

N-Initial and Pronominal-Initial Relative Clauses in Mandarin¹

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Abstract:

This paper describes the syntactic condition on N-initial relative clauses (RC) and pronominal-initial RCs in Mandarin Chinese. N-initial RC is only licensed when the head noun is extracted from the subject position of a non-finite clause and the complex NP as a whole is used as a subject of a generic sentence. The plural pronouns (except 1PL EXCLUSIVE) license both restrictive and attributive RC. In subject position, pronouns (except 1PL EXCLUSIVE and 2PL) can restrict the reference of the Num-RC-(NP), with or without the “antecedent” NP; and co-indexing with its antecedent in Dem-RC-(NP). 1PL EXCLUSIVE and 2PL can only co-indexing with the RC-(NP). Both “head” initial RCs respect subject/object asymmetry, the relativization site must only be the subject.

Keywords:

N-initial, pronominal-initial, relative clause, extraction of the subject, demonstrative, numeral

1. Introduction

Although rarely discussed in the literature, and also rarely occurs, there are N-initial relatives in Mandarin (Dong 2003).

- (1) *dangshi-ren* [dui jue ding bu-fu de], ke-yi shenqing fu-yi.
involved-people to decision not-agree DE can-by apply re-discuss
“If there is a party, no matter who, if the party disagrees with the decision, they can apply for an appeal.” (Dong 2003)

That a structure is “rare” can due to its special semantics; in other words, having a restrict set of syntactic constraints. Head initial RCs in Mandarin are “rare” exactly due to their highly specified syntax/semantics.

This paper focuses on head initial RCs. In section 2, I describe the syntactic conditions on N-initial RCs. The head noun is a relativized subject of a non-finite clause and main clause predicate of the complex NP must not be anchored.

In section 3, I describe another type of head-initial RC, i.e. pronominal (Pron)-initial RCs. The pronoun must also be the relativized subject of the RC. There are both restrictive and appositive Pron-initial RCs. The complex pronoun **can** occur in existential or presentational sentences with Locative inversion, where a simple

¹ I'd like to thank Tarald Taraldsen and Eva Dekany for their help and comments.

pronoun is barred due to the Definiteness Effect. The requirement of Num-(CL) and Dem in [Pron (Dem (Nom)) RC] depends on the number of the head pronoun, the interpretation of the complex pronoun and the position of the complex pronoun in the main clause.

We can see the internal structure of DP is directly related to its external structure.

2. N-initial RC

Suppose we have a pair of conditional sentences, as in (2)².

(2)a. *yi ge gao zhong sheng, ruguo mei zhou qu san ci jiuba,*
one CL high school student if every week go three time pub

jiu hui bei jiyu jinggao-chufen.
then will by give warning-punishment

“If a High school student goes to pubs three times a week, he will be given a warning.”

b. *yi ge gao zhong sheng, ruguo mei zhou qu san ci jiuba,*
one CL high school student if every week go three time pub

jiu kao-bu-shang daxue .
then exam-not-up college

“If a high school student goes to pubs three times a week, he won’t be able to pass the college entrance exam.”

The subject can be relativized, and when the NP is the head noun (boldfaced in 3, 4), it can precede (3) or follow the relative clause (4).

(3) ***Gao zhong sheng,*** *mei zhou qu san ci jiuba de,*
High school student every week go three time pub DE

jiyu jinggao-chufen.
give warning-punishment

“High school students, whoever go to pubs three times a week, will be given a warning.”

(4) *mei zhou qu san ci jiuba de* ***gao zhong sheng,***
every week go three time pub DE high school student

genben kao-bu-shang daxue.
earthly exam-not-up college

“High school students who go to pubs three times a week won’t pass the college entrance exam at all.”

² The subject *yi ge gaozhongsheng* “a high school student” can follow the conjunction in both sentences, *ruguo yi ge gaozhongsheng...* “if a high school student”, whether the subject is topicalized or not doesn’t have effect on the relativization.

The closest paraphrase of the sentence with N-initial RC (3) is (5), where both a prepositional *duiyu* “to” and an auxiliary *yao* “will” needs to be added.

- (5) *dui-yu mei zhou qu san ci jiuba de gao zhong sheng,*
as.to every week go three time pub DE high school student

yao jiyu jinggao-chufen.

will give warning-punishment

“High school students who go to pubs three times a week, should be given a warning.”

In other words, the main clause that takes an N-initial RC as its argument cannot take an NP with N-final RC and yet expecting to stand as an independent sentence (6). Either adding a coordinate sentence (6) or adding an auxiliary (7) is required.

