not have any other syntactic feature, most crucially thematic features (which is why **class 1 and 2** objects are impossible); and
d. acquires its content via LF copying (e.g., Chung, Ladusaw & McCloskey 1995) (hence **the indefinite/sloppy readings**).

3.1 Generalization-level challenges

Class 3 objects are impossible not because they are nonreferential:

(19) *Possible null measure phrase*
Zhangsan he ni de shengao cha chaoguo-le **shi limi**. Lisi he Zhangsan and 2SG POSS height difference exceed-PFV ten centimeter Lisi and wo de shengao cha ye chaoguo-le **e**.
1SG POSS height difference also exceed-PFV
'The height difference between Zhangsan and you exceeded **ten centimeters**. The height difference between Lisi and me also exceeded **[ten centimeters]**.'

(20) *Possible null predicate nominal*
Zhangsan dang-guo **laoshi**. Lisi ye dang-guo **e**.
Zhangsan work.as-EXP teacher Lisi also work.as-EXP
'Zhangsan has worked as **a teacher**. Lisi has also worked as **[a teacher]**.'

Rather, their unacceptability comes from the verbs, some of which (e.g., 'become') have been independently argued to not allow null objects (21).

(21) *Null object of some stative verbs:* ✗
Zhe jia gongchang chengwei **guoqi**. (*Na jia gongchang ye chengwei **e**.)
this CLF factory become state.owned.enterprise that CLF factory also become
'This factory became **a state-owned enterprise**. (*That factory also became **[a state-owned enterprise]**.)' (Zhang & Tang 2013: 50)

3.2 Theory-level challenges

Data overgeneration The current implementation of TEC predicts that all Case-licensed DP objects that do not assign a theta role or receive multiple theta roles can be null, but complications arise with:

- a subset of stative verbs, including (21) above and (22) below;
- prepositions (23); and
- object control verbs (24).

(22) *Null object of some stative verbs:* ✗
Zhe jia gongsi shuyu **AQ**. (*Na jia gongsi ye shuyu **e**.)
this CLF company belong.to Ah.Q that CLF company also belong.to
'This company belongs to **Ah Q**. (*That company also belongs to **[Ah Q]**.)' (Zhang & Tang 2013: 51)

(23) *Null object of prepositions:* ✗
Zhangsan tang zai **ta de chuang shang**. (*Lisi ye tang zai **e** (shang).)
Zhangsan lie at 3SG POSS bed on Lisi also lie at on
'Zhangsan$_i$ lies on **his$_i$ bed**. (*Lisi$_j$ also lies on **[his$_{i/j}$ bed]**.)'

(24) *Null object of object control verbs:* ✗
Zhangsan bipo **ta de haizi** jie yan. (*Lisi ye bipo **e** jie yan.)
Zhangsan force self POSS child quit smoking Lisi also force quit smoking
'Zhangsan$_i$ forces **his$_i$ child** to quit smoking. (*Lisi$_j$ also forces **[his$_{i/j}$ child]** to quit smoking.)'

Derivational inefficiency A last resort approach, being transderivational, is against local economy (Collins 1996, Potts 2001).

4 New analysis

4.1 Applicative constructions

Mandarin has "object"-introducing applicatives, including *ba* (a.o.: Thompson 1973, Huang 1982, Sybesma 1992), *dui*, and *gei* (a.o.: Paul & Whitman 2010, Tsai 2018):

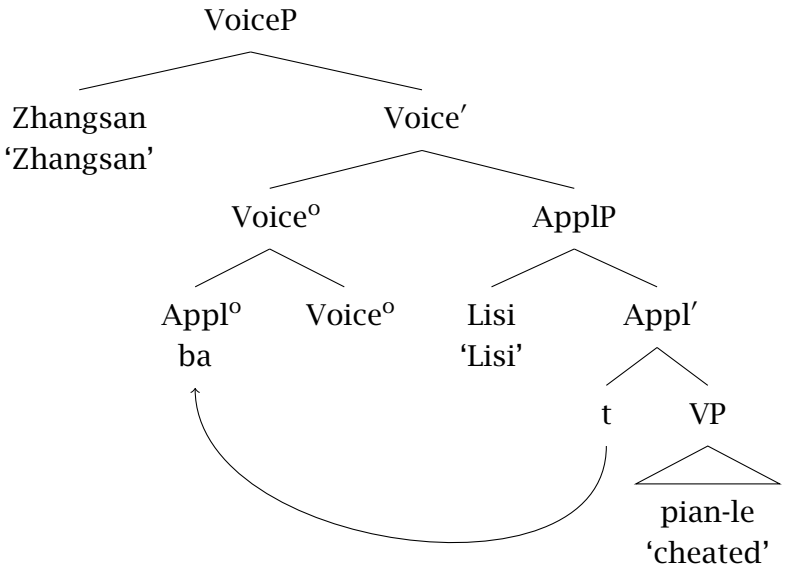
(25) *Simple direct object:* Ba
Zhangsan ba Lisi pian-le.
Zhangsan BA Lisi cheat-PFV
'Zhangsan cheated Lisi.'

