

Agreement in imperative clauses: Evidence from object resumptive pronouns in Mandarin Chinese*

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1 Introduction

While imperative/jussive clauses are known to have interaction with (null) subjects, verbal morphology, modals, negation, and speaker-addressee relations (Potsdam 1996; Portner 2007; Zanuttini 2008; Zanuttini, Pak, and Portner 2012; Pak, Portner, and Zanuttini 2022; Kaufmann 2012; Alcázar and Saltarelli 2014; Liao and Wang 2022, *i.a.*), whether *objects* interact with jussive clauses is, however, less understood.¹

- (1) The interaction of jussives with:
- a. Subjects (e.g. exceptional null subjects in non-pro-drop languages)
 - b. Verbal morphology (e.g. infinitival/special imperative morphology)
 - c. Modals (e.g. performativity)
 - d. Negation (e.g. prohibitives)
 - e. Speaker-addressee relation and embeddability (e.g. speech-style particles)
 - f. 🗨️ **Objects?**

This study reports such a case of interaction with **objects**, which is observable in a particular movement context. The core data comes from non-agreeing resumptive pronouns (NRPs) in Mandarin Chinese (first reported by Xu 1999), exemplified in (2a). An NRP is strongly preferred when an *object* is topicalized in an imperative (vs. 2b).²

- (2) a. Zhexie shu_i, ni shao-le ??(ta_i)! (3PL antecedent vs. 3SG NRP)
 these books you burn-PFV 3SG
 Lit.: ‘These books, you burn it!’ (i.e. These books, burn them!)
- b. Ni shao-le zhexie shu (*ta_i)!
 you burn-PFV these books 3SG
 ‘You burn these books!’

Mandarin Chinese does not have *overt* syntactic marking of the imperative/jussive clause type (except prohibitive negation, Yuan 1993; also Liao and Wang 2022 for Taiwan Southern Min). As we will show, the licensing environment of NRPs exactly aligns with **jussive (imperative, promissive, exhortative) clauses**. This striking sensitivity of NRPs to jussives suggests that jussive is a syntactically active notion even in a language without inflectional morphology.

1. While receiving less attention, null objects, with a definite interpretation, may also be exceptionally licensed in imperatives clauses in English. For a recent discussion, see Bošković (2023).

2. The data in this study are confirmed by seven native speakers of Mandarin Chinese. Discrepancies in judgment are indicated by “%”.

(3) Overview

- a. We show that the NRP exhibits a multifaceted empirical profile that involves:
- (i) licensing by jussive clauses,
 - (ii) patient roles of objects, and
 - (iii) movement-derived properties.
- b. We argue that the intricate pattern can be accounted for by an *Agree* relation between the **NRP** and **jussive** head, coupled with interface conditions on partial Copy Deletion:
- $$[_{CP} C\text{-jussive} [_{TOPP} DP_{[TOP]} [\text{Top } [_{TP} \dots [_{VP} V <DP> = \mathbf{NRP}_{[TOP][JUSSIVE]}]]]]]]]$$
- c. We conclude that NRPs can be viewed as syntactic markers of jussive clauses in Mandarin Chinese, which offers support for jussive being a *syntactic* clause type with interaction with *objects*.
- d. We also briefly discuss the interaction of jussive with objects in other languages.

Before proceeding, we note that NRPs in other Sinitic languages (e.g. Cantonese/Shanghainese) have a wider distribution (Xu 1999; Man 1998; Yip and Ahenkorah 2023), but they similarly require an NRP (vs. gap) just like (1a).

- (4) a. Nidi syu_i ne, nei siu-zo *(keoi_i)! (Cantonese)
 these books TOP you burn-PFV 3SG
 Lit.: 'These books, you burn it!' (i.e. These books, burn them!)
- b. Diqngge meqzy_i nung gue-teq *(i_i)! (Shanghainese)
 these things you throw-PFV 3SG
 Lit.: 'These things, you throw it away!' (i.e. These books, throw them away!)

- **Road map**

§2: Licensing by jussives

§5: Proposal: jussive agreement

§3: Patient object requirement

§6: Concluding remarks

§4: Movement properties

§7: Appendix: stranding

2 Jussives as the licensing condition of NRPs

We show that NRPs always occur in a jussive clause, and other clause types (or the lack of directive force associated with jussives) cannot license NRPs. That is, the occurrence of NRPs is dependent on jussives.

(5) The licensing condition of NRPs

- a. $[_{CP} \text{ C-jussive } \dots [_{TP} \dots [_{VP} \text{ V } \text{NRP}]]]$
 b. $*[_{CP} \text{ C-other } \dots [_{TP} \dots [_{VP} \text{ V } \text{NRP}]]]$

Licensing conditions		Non-agreeing RPs	Agreeing RPs
Matrix clause type	Jussive	✓	✓/✗
	Declarative	✗	✓
	Interrogative	✗	✓
Modal	Performative	✓	✓
	Descriptive	✗	✓
Negation	Prohibitive	✓	✓
	Non-prohibitive	✗	✓
Embedding predicates	'advise/order'-type	✓	✓
	'believe'-type (doxastic)	✗	✓

Table 1: Jussives as the licensing condition of NRPs

2.1 Matrix clause types

First, NRPs in Mandarin are licensed only in **jussive** clauses. In root clauses, NRPs are licensed in *imperatives*, as we have already seen (reproduced below). In (6), the obligation is placed on the *addressee*. Here, an agreeing resumptive pronoun (ARP) is also acceptable for some speakers.³

(6) Imperatives license NRPs

Zhexie shu_i, ni shao-le {ta_i/%tamen_i}!
 these books 2SG burn-PFV 3SG/3PL (obligation on addressee)
 Lit: 'These books, you burn it/them!'

NRPs are also licensed in other jussive clauses, like *promissives* in (7), where the obligation is placed on the *speaker* (with 'I' as the subject), and *exhortatives* in (8), where the obligation is placed on both the *speaker* and the *addressee* (with 'we' as the subject).