- (6) *mei zhou qu san ci jiuba de gao zhong sheng, jiyu jinggaochufen;*
every week go three time pub DE high school student give warning

*(*qu san ci yishang de, jiyu yanzhong-jinggao-chufen*)

go three time above DE give serious-warning-punishment

“High school students who go to pubs three times a week will be given a warning; those who go more than three times a week, will be given a serious-warning.”

- (7) *mei zhou qu san ci jiuba de gao zhong sheng hui jiyu jinggaochufen*
every week go three time pub DE high school student will give warning.

“High school students who go to pubs three times a week will be given a warning.”

On the other hand, the main clause that licenses an NP with N-final RC, can also license an NP with an N-initial RC. The main clause predicate in (8) is the same as that in (4b).

- (8) *Gao zhong sheng, mei zhou qu san ci jiuba de,*
Hight school student every week go three times pub DE

genben kao bu shang daxue.

earthly exam-not-up college

“High school students, whoever go to pubs three times a week, won’t pass the college entrance exam at all.”

The condition for licensing N-initial RCs is more restricted than that for N-final RCs, the main restrictions come from both conditions on extraction domain (what a possible relativization site is) and the condition on the type of predicate that takes N-initial RC:

For the relativization site:

- (i) The head noun must be the subject gap.

A Theme can be the head noun only when being promoted to

- the subject position of the RC via passivization.
- (ii) Temporal adverbs in the RC must be non-deictic.

For the complex NP:

- (iii) an NP modified by an N-initial RC cannot occur in existential sentences when LocP is promoted.
- (iv) This complex NP cannot be the subject of a progressive sentence or the subject of any anchored predicate.
- (v) Demonstratives (Dem) *zhei/nei* ‘this/that’ and/or Numeral-Classifier (Num-CL) can’t precede the RC.
- (vi) Dem and/or Num-CL cannot precede the NP modified by a post NP relative clause.

In §2.1, I argue that properties (i, ii) show that the head noun is raised from a non-finite IP. In §2.2, I take (iii, iv) to suggest the N-initial can’t be the subject of a finite clause (i.e. an Utterance time (t*) anchored clause). In §2.3, I take the inverted word order in N-initial RC to be related to the English auxiliary inversion in subjunctives and the position of relative pronouns (preceding *—ever*) in free relatives.

2.1 Restriction on the gap

The head noun must be an extracted subject. A Theme can be the head noun only when being promoted to the subject position of the RC via passivization (9).

- (9) a. *xuesheng* ___ *bei kaoshiti nan-dao le de, keyi shui-jiao*
 student ___ by test puzzle-fall ASP DE can sleep-nap
 ‘If there are any students, whoever they are, if they are puzzled by the test, they can sleep.’
- b. **xuesheng, kaoshiti nan-dao le ___ de, keyi shui-jiao*
 student test puzzle-fall ASP ___DE can sleep-nap

The licensing position for subject (spec-IP, or Agr_s) is higher than that of the object (Agr_o). The extraction gap cannot be headed by any predicate, i.e. cannot be in the Complement of vP.

Temporal adverbs in the RC must be non-deictic.

- (10) *Er nianji yi-shang de xiaoxuesheng,*
 two grade a-bove DE pupil
 ‘pupils above Grade 2, (whoever they are, if they)’
- a. **zuo-tian/ *xia yibai bu jiao zuoye de, jiyu chufen.*
 *yesterday/*next week not hand.in homework DE give warning
- b. *liangxu san tian bu jiao zuoye de, jiyu chufen.*
 Continue three day not hand.in homework DE give warning
 ‘... don’t hand in their homework for three successive days, should get a warning.’
- c. *qian yi tian bu jiao zuoye de, di-er tian xuyao buqi.*
 before one day not hand.in homework DE second day need submit

“... don’t hand in their homework, should submit it on the next day.”

Non-deictic Temporal nominals are argued to be licensed at spec-TP (Di 2006); Deictic temporals link the event time of the sentence directly into the Utterance time, t^* . Here, we see a future distinction on non-deictic temporal nominals. The T-linked non-deictic temporal NPs (*san-tian qian* “three days before”), cannot be licensed in N-initial RC (11).

- (11) **san-tian qian bu jiao zuoye de, jiyu chufen.*
 *three weeks before not hand.in homework DE give warning

The phrase doesn’t anchor to the t^* , and since the complex N-initial NP cannot be licensed as argument in a t^* linked sentence (see §2.2), the kind of temporal nominals that can be licensed must not link to the t^* directly (deictic temporal) or indirectly (via matrix clause).