(26) *Direct object of psychological verbs:* Dui
Zhangsan dui Lisi hen danxin.
Zhangsan DUI Lisi very worry
'Zhangsan worries about Lisi.'

(27) *Indirect object:* Gei
Zhangsan gei Lisi song-le yi kuai shoubiao.
Zhangsan GEI Lisi give.as.a.gift-PFV one CLF watch
'Zhangsan gave a watch as a gift to Lisi.'

(28) sketches the structure that I assume for (25).[3]

(28)



(cf. Huang 1992a, Sybesma 1992, Chen 2023)

Observation 1 Applicatives and their objects can be null, and when they are null, (indefinite and) sloppy readings are possible as in (29–31).

3 Projections above VoiceP are omitted for simplicity.

(29) Zhangsan ba **ta de haizi** ma-le. Lisi ye **e** ma-le.
Zhangsan BA 3SG POSS child scold-PFV Lisi also scold-PFV
'Zhangsan$_i$ scolded **his$_i$ child**. Lisi$_j$ also scolded **[his$_{i/j}$ child]**.'

(30) Zhangsan dui **ta de haizi** hen danxin. Lisi ye **e** hen danxin.
Zhangsan DUI 3SG POSS child very worry Lisi also very worry
'Zhangsan$_i$ worries about **his$_i$ child**. Lisi$_j$ also worries about **[his$_{i/j}$ child]**.'

(31) Zhangsan gei **ta de haizi** song-le yi kuai shoubiao. Lisi ye **e** song-le yi kuai shoubiao.
Zhangsan GEI 3SG POSS child give.as.a.gift-PFV one CLF watch Lisi also give.as.a.gift-PFV one CLF watch
'Zhangsan$_i$ gave a watch as a gift to **his$_i$ child**. Lisi$_j$ also gave a watch as a gift to **[his$_{i/j}$ child]**.'

This is true even for predicates that can only introduce objects by applicatives:

(32) Zhangsan dui **ta de haizi** hen shiwang. Lisi ye **e** hen shiwang.
Zhangsan DUI 3SG POSS child very disappointed Lisi also very disappointed
'Zhangsan$_i$ is disappointed in **his$_i$ child**. Lisi is also disappointed in **[his$_{i/j}$ child]**.'

Observation 2

- Unaccusative objects, affected inner objects, objects preceding a secondary predicate, and objects of prepositions do not allow applicatives.
- In simple transitive constructions, we observe a strong correlation between verbs that allow applicative objects and those that allow elided objects:

Verb	Applicative object	Elided object
chi 'eat'	✓	✓
he 'drink'	✓	✓
ma 'scold'	✓	✓
ti 'kick'	✓	✓
chengwei 'become'	✗	✗
gao '(become) tall'	✗	✗
jiao 'call'	✗	✗
shuyu 'belong'	✗	✗

Table 1 Some predicates that are presented in sections 2 to 3 and their compatibility with applicative objects and elided objects

Observation 3 There are no "subject"-introducing applicatives.[4]

4.2 Applicative-licensed nominal ellipsis

I propose a new approach, which I dub *applicative-licensed nominal ellipsis* (33).[5]

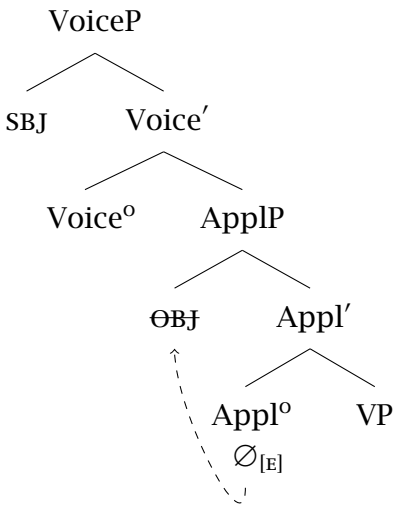
(33) *ALNE approach*

a. Verbs can optionally select a phonologically null Appl^{o}, subject to the same selectional constraints on the overt applicatives.

b. The Appl^{o} bears an E feature.

c. The E feature deletes the specifier of the ApplP at PF, if it has a semantically identical antecedent.