3. One of our informants rejected the use of plural pronouns for referring to inanimate entities, regardless of the clause type. In this case, whether the use of singular pronoun is "non-agreeing" is not clear since there are no "agreeing" counterparts. Note that other speakers we consulted all accepted the use of plural pronouns for inanimate entities in non-jussives.

(7) Promissives license NRPs

Zhexie shu_i, wo shao-le {**ta_i**/%tamen_i}! (obligation on speaker)
 these books 1SG burn-PFV 3SG/3PL
 Lit: ‘These books, I burn it/them!’

(8) Exhortatives license NRPs

Zhexie shu_i, women shao-le {**ta_i**/%tamen_i}! (obligation on speaker+addressee)
 these books 1PL burn-PFV 3SG/3PL
 Lit: ‘These books, we burn it/them!’ (i.e., Let’s burn these books!)

Crucially, the obligation cannot be placed on a non-discourse participant (i.e. ‘he/she/they’):⁴

(9) *Zhexie shu_i, tamen shao-le **ta_i**! (*obligation on non-participant)
 these books 3PL burn-PFV 3SG
 Lit: ‘These books, they burn it/them!’

Moreover, other clause types, like declaratives or interrogatives in (10), also do not license NRPs.

- (10) a. Zhexie shu_i, wo yijing shao-le {***ta_i**/tamen_i}. (declarative)
 these books I already burn-PFV 3SG/3PL
 ‘I already burnt these books.’
 b. Zhexie shu_i, ni yijing shao-le {***ta_i**/tamen_i} ma? (interrogative)
 these books you already burn-PFV 3SG/3PL SFP
 ‘Have you burnt these books?’

2.2 Performative modals

NRPs are also licensed under **performative uses** of modals. It is well-known that **deontic modals** can be used *descriptively* or *performatively*, the latter resulting in a jussive/directive force (Kamp 1973; Portner 2007; Kaufmann 2012, *i.a.*).

- (11) a. You **should** go to confession, but you’re not going to. (descriptive, Portner 2007, ex.31a)
 b. You **should** sit down right now. (performative, Portner 2007, ex.28)

On its descriptive use, the sentence *reports* a pre-existing obligation/permission, to which the speaker may or may not be committed to. On its performative use, the speaker *issues* a command/permission with commitment to it.

With NRPs, the modalized sentence in (12a) can *only* be performative, rendering continuation like ‘but I think you do not need to’ in (12b) and responses like ‘True!/False!’ in (12c) infelicitous.

4. This is different from Italian (and English to a limited extent), where root jussives with third-person subjects like *Che venga anche lui* ‘(See to it that) he comes as well!’ in Italian or *Someone seat the guests!* in English are acceptable (Zanuttini, Pak, and Portner 2012).

(12) The obligatory *performative* use of deontic modals with NRPs

- a. A: Zhexie shu_i, ni yao/yinggai shao-le **ta_i!**
 these books you must/should burn-PFV 3SG
 Lit: ‘These books, you must/should burn it.’
- b. A: ... # but I think you don’t need to burn them.
- c. B: # True!/# False!

Notice that with the presence of a plural ARP, the descriptive reading is possible and even sometimes preferred, as in (13). The descriptive reading can be facilitated under a context where the obligation is sourced from some regulations that the speaker does not agree.

(13) The *descriptive* use of deontic modals with ARPs

- a. A: Zhexie shu_i, ni yao/yinggai shao-le **tamen_i.**
 these books you must/should burn-PFV 3PL
 ‘(According to these *ridiculous* regulations,) these books, you must/should burn them.’
- b. A: ... but I think you don’t need to burn them.
- c. B: True!/ False!

The contrast is more salient if the subjects are in first-person or third-person. The use of NRPs enforces a performative reading, whereas the use of ARPs generally leads to a descriptive reading.⁵

(14) Deontic modals with a first-/third-person subject

- a. Zhexie shu_i, wo yao/yinggai shao-le {**ta_i}/tamen_i}.
 these books 1SG must/should burn-PFV 3SG/3PL
 NRP: ‘These books, I must/should burn it! (# though *I* don’t think I need to)’
 ARP: ‘These books, I must/should burn them.’ (though *I* don’t think I need to)**
- b. Zhexie shu_i, yuehan yao/yinggai shao-le {**ta_i}/tamen_i}.
 these books John must/should burn-PFV 3SG/3PL
 NRP: ‘These books, John must/should burn it!’ (# though *I* don’t think he needs to)
 ARP: ‘These books, John must/should burn them.’ (though *I* don’t think he needs to)**

Permission modal *keyi* ‘may’ and disposition modal *hui* ‘will’ may also license NRPs under a performative reading: suggestion for *keyi* ‘may’ and promissive for *hui* ‘will’.

- (15) Zhexie shu_i, wo jintian hui kan-le **ta_i.**
 these books I today will read-PFV 3SG
 Lit.: ‘These books, I will read it today.’ (you have my word.)

5. In third-person subject cases, there is a contrast regarding whether an overt modal is present. Without an overt modal, third-person subjects are in general banned in “bare” jussives without a modal (as in (9)), whereas the performative use of an overt deontic modal allows third-person subjects (as in (14b)). The contrast suggests that ‘bare’ jussives in Mandarin cannot be analyzed as *simply* having a covert modal.

- (16) Zhexie binggan_i, women **keyi** chi-le **ta_i**.
 these cookie we **should** eat-PFV **3SG**
 Lit.: ‘These cookies, we can eat it.’ (let’s do it.)

This contrasts with epistemic and dynamic modals. While they do not license a performative/directive use (Portner 2007), they also do not license NRPs as in (17)-(18).

(17) Epistemic modals

Zhexie shu_i, ni/wo/yuehan {**keneng/ yiding**} shao-le {***ta_i/tamen_i**} (le)
 these books you/I/John **probably/ definitely** burn-PFV **3SG/3PL** SFP
 ‘You/I/John {probably/definitely} burnt these books.’