To sum up, the relativization site of N-initial RC must be the subject and the complex NP must not be the subject of an anchored predicate, i.e. it is a subject of a non-finite clause.

2.2 Distribution of NP with N-initial RC

Complex NPs with an N-initial RC cannot be object (12), after preposition *bei* “by” or *ba* “get” (13), nor can they be the possessor (14).

- (12) *xiaozhang shuo le *N-initial*_____
 principle criticize LE
- (13) a. *xiaozhang ba *N-initial shuo le*
 principle get criticize LE
- b. *xiaozhang bei *N-initial shuo le*
 principle by criticize LE
- (14) **N-initial de haizi /shoujuan*
 DE children /handkerchief

An NP modified by an N-initial RC can only be the subject of limited types of predicates, as we have seen, it can be the subject of modal verbs *neng* “can, allow, able”, *keyi* “can, allow”, or a predicate that conveys the meaning of permission or a necessary consequence *hui* “will, shall” (see all the grammatical sentences for illustration).

Complex NPs with N-initial RC cannot be the subject of a raising predicate *haoxiang* “seems” (15) or a control predicate *xiang* “want” (16).

- (15) **N-initial haoxiang shui zhao le.*
 seem sleep asleep LE
 “It seems that ____ has already fell asleep.”
- (16) **N-initial xiang shui jiao le.*
 want sleep nap LE

“___ want to sleep.”

NPs modified by N-initial RCs cannot occur in existential sentences (17).

- (17) a. **cao ping shang tang zhe xuesheng bu jiao zuoye de.*
Grass ground up lie ASP student not hand.in homework DE.
- b. **xuesheng bu jiao zuoye de zai cao ping shang tang zhe.*
student not hand.in homework DE at grass ground up tie ASP.

This complex NP cannot be the subject of a progressive sentence (18b) or the subject of any anchored predicate (19).

- (18) a. *Jiazhang bu canjia jiazhang-hui de, keyi zai cao-chang chou-yan.*
Parents not attend parent-meeting DE can at play-ground smoke
‘Parents, whoever they are, if they are not attending the meeting, can smoke on the playground.’
- b. **Jiazhang bu canjia jiazhang-hui de, zheng zai cao-chang chou-yan.*
Parents not attend parent-meeting DE just be.at play-ground smoke
- (19) **Jiazhang bu canjia jiazhang-hui de, mingtian qu jian xiaozhang.*
Parents not attend parent-meeting DE tomorrow go see principle

Demonstratives (Dem) *zhei/nei* ‘this/that’ and/or Num-CL can’t precede the RC (20), which is a special property for N-initial. In N-final RCs, having Dem or Num preceding the RC are both grammatical (21).

- (20) a. NP Dem RC
* *xuesheng zhei/nei [bei kaoshi-ti nan-dao le de], keyi shui-jiao*
Student this/that by test puzzle-fall ASP DE can sleep-nap
- b. NP Num CL RC
* *xuesheng si ge [bei kaoshi-ti nan-dao le de], keyi shui-jiao*
Student four CL by test puzzle-fall ASP DE can sleep-nap
- (21) a. Dem RC NP
zhei/nei [bei kaoshi-ti nan-dao le de] xuesheng keyi shui-jiao le
this/that by test puzzle-fall ASP DE student can sleep-nap LE
‘The/that student who has been puzzled by the test can sleep now.’
- b. Num CL RC NP
si ge [bei kaoshi-ti nan-dao le de] xuesheng dou shui-jiao le
four CL by test puzzle-fall ASP DE student DOU sleep-nap LE
‘The four students who have been puzzled by the test can sleep now.’

A Dem and/or Num-CL cannot precede the NP modified by a post NP relative clause (22); whereas N-final RCs gladly allow Dem or Num-CL to precede the head nouns (23).

- (22) a.

Dem	NP	RC
*zhei/nei	xuesheng	[bei kaoshi-ti nan-dao le de], keyi shui-jiao (le)
this/that	student	by test puzzle-fall ASP DE can sleep-nap (LE)
- b.

Num	CL NP	RC
*si	ge xuesheng	[bei kaoshi-ti nan-dao le de], keyi shui-jiao
four	CL student	by test puzzle-fall ASP DE can sleep-nap
- b'.

Num	CL NP	RC
*si	ge xuesheng	[bei kaoshi-ti nan-dao le de], dou shui-jiao le
four	CL student	by test puzzle-fall ASP DE DOU sleep-nap LE
- (23) a.