(34)



4 The passive marker *bei* might initially appear to be a strong candidate, but it has been independently argued to differ from the normal applicatives in significant ways (e.g., Tsai 2018). For example, only *bei* allows the argument it introduces to be optional:

(iii) a. Zhangsan ba *(yi ge ren) pian-le.
Zhangsan BA one CLF person cheat-PFV
'Zhangsan cheated someone.'

b. Zhangsan bei (yi ge ren) pian-le.
Zhangsan BEI one CLF person cheat-PFV
'Zhangsan was cheated (by someone).'

5 One of the reasons why the identity condition needs to be semantic is the null object's behavior with respect to NPIs:

(iv) Zhangsan bu xihuan **renhe ren**, dan Lisi xihuan **e**.
Zhangsan not like any person but Lisi like
'Zhangsan does not like **anyone**, but Lisi likes **[someone]**.' (Ye 2020: 80)

4.3 Tying up loose ends

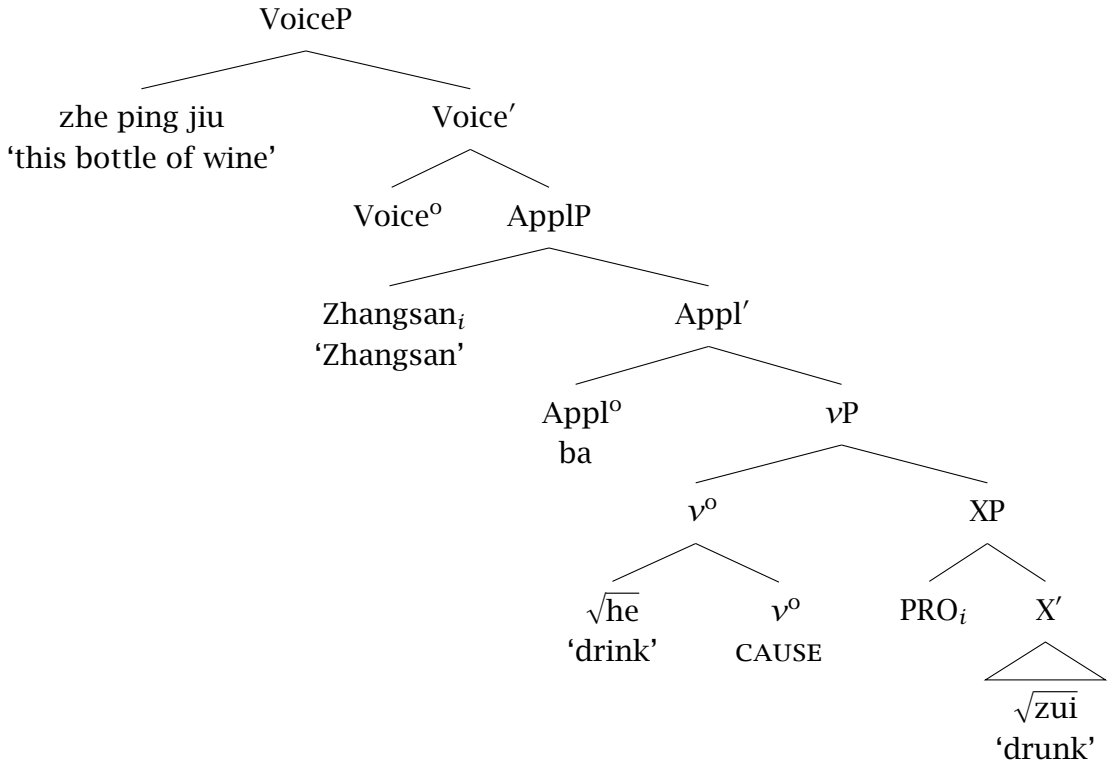
Recall that resultative construction (13) and object control verbs (24) do not allow null objects. However, their objects can co-occur with *ba* as in (35–36).