(18) Dynamic modals

Zhexie shu_i, ni/wo/yuehan {**gan/ neng**} jiu zheyang shao-le {***ta_i/tamen_i**}
 these books you/I/John **dare/ can** then like.this burn-PFV **3SG/3PL**
 ‘You/I/John {dare to/can} burn these books just like that.’

2.3 Negation

Another piece of evidence comes from negation. Mandarin has three forms of negation: *bu* ‘not’, *mei(you)* ‘didn’t’, and *bie* ‘don’t’. *Bie* ‘don’t’ is a **prohibitive negation** that only occurs in jussive clauses (strictly speaking, only imperatives and exhortatives) (see also Liao and Wang 2022 for Taiwan Southern Min). The other two forms, *bu* (neutral negation) and *meiyou* (perfective negation), do not occur in jussive clauses.⁶

- (19) a. Ni **bie** shao-le zhexie shu!
 2SG PROH burn-PFV these books
 ‘(You) don’t burn these books!’
 b. *Ni **bu/meiyou** shao(-le) zhexie shu!
 2SG not/not.PFV burn-PFV these books
 Int.: ‘(You) don’t burn these books!’

Importantly, with the presence of NRPs, only the prohibitive negation *bie* ‘don’t’ is allowed. *Bu* and *meiyou* are banned. (20b) is unacceptable regardless of the intended meaning (either as command or assertion).

- (20) a. Zhexie huaping_i, nei **bie** za-le **ta_i**!
 these vase 2SG PROH break-PFV **3SG**
 Lit.: ‘These vases, (you) don’t break it!’

6. Except for *bu* in *buyao* ‘don’t’ where the deontic modal *yao* ‘should/must’ is negated, expressing a prohibitive reading.

- b. *Zhexie huaping_i, nei **bu/meiyou** za(-le) **ta_i**.
 these vase 2SG NOT/NOT.PFV break-PFV 3SG
 Lit.: ‘These vases, (you) don’t/didn’t break it.’

With a plural ARP, on the other hand, *meiyou* and *bu* may be licensed in a declarative clause.

- (21) a. Zhexie huaping_i, nei **meiyou** za-le **tamen_i**.
 these vase 2SG NOT.PFV break-PFV 3PL
 ‘These vases, you didn’t break them.’
 b. Zhexie huaping_i, Zhangsan **bu** za **tamen_i** le.
 these vase Zhangsan NOT break 3PL SFP
 ‘These vases, Zhangsan no longer breaks them.’

Note that prohibitive negation can only occur in jussives where an obligation is placed *on the addressee* (i.e., imperatives and exhortatives). The prohibitive negation is not allowed in promissives, where the obligation is only placed *on the speaker*. This is different from NRPs - which, as we have already seen, occur in *all three* types of jussive clauses.

- (22) a. **Women bie** shao-le zhexie shu (ba)! (exhortative)
 1PL PROH burn-PFV these books SFP
 ‘Let’s not burn these books.’
 b. ***Wo bie** shao-le zhexie shu (ba)! (promissive)
 1SG PROH burn-PFV these books SFP
 Int.: ‘I won’t burn these books. (you have my word)’

2.4 Embedding predicates

NRPs can only be embedded under **advise predicates** like ‘advise/order’, as illustrated in (23a). These predicates are argued to take embedded imperatives (as evidenced by, for example, the clause type markers in Korean, Portner 2007; see also Crnič and Trinh 2009; Kaufmann and Poschmann 2013).

(23) Embedded jussives taken by ‘advise/order’ predicates license NRPs

- a. Zhexie shu_i, Xiaoming **mingling** ni/wo/yuehan [shao-le {**ta_i**/tamen_i}]
 these books Xiaoming order you/I/John burn-PFV 3SG/3PL
 ‘Xiaoming ordered you/me/John to burn these books.’
 b. Zhexie shu_i, Xiaoming **jianyi** ni/wo/yuehan [shao-le {**ta_i**/tamen_i}]
 these books Xiaoming advise you/I/John burn-PFV 3SG/3PL
 ‘Xiaoming advised you/me/John to burn these books.’

Additional support for the embedded clauses being jussives comes from the embeddability of prohibitive negation *bie* 'don't'. *Bie* may even co-occur with NRPs in these embedded jussives:

- (24) Embedded jussives with prohibitive negation and NRPs
 Zhexie shu_i, Xiaoming mingling ni [bie shao-le ta_i]
 these books Xiaoming order you PROH burn-PFV 3SG
 'Xiaoming ordered you to not burn these books.'

Other examples of the licensing predicates are listed in (25).⁷

- (25) Other embedding predicates that license NRPs
- Object control: *jiao* 'ask (someone to do something)', *yao* 'demand', *yaoqiu* 'request', *rang* 'let', *quan* 'urge'
 - Subject control: *jihua* 'plan'
 - Non-control: *xiwang* 'hope'

A short note here is that the patterns remain the same with the topicalized antecedent in either matrix or embedded clauses:

- (26) Xiaoming jianyi ni/wo/yuehan [zhexie shu_i shao-le {ta_i/tamen_i}]
 Xiaoming advise you/I/John these books burn-PFV 3SG/3PL
 'Xiaoming advised you/me/John to burn these books.'

Importantly, doxastic predicates like 'believe' in (27) do not license an embedded NRP. Hence, NRPs can only be licensed in *embedded jussives* but *not* embedded declaratives.

- (27) (Zhexie shu_i) Xiaoming xiangxin [(zhexie shu_i) wo shao-le {*ta_i/tamen_i}]
 these books Xiaoming believe these books I burn-PFV 3SG/3PL
 "Xiaoming believed that I burnt these books."

Taking stock, NRPs are licensed by jussives, including imperatives, promissives, and exhortatives, suggesting that they establish some syntactic dependency with the jussive projection.

- (28) [CP C-jussive ... [TP ... [VP V NRP]]]

7. The licensing predicates do not have Huang (2022)'s "Type III" predicates (compare: Type II *jihuan* 'plan' vs. Type III *shefa/changshi* 'try', the latter of which cannot license NRPs), which are argued to be restructuring predicates that take a reduced clause like *vP/VP*.