RC	Dem	NP
[bei kaoshi-ti nan-dao le de]	zhei/nei	xuesheng
by test puzzle-fall ASP DE	this/that	student

 keyi shui-jiao le.
“The/that student who has been puzzled by the test can sleep now.”
- b.

RC	Num	CL NP
[bei kaoshi-ti nan-dao le de]	si	ge xuesheng
by test puzzle-fall ASP DE	four	CL student

 DOU shui-jiao le.
“The four students who have been puzzled by the test can sleep now.”

The complex NP with a post-nominal RC can only occur in a predicate that is not anchored to *t** directly or indirectly. A relativized subject raised out of a non-finite clause forming a complex NP. The NP itself can only be the subject of a non-finite (generic) sentence.

The restricted syntactic properties match their special semantics (informally): the predicate scopes over the N-initial RC subject in **all** possible worlds; but the **existence** of the subject is not presupposed in any specific world(s).

2.3 Derivation

An N-initial RC is licensed as a subcase of the overlapping condition where one will use a subjunctive and a free relative. Informally put, the semantics of the sentences is: *whoever/whatever the NP (x) is, if x is an element in RC, then something will happen on x.*

In English, for certain high registers, auxiliary inversion can be used to form counterfactual condition (24).

- (24) a. *Had we known that, we would have told you.*
b. *Were I the President, ...*

In free relatives, a subpart of relative pronoun precedes the morpheme *-ever*.

- (25) *There is a lot of violence in whatever Parker writes.* (Fintel 2000)

There is a universal meaning encoded in certain free relatives (Dayal 1997, Fintel 2000), and Kayne (1994, 2005) suggests that *whatever* has two morphemes, a relative pronoun and a morpheme *ever*, a morpheme also found in indefinite *ever-y*. A relative pronoun is a determiner whose NP has raised to become the “head” of the relative. If a free relative has a relative pronoun, it has a “head”. The derivation for

free relatives involve raising the relative pronoun over *ever*.

If we take English *what-ever* in having the relative pronoun raised to precede a raised remnant DP *ever*; then in English, we have also find head-internal RCs. The “special” word order of relative pronoun preceding the head noun (*ever*) in English free relatives should also linked to the special semantics of free relatives.

The word order of the N-initial RC in Mandarin is “special” because its semantics is special. The “inversed” order of the NP and its modifier is not surprising as we have seen that inversion can be used to mark certain conditional sentence (although not the same type) in other language.

The derivation I suggests for N-initial RC, taking (1) as an example and repeated here as (26a), involve raising the RC and the main clause predicate (as illustrate in (26b, c).

(26)a. *dangshi-ren* *dui jue ding bu-fu* *de*, *ke-yi* *shenqing fu-yi*.

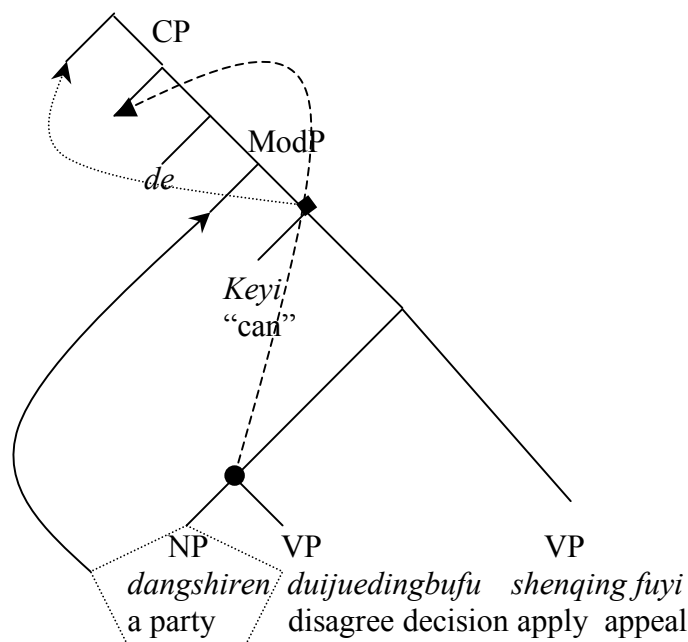
involved-people to decision not-agree DE can-by apply re-discuss

“If there is a party, no matter whom it consists of, if the party disagrees with the decision, they can apply for an appeal.”

b. The NP *dangshiren* “a party” raises up to Spec-ModP, thus becomes the argument of the ModP.

Merge *de* as a complimentizer which attracts the remnant of the lower clause.

Raise the Comp of ModP to spec of CP.



c. Raise CP to the spec of non-finiteP, to become the argument of non-finite predicate.