(35) *Resultative construction with* ba
Zhe ping jiu ba Zhangsan he-zui-le.
this CLF wine BA Zhangsan drink-drunk-PFV
'This bottle of wine made Zhangsan drunk.'

(36) *Object control verb with* ba
Zhangsan ba ta de xuesheng bi tuixue le.
Zhangsan BA 3SG POSS student force drop.out.of.school PRF
'Zhangsan has forced his student to drop out of school.'

I assume the structure in (37) for (35).

(37)



(cf. J. Liu 2021, Chen 2023)

The generalization is that elided objects are not allowed when they need to bind a PRO.

5 Derivation and comparison

The predictions are summarized in the following two tables.

	Appl^{o}	No PRO	ALNE prediction	Elided object
Direct object in a DOC			✓	✓
Indirect object in a DOC			✓	✓
Unaccusative object	*		✗	✗
Affective inner object	*		✗	✗
Object of some stative verbs	*		✗	✗
Object of prepositions	*		✗	✗
Object of object control verbs		*	✗	✗
Resultative object		*	✗	✗
Object preceding a secondary predicate	*	*	✗	✗

Table 2 ALNE predictions

	Elided object	ALNE prediction	TEC prediction
Direct object in a DOC	✓	✓	✓
Indirect object in a DOC	✓	✓	✓
Unaccusative object	✗	✗	✗
Affective inner object	✗	✗	✗
Object of some stative verbs	✗	☒	☑
Object of prepositions	✗	☒	☑
Object of object control verbs	✗	☒	☑
Resultative object	✗	✗	✗
Object preceding a secondary predicate	✗	✗	✗

Table 3 Comparing ALNE with TEC

6 Conclusion

Takeaways

- Mandarin predicates do not trigger argument ellipsis; they introduce an applicative that does.
- If the ALNE analysis is on the right track, the ellipsis toolbox welcomes a new addition.

A Apparent counterexamples

- The copula does not allow applicative objects but appears to allow elided objects. I align with the widely accepted view that this is because 'be' can license the ellipsis of larger projections.
- 'Have' does not allow applicative objects but appears to allow elided objects. I follow previous work and assume that 'have' is a light verb.
- Bare verbs are incompatible with *ba* unless accompanied by an aspect marker, a result phrase, and so on. The underlying cause of this constraint remains unclear, but crucially, it does not appear to apply in the presence of the phonologically null Appl^{o}.

B Further predictions

The verb with an elided object does not have to be identical to its antecedent. This is true:

(38) *Nonidentical verbs*
Zhangsan ti-le **ziji haizi** yi jiao, Lisi que zhi ma-le **e** yi dun.
Zhangsan kick-PFV self child one foot Lisi but only scold-PFV one CLF
'Zhangsan$_i$ kicked **his$_i$ own child**, but Lisi$_j$ only scolded **[his$_{i/j}$ own child]**.'
(Li & Wei 2023: 5)

Proposition verbs, which allow topicalization but not applicative objects, should allow null objects but not indefinite/sloppy readings. This is true:

(39) *Proposition verb*
Zhangsan zhidao **yi jian shi**. Lisi ye zhidao **e**.
Zhangsan know one CLF thing Lisi also know
'Zhangsan knows **a thing**. Lisi also knows **[it/*a thing]**.'

C Other existing analyses

(40) *Topic drop (Huang 1982, 1984, 1998, Huang & Yang 2024)*
Op$_1$ Mary ye kanjian-le e$_1$.
Mary also see-PFV

(41) *Free empty category (Xu 1986, 2003, Zhang & Tang 2013)*
Mary ye kanjian-le EC.
Mary also see-PFV

(42) *V-stranding VP ellipsis (Huang 1992b, H.-J. G. Li 2002, C.-M. L. Liu 2014, Pan 2019)*
Mary ye kanjian$_1$-le [$_{VP}$ ~~t$_1$~~ ~~ta~~ ~~de~~ ~~mama~~].
Mary also see-PFV 3SG POSS mother

(43) *Argument ellipsis (Cheng 2011, 2013, Pan 2019)*
Mary ye kanjian-le [$_{NP}$ ~~ta~~ ~~de~~ ~~mama~~].
Mary also see-PFV 3SG POSS mother

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