3 The patient object restriction on NRPs

The distribution of NRPs is not only restricted by clause types, but also by grammatical functions and theta roles. Specifically, only *direct objects* that bear a *patient role* may be an NRP.⁸

3.1 Grammatical functions

First, **subjects** cannot be NRPs. Note that the subject is constructed as inanimate (as well as other cases below) so as to avoid violations of an animacy constraint, which will be discussed in §3.2.

(29) A subject cannot be an NRP

- a. Wo xiwang [zhexie taifeng] bie chuidao-le zheke shu!
 1SG hope these typhoons PROH blow.down-PFV this tree
 '(I hope) these typhoons don't blow down this tree!'
- b. *Zhaxie taifeng_i, wo xiwang **ta_i** bie chuidao-le zheke shu!
 these typhoons 1SG hope **3SG** PROH blow.down-PFV this tree
 'I hope these typhoons don't blow down this tree!'

Second, an **indirect object**, unlike direct objects, also cannot be an NRP.

(30) An indirect object cannot be an NRP

- a. Ni yinggai song-gei [zhaxie gongsi] yibi qian!
 2SG should give-to these companies one money
 'You should give these companies an amount of money!'
- b. *Zhaxie gongsi_i, ni yinggai song-gei **ta_i** yibi qian!
 these companies 2SG should give-to **3SG** one money
 Lit.: 'These companies, you should give it an amount of money!'

(31) *Zhe jibu diannaoy_i, ni yinggai gei **ta_i** yidian naixin!
 this several computer 2SG should give **3SG** a.bit patience
 Lit.: 'These several computers, you should give it some patience!'

Last but not least, an **object of a preposition** also cannot be an NRP. Note that preposition-stranding is not allowed in Mandarin Chinese and an resumptive pronoun is needed after the preposition with topicalization, but the resumptive pronoun can only be an agreeing one (plural) instead of the NRP in this case.

8. There is also a telicity constraint on the predicate as observed by Xu (1999), which we set aside for now.

(32) A prepositional object cannot be an NRP

- a. Ni yinggai [yong zhe-jizhi bi] xie zuoye!
 2SG should use this-several pen write homework
 ‘You should use these several pens to do your homework!’
- b. *Zhe-jizhi bi_i, ni yinggai [yong **ta**_i] xie zuoye!
 this-several pen 2SG should use 3SG write homework
 Lit.: ‘These several pens, you should use it to do your homework!’
- c. Zhe-jizhi bi_i, ni yinggai [yong ***(tamen)**_i] xie zuoye!
 this-several pen 2SG should use 3PL write homework
 ‘These several pens, you should use *(them) to do your homework!’

3.2 Thematic roles

Apart from grammatical functions, the thematic role of the objects also matters. Only a **patient/theme (object)** may be an NRP. In (33a), the object is a **causee** rather than a patient. Crucially, only the agreeing RP *tamen* ‘they’, but not the NRP, is allowed in imperative (33b).

- (33) a. Ni qu qi-lei **zhexie ma**!
 you go ride-tired **these horse**
 ‘You go ride these horses until they get tired!’
 (i.e. go cause these horses to be tired by riding them!)
- b. **Zhexie ma**_i, ni qu qi-lei {***ta**_i/tamen_i}!
these horse you go ride-tired 3SG/3PL
 ‘You go ride these horses until they get tired!’

The same can be said to the applicative objects with an instrumental role (“non-canonical objects”).

- (34) a. Ni qie **zhexie caidao**_i ba.
 you cut **these knife** SFP
 ‘(You) use these knives (to cut something).’
- b. #**Zhexie caidao**_i, ni (qu) qie(-le) **ta**_i ba!
these knife you go cut-PFV 3SG SFP
 ONLY: ‘You go cut these knives!’ (=patient)
 BUT NOT: ‘You go use these knives to cut something!’ (=instrument)//

It should be noted that even for a patient object, there is a general preference for having an inanimate object over an animate object. Human objects are generally not acceptable, as shown in (a). For non-human animate objects like ‘chicken’, NRPs, though not entirely natural, may still be acceptable *modulo* speaker variations, as well as the choice of the predicate.

(35) The inanimacy preference of NRPs

a. Context: A dialogue in a movie:

Zhexie ren_i, ni qu zai-le {**ta_i*/tamen_i}! (✗ human)
 these person you go butcher-PFV 3SG/3PL
 ‘You go kill (lit. butcher) those people!’

b. Zhexie ji_i, ni qu zai-le {*%ta_i*/tamen_i}! (✓/✗ non-human animate)
 these chicken you go butcher-PFV 3SG/3PL
 ‘You go butcher those chickens!’ (more acceptable if the chickens are perceived as meat)

While we could not give a full explanation here, we speculate that the inanimacy preference may be related to the patient requirement, since inanimate entities are the prototypical patient/theme (but see Appendix for how a stranding analysis can handle it).

In short, together with the jussive licensing, the NRP always refers to the **patient object** upon which the addressee or the speaker (or the matrix subject, as in embedded jussives) is obligated to impose actions. This can be understood as an interaction of **addressee/speaker** with **argument structure** in **jussive** clauses.

4 The movement properties of NRPs

We argue that NRPs are not base-generated pronouns or object s.⁹ Rather, they are derived by movement, and, as we will propose, they are the (partial) realization of the lower copy/trace.

(36) The resumption dependency with NRPs is movement

... [_{TOPP} DP [_{TOP} [Top [_{TP} ... [VP V **NRP=ta**]]]]]

Movement properties		Non-agreeing RPs	Agreeing RPs
Locality (§4.1)	Long distance	✓	✓
	Island sensitivity	✓	✗
Connectivity (§4.2)	Idiom preservation	✓	✗
	Reconstruction for binding	✓	✗

Table 2: The movement properties of NRPs

9. The use of NRPs here should be distinguished from a non-referential, expletive use of *ta* ‘it’, as in *Wōmen hē tā gè sān bēi*, literally “we drink **it** three glasses (of wine)” (Lin 1994; Lin and Zhang 2006; Wu and Matthews 2010). This use of *ta* imposes an *indefinite* constraint on the object (i.e. the sentence “*we drink it these three glasses of wine” with a definite object is not acceptable). As far as we know, the NRP use of *ta* requires a *definite* object being displaced instead.

4.1 Locality

First, the NRPs may be separated from the antecedent (i.e., the topicalized nominal) across a clause boundary, as can be seen from the embedded jussives in §2.4 above. As shown in (37), the embedded jussives may be further embedded in another (declarative) CP, yet allowing the NRP with the antecedent in the matrix clause.

(37) The resumption dependency with NRPs can be long-distance

- a. Zhaxie shu_i, Lisi mingling ni [_{embedded} shao-le {**ta_i**/tamen_i}].
 these books Lisi order you burn-PFV 3SG/3PL
 ‘(As for) these books, Lisi ordered you to burn it.’
- b. Zhaxie shu_i, wo tingshuo [_{embedded} Lisi mingling ni [_{embedded} shao-le
 these books 1SG hear Lisi order 2SG burn-PFV
 {**ta_i**/tamen_i}]].
 3SG/3PL
 ‘(As for) these books, I heard that Lisi ordered you to burn it.’

Second, while the resumption dependency can be long-distance, no island boundaries may intervene between the antecedent and the NRP, as illustrated by the complex DP island in (38a). Note that if the topicalization does not cross an island boundary as in (38b), the NRP can still be used.

(38) The resumption dependency with NRPs cannot cross a complex DP island

- a. Zhaxie shu_i, wo tingshuo-le [_{DP} [_{CP} Lisi mingling ni shao-le {***ta_i**/tamen_i}]]
 these books I hear-PFV Lisi order you burn-PFV 3SG/3PL
 de xiaoxi].
 DE news
 ‘(As for) these books, I heard the news that Lisi ordered you to burn {*it/them}.’
- b. Wo tingshuo-le [_{DP} [_{CP} zhaxie shu_i Lisi mingling ni shao-le **ta_i**]] de xiaoxi].
 I hear-PFV these books Lisi order you burn-PFV 3SG DE news
 Lit.: ‘I heard the news that (as for) these books Lisi ordered you to burn it.’

Similar patterns apply to other types of islands:¹⁰

10. Left Branch Extraction is also banned, but this could be attributed to the patient object requirement. In LBE contexts, the NRP is a possessor rather than a patient object.

(39) The resumption dependency with NRPs cannot cross other types of islandsa. *Adjunct island*

Zhe-jiben shu_i, wo tingshuo [_{adjunct} ruguo Zhangsan mingling ni shao-le
 this-several book I hear if Zhangsan order 2SG burn-PFV
 {*ta_i/tamen_i}], laoshi jiu hui hen shangxin.
 3SG/3PL teacher will be very sad

‘These several books, I heard that if Zhangsan orders you to burn {*it/them}, the teacher will be very sad.’

b. *Sentential subject island*

Zhe-jige huaping_i, [_{subject} Zhangsan jianyi ni za-le {*ta_i/tamen_i}] bingbu
 this-several vase Zhangsan suggest 2SG break-PFV 3SG/3PL not
 heshi.
 appropriate

‘These several vases, that Zhangsan suggests you break {*it/them} is not appropriate.’

c. *Coordination structure*

Zhe-jige huaping_i, Zhangsan jianyi ni [_{conjunct} za-le {*ta_i/tamen_i}] er
 this-several vase, Zhangsan suggest 2SG break-PFV 3SG/3PL and
 [_{conjunct} bie shao-le zhe-jiben shu].
 don’t burn-PFV this-several book

‘These several vases, Zhangsan suggests you break {*it/them} and (meanwhile) don’t burn these few books.’

4.2 Connectivity effects

First, idiomatic meaning is preserved with the use of NRPs. (40) shows an idiom ‘to blow bull leather’ which idiomatically means ‘to brag’.¹¹

(40) %Ni qu chui-le zhaxie niupi!.

2SG go blow-PFV these cow.skin

Lit.: ‘You go blow these bull leather (i.e. cow skins)!’

Idiom.: ‘You go brag about these things!’

The idiomatic reading ‘to brag’ is only available with the NRP in (41a), but not with the plural ARP in (41b). The latter only gives rise to the odd literal reading ‘to blow bull leather’.

11. One Northern Mandarin speaker we consulted rejected the baseline in (40). The second author, who is a Northern Mandarin native speaker, shares the judgment. The oddness comes from modifying part of the idiom *niupi* ‘cow skin’ with the plural classifier *xie*. For other speakers who accepted the baseline, the contrast in (41) held.

(41) Idiomatic reading is preserved with NRPs

- a. Zhexie niupi_i, ni qu chui-le **ta_i!** (✓ idiomatic)
 these cow.skin 2SG go blow-PFV 3SG
 Lit.: ‘These bull leather (i.e. cow skins), you go blow it!’
 Idiom.: ‘These things, you go brag about!’
- b. Zhexie niupi_i, ni qu chui-le **tamen_i!** (✗ idiomatic)
 these cow.skin 2SG go blow-PFV 3PL
 Only lit.: ‘You go blow these bull leather (i.e. cow skins)!’

Second, reconstruction for variable binding is also found with NRPs. In (42a), the controller (i.e. ‘everyone’) binds the reflexive variable *taziji* ‘him/herself’ contained in the topicalized nominal.

(42) NRPs allow reconstruction for variable binding

- a. [Naxie **taziji_i** de shu]_i, wo mingling [**mei yige ren**]_j gankuai shao-le **ta_i.**
 those 3SG.self DE book 1SG order every one person quickly burn-PFV 3SG
 Lit.: ‘Those books_i of him/herself_i’s, I ordered everyone_j to burn it_i.’ (i.e., I ordered everyone_j to burn his/her_j books.) (✓ reconstr.)
- b. *[Naxie **taziji_i** de shu]_i, wo mingling [**mei yige ren**]_j gankuai shao-le **tamen_i.**
 those 3SG.self DE book 1SG order every one person quickly burn-PFV 3PL
 Lit.: ‘Those books_i of him/herself_i’s, I ordered everyone_j to burn them_i.’ (i.e., I ordered everyone_j to burn his/her_j books.) (✗ reconstr.)

Taking stock:

(43) The resumption dependency with NRPs is movement

... [_{TopP} DP_[TOP] [Top [_{TP} ... [_{VP} V **NRP=ta**]]]]

5 Proposal: jussive agreement

To account for the empirical patterns above, we propose that the NRP establishes two separate dependencies: (i) *agreement* with the **jussive C head**, (ii) *movement* dependency with the antecedent (i.e. topicalization):

$$(44) \quad [{}_{CP} C\text{-jussive} [{}_{TOPP} DP_{{}_{TOPP}} [\text{Top} [{}_{TP} \dots [{}_{VP} V \langle DP \rangle = \mathbf{NRP} [{}_{TOPP} [{}_{JUSSIVE}]]]]]]]$$

We propose that the **non-agreeing form** of the NRP is derived by **partial Copy Deletion**. The proposal involves three key ingredients.

- (45) a. The [JUSSIVE] feature on the NRP, which is only present on objects with a patient role
- b. The lower copy but not the higher copy agrees with the jussive C head
- c. Two interface conditions on chain resolution, that give rise to partial Copy Deletion

First, the [JUSSIVE] feature on the NRP captures its licensing condition: there must be a jussive C head to agree with the NRP. We further suggest that only objects with a patient role (i.e., “disposal” objects) bear this feature - which is, the *patient* that receives the action directly **from the addressee/speaker** (in root jussives) or the matrix subjects with the obligation (in embedded jussives).

Second, we assume that the higher copy of the topicalized object does *not* agree with the jussive C head. The leading idea is it only agrees with the topic head and does not carry an accessible [JUSSIVE] feature. This is in a sense similar to Criterial Freezing (Rizzi 2006; although it usually concerns further movement, as compared to agreement). For concreteness, we assume with Obata and Epstein (2011) that A'-movement only moves A' features. Thus, the higher copy only carries the A' [TOP] feature agreed with Top.¹² The [JUSSIVE] feature only stays at the lower copy. In effects, it creates a configuration like below, where only the lower copy but not the higher copy of the object carries [JUSSIVE].

$$(46) \quad [{}_{CP} C\text{-jussive} [{}_{TOPP} DP_{{}_{TOPP}} [\text{Top} [{}_{TP} \dots [{}_{VP} V \langle DP \rangle_{{}_{TOPP} [{}_{JUSSIVE}]]]]]]]$$

Third, we further borrow the insight from Fanselow and Cavar (2002) that partial Copy Deletion (CD) may apply over full CD when the two copies agree with different heads, as given in (47). In the case of NRPs, the higher copy agrees with Top and the lower copy agrees with C_{jussive}, hence both copies need to be spelt out.

- (47) An interface condition (simplified)

In a chain $\langle C_1, C_2 \rangle$, spell out both C_1 and C_2 if they agree with different heads.

- (48) The interface condition in Fanselow & Cavar (2002:88)

Suppose $C = \langle C_1, C_2 \rangle$ is formed because a strong feature of H has attracted XP and suppose that H checks the operators features $f_1 \dots f_k$ of XP. Then the categories bearing $f_1 \dots f_k$ must be spelt out in C_1 .

12. Alternatively, one can adopt Safir (2019)'s approach where A'-moved elements are “insulated” by inserting a PP layer.

6 Concluding remarks

(54) Take home messages

- a. The NRP in Mandarin can only be licensed in jussive clauses, and there is an *Agree* relation between the **NRP** and **jussive** head:

$$[_{CP} C\text{-jussive} [_{TOPP} DP_{[TOP]} [\text{Top} [_{TP} \dots [_{VP} V <DP>= \mathbf{NRP}_{[TOP][JUSSIVE]}]]]]]]]$$

- b. Jussive is a *syntactic* clause type that has syntactic consequences on the form of resumptives - even in a language without other overt marking of jussives.
- c. The NRP can only be **patient objects** - suggesting some special interaction between objects and jussive clauses!

(55) Further questions to explore

- a. Theoretical: Why patient objects? Considering that they receive action which the *addressee* or the *speaker* (or the matrix subject, as in embedded jussives) is obligated to perform, what does the interaction with objects inform us about the nature of the interpretation of jussives?
- b. Analytic: How to account for the variations among Sinitic languages (e.g. Cantonese)?
- c. Cross-linguistic: Do objects in other languages have special behavior in jussives? ☞ **Yes!**

We would like to end the paper by pointing out that the link between objects and jussives is not restricted to just Mandarin Chinese. Den Dikken (1992, 1998) observe that *right-peripheral objects* are only allowed in imperatives but not declaratives in Dutch (but see Koopman 2007).¹³

(56) Right-peripheral objects are licensed in imperatives in Dutch

- a. Leg {a. die bal} neer {b. **die bal**}! (Imperative)
 put that ball down that ball
 'Put the ball down!'
- b. Jan legde {a. die bal} neer {b. ***die bal**} (Declarative)
 Jan put that ball down that ball
 'Jan put the ball down.'

(Den Dikken 1992, ex.1-5)

Crucially, the right-peripheral objects are only limited to **direct objects**, showing striking similarities with Mandarin.

13. Instead of treating the right-peripheral objects as a result of movement, Den Dikken (1992, 1998) proposes that imperatives in Dutch involve **empty operator movement** of (*direct*) objects, to a specifier of a functional projection that hosts imperative mood.

(57) Only direct objects can surface in the right-peripheral position in imperatives in Dutch

a. *Stuur dat boek op **die jongen!** (Indirect objects)
send that book up that boy

b. ?Stuur die jongen op **dat boek!** (direct objects)
send that boy up **that book**

(Den Dikken 1992, ex.23b-c)

Also null objects in English imperatives ... (and many other languages discussed in Bošković 2023):

- (58) a. Open carefully!
b. *You open carefully!
c. You open it carefully!

7 Appendix: an alternative stranding analysis

Partial deletion is not the only way to capture NRPs. An alternative way is to adopt the “big-DP”-cum-stranding approach (Boeckx 2003, see also Aoun, Choueiri, and Hornstein 2001). Under this view, NRPs are D heads that may take another DP.

- (59) The big DP structure
 $[_{DP\text{-big}} D\text{-NRP}_{[D]} [_{DP} \dots]]$

The derivation of a sentence with an NRP like ‘these books, you burn *it!*’ is shown below:

- (60) The derivation of NRPs by under the stranding approach

a. Baseline

$[_{TopP} Top [\dots [_{VP} [_{DP1} D_{[D]} [_{DP2} \textit{these.books}_{[D,+pl,n,\sqrt{book}]}]]]] \dots]$

b. Topicalization

$[_{TopP} [_{DP2} \textit{these.books}_{[D,+pl,n,\sqrt{book}]}] [_{Top} [\dots [_{VP} [_{DP1} D_{[D]} <[_{DP2} \textit{these.books}_{[D,+pl,n,\sqrt{book}]}]>]]]]] \dots]$

c. Full CD (PF)

$[_{TopP} [_{DP2} \textit{these.books}_{[D,+pl,n,\sqrt{book}]}] [_{Top} [\dots [_{VP} [_{DP1} D_{[D]} <[_{DP2} \textit{these.books}_{[D,+pl,n,\sqrt{book}]}]>]]]]] \dots]$

d. VI (PF)

$[_{TopP} [_{DP2} \textit{these.books}_{[D,+pl,n,\sqrt{book}]}] [_{Top} [\dots [_{VP} [_{DP1} \textit{ta}_{[D]}]]]]] \dots]$

In comparing the two approaches, the partial deletion approach is superior in deriving the jussive licensing pattern (*via* agreeing with multiple heads). It is not immediately clear how the stranding approach can derive it without a stipulation that only jussives license big DP structures. Nevertheless, the stranding approach may be able to capture the inanimacy requirement, as will be discussed below. We thank Željko Bošković for bringing up this possibility.

A novel generalization on the animacy of antecedents

Mandarin has a strong preference for the antecedents of NRPs to be *inanimate*. Such an (in)animacy preference is not found in Cantonese and Shanghainese. Upon closer examination, the variations are correlated with the availability of *plural markers*, on three levels:

- (61) a. Cross-linguistic (Mandarin vs. Cantonese/Shanghainese)
 b. Language-internal (animacy restrictions of plural *-men* in Mandarin)
 c. Individual (variations in non-human animate DPs).

- (62) Generalization on antecedents permitting NRPs

If the noun in a DP cannot be attached by a plural marker, the DP can take an NRP.

Language	Antecedents with NRPs		
	Human	animate	inanimate
Mandarin	*	%	OK
Cantonese	OK	OK	OK
Shanghainese	OK	OK	OK

Table 3: Variations in animacy restrictions

Variations in animacy restrictions

In Mandarin, human DPs cannot take NRPs as in (c) (*contra.* Xu 1999),¹⁴ in contrast to inanimate DPs in (a). There are variations in non-human animate DPs in (b). 4 out of 8 informants accepted (b), and the other 4 found it either degraded or ungrammatical.

(63) The inanimacy preference in Mandarin

- a. Context: A dialogue in a movie:
 Zhexie ren_i, ni qu zai-le {*ta_i/ tamen_i}! (✗ human)
 this-CL.PL person you go butcher-PFV 3SG/ 3PL
 ‘You go kill (lit. butcher) those people!’
- b. Zhexie yazi_i, ni qu zai-le {%ta_i/ tamen_i}! (✓/✗ non-human animate)
 this-CL.PL duck you go butcher-PFV 3SG/ 3PL
 ‘You go butcher those ducks!’
- c. Zhexie shu_i, ni shao-le {ta_i/ %tamen_i}! (✓ inanimate)
 this-CL.PL book 2SG burn-PFV 3SG/ 3PL
 Lit: ‘These books, you burn it/them!’

In Cantonese, however, such animacy restrictions are not found. All three types of antecedents allow NRPs.

(64) No animacy restrictions in Cantonese

- a. [Ni di jan]_i, nei jinggoi saat-saai {keoi_i/ keoidei_i}. (✓ human)
 this CL person 2SG should kill-ALL 3SG/ 3PL
 ‘You should kill those people.’
- b. [Ni di aap]_i, nei jinggoi saat-saai {keoi_i/ keoidei_i}. (✓ animate)
 this CL duck 2SG should kill-ALL 3SG/ 3PL
 ‘You should kill those ducks.’

14. Xu (1999) ex. 4 with *zhe bang xiaotou* ‘this gang of thieves’, ex. 13 with *zhexie jiahu* ‘these chaps’.

- c. [Ni di syu]_i, nei jinggoi siu-saai {**keoi_i**/ **keoidei_i**}. (✓ inanimate)
 this CL book 2SG should kill-ALL 3SG/ 3PL
 ‘You go kill (lit. butcher) those people!’

Shanghainese also allows both human and inanimate DPs to take NRPs:

(65) No animacy restrictions in Shanghainese

- a. [geq-nge gning]_i ngu io ciacueq-teq **i_i**. (✓ human)
 this-clfpl person I will solve-aspinn it
 ‘These men, I will get rid of.’ (adapted from Zhu 2023, ex. 7)
- b. [Diqnge meqzy]_i nung gue-teq **i_i**! (✓ inanimate)
 these things you throw-PFV 3SG
 Lit.: ‘These things, you throw it away!’

Correlation with plural markers

The animacy restrictions of NRP antecedents mirror the animacy restrictions of plural marker *-men* in Mandarin. *-Men* can only attach to human nouns, and, for some speakers, animate nouns as well. Crucially, it cannot attach to inanimate nouns.¹⁵

(66) The animacy restrictions of plural marker *-men* in Mandarin

- a. Ren/xueshang-**men** (✓ human)
 person/student-PL
 ‘people/students’
- b. %Gou/yazi-**men** (✓/✗ animate)
 dog/duck-PL
 ‘dogs/ducks’
- c. *Shu/zhuozi-**men** (✗ inanimate)
 book/table-PL
 ‘books/tables’

For human vs. inanimate DPs where the patterns hold across individuals, we get the following correlation:

(67) Correlation between *-men* and NRPs (Part 1)

- a. Human DPs can be attached by *-men* and cannot take an NRP.
 b. Inanimate DPs cannot be attached by *-men* and can take an NRP.

15. I think Zeljko Boskovic for drawing my attention to this correlation.

For animate DPs combining with *-men*, there are individual variations. Strikingly, the variations in animate-DP-*men* **correlate** with the variations in whether animate-DPs can take an NRP. There are three group of speakers:

(68) Correlation between *-men* and NRPs (Part 2)

- a. Group I: Speakers who reject animate-DP-*men* and allow animate-DPs to take NRPs.
- b. Group II: Speakers who accept animate-DP-*men* and disallow animate-DPs and animate-DP-*men* to take NRPs.
- c. Group III: Speakers who accept animate-DP-*men* and allow animate-DPs to take NRPs, but disallow animate-DP-*men* to take NRPs.

(69) Group III speakers

- a. Zhexie yazi_i, ni qu zai-le **ta_i!**
 this-CL.PL duck you go butcher-PFV 3SG
 ‘You go butcher those ducks!’
- b. *Zhexie yazi-**men**_i, ni qu zai-le **ta_i!**
 this-CL.PL duck-PL you go butcher-PFV 3SG
 ‘You go butcher those ducks!’

The above is summarized below. Importantly, there are no speakers (that accept NRPs for inanimate DPs) who (i) reject both *-men* and NRPs for animate DPs, or (ii) show a flipped contrast such that animate-DP-*men* can take NRPs but animate-DP cannot.

	animate-DP- <i>men</i>	animate-DP + NRP	animate-DP- <i>men</i> + NRP
Group I (n=2)	*	OK	*
Group II (n=4)	OK	?/??/*	*
Group III (n=3)	OK	OK	*
Unattested I	*	*	*
Unattested II	OK	*	OK

Table 4: Three groups of Mandarin speakers varying w.r.t. the animacy restrictions

The generalization holds beyond Mandarin. Recall that Cantonese and Shanghainese do not have the animacy restrictions on the antecedents. Strikingly, the plural markers in both languages can only occur in pronouns, but they cannot combine with nouns. This confirms the generalization on a cross-linguistic level.

(70) Plural markers in Cantonese and Shanghainese cannot combine with nouns

- a. keo**dei** vs. *hoksaang-**dei** [C]
 3PL student-PL
 'they / students'
- b. **ila** vs. *isang-**la** [S]
 3PL doctor-PL
 'they / doctors'

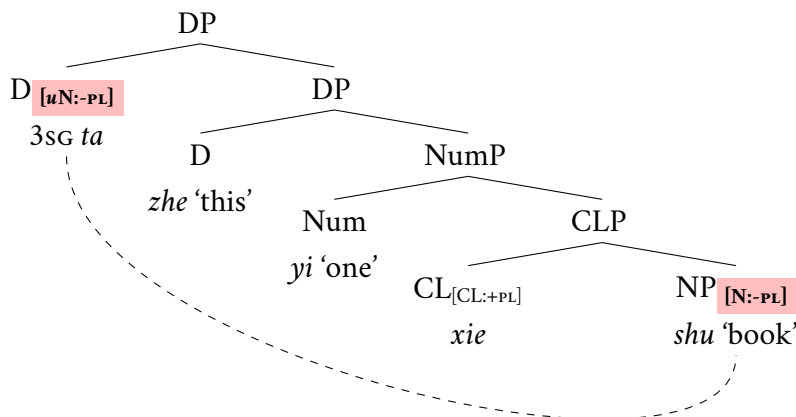
A stranding approach to movement-derived resumption

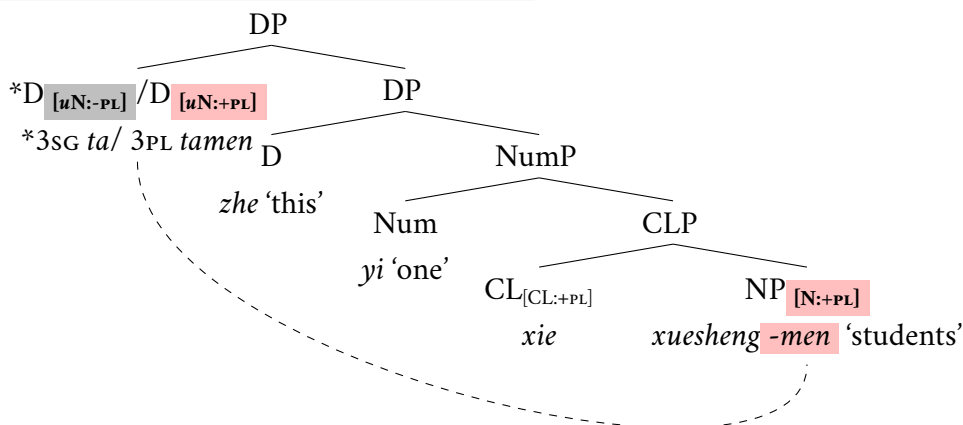
The big-DP + stranding approach is able to capture the generalization of animacy restrictions by making the following assumptions:

(71) Three assumptions

- a. *-Men* carries [N:+PL,+animate] features and can attach to animate nouns (cf. *-dei* in Cantonese being [D,PL]).
 (Individual variations: [animate] may be [human] for some speakers)
- b. *-Men* is *optionally* pronounced.
- c. The D in big DP structures carries [μ N:+/-PL] that must Agree with a NP with the corresponding features [N:+/-PL]
 (Plural features on other levels like Num and CL are irrelevant)

The proposed big DP structure is the following. In effect, NRPs can only combine with inanimate nouns, whereas ARPs may combine with animate nouns.

(72) The big DP structure with NRPs

(73) The big DP structure with -men taking NPs

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