This triggers a remnant movement that contains the head noun to spec of a null universal operator CP (the head is where English *ever* finally lands).

b2. *wo/ni/ta* *men ?(zhei xie)* *bei Nana kan-jian de*
 1SG/2SG/3SG MEN this some by Nana look-see DE

dou bian cheng shitou le.
 DOU change into stone LE

“We/You/They, who have been seen by Nana, are all turned to stone.”

Demonstratives (Dem) are needed in order to make the complex pronoun stand as an argument. Dem is not necessary for plural pronoun (29b2), but it is required when the pronoun is singular (29b1).

Whether a Dem is required or not does not only depend on the number of the pronoun. When the pronoun is singular, the appearance of Dem is also depending on the main predicate. In (30a) Dem is required, in (30b) it is optional, in (30c), when the subject of the main clause is a subpart of the pronoun, Dem is again required.

(30)a. *wo/ni/ta* **(zhei (ge))* *kai* *chuzu de* *nar* *dou renshi*
 1SG/2SG/3SG *(this CL) drive taxi DE where DOU know
 e.g. “I’m the best taxi-driver, so I know every street.”

b. *wo/ni/ta* *(zhei (ge))* *kai* *chuzu de* *nar* *bu renshi?!*
 1SG/2SG/3SG (this CL) drive taxi DE where not know
 e.g. “Is there a place that I, a taxi-driver, don’t know?!”

c. *wo/ni/ta* **(zhei (ge))* *kai* *chuzu de* *shoutou bu fuyu*
 1SG/2SG/3SG *(this CL) drive taxi DE hand not affluent
 e.g. “I, a taxi-driver, am not rich.”

Deictic nominal temporal adverbs can occur in the Pron-initial RC, either in RC or in the main clause, or even both (31).

(31) *wo/ni/ta* *men zuo tian* *kai* *guo zhei liang chuzu* *de*
 1SG/2 SG/3 SG MEN yesterday drive ASP this CL taxi DE

jintian dou bei jiao dao gong'an-ju *qu le.*
 today DOU by call to police-station go LE

e.g. “Those who drove this taxi yesterday are all called to the police-station today.”

And Pron-initial RC can be subjects or objects of various types of predicates (examples and details see §3.1, §3.2). Dem and Num affects the interpretation of the complex pronoun (§3.1), and also determines their distribution (§3.2).

3.1 Dem / Num and the semantics of the complex pronoun

Dem cannot precede or follow a simple pronoun in Mandarin (32), nor can Num-CL (33).

(32) a. **zhei/nei Pron*
 this/that

- b. **Pron zhei/nei*
- (33) a. **liu/yi ge Pron*
six/one CL
- b. **Pron liu /yi ge*
six /one CL

Pron-final RCs can be licensed with strong unnaturalness (34a); however in the presence of Dem, Pron-initial is the only order: (35a) is unnatural, while (35b) a Pron-final RC with Dem is completely out.

- (34) a. ?? *kai chuzu de wo men bing bu fuyu.*
Drive taxi DE 1SG MEN frankly not rich
“We taxi drivers are not rich.”
- b. *wo men kai chuzu de bing bu fuyu.*
1SG MEN drive taxi DE frankly not rich
“We taxi drivers are not rich.”
- (35) a. ?(?)*kai chuzhu de ta-men, nar you zhou-mo a.*
drive taxi DE 3SG-MEN where have week-end FORCE
- b1. **zheixie kai chuzhu de ta-men, nar you zhou-mo a.*
these drive taxi DE 3SG-MEN where have week-end FORCE
- b2. **kai chuzhu de zheixie ta-men, nar you zhou-mo a.*
drive taxi DE these 3SG-MEN where have week-end FORCE

Num-CL is also impossible for a Pron-final RC, neither singular (36a) nor plural (36b).

- (36) a1. **yi ge kai chuzhu de ta, nar you zhou-mo a.*
one CL drive taxi DE 3SG where have week-end FORCE
- a2. **kai chuzhu de yi ge ta, nar you zhou-mo a.*
drive taxi DE one CL 3SG where have week-end FORCE
- b1. **si ge kai chuzhu de ta-men, nar you zhou-mo a.*
four CL drive taxi DE 3SG-MEN where have week-end FORCE
- b2. **kai chuzhu de si ge ta-men, nar you zhou-mo a.*
drive taxi DE four CL 3SG-MEN where have week-end FORCE

Dem and Num can be licensed in Pron-initial RC (37).

- (37) *ta-men (zheixie / liu ge) kai chuzhu de, nar you zhou-mo a.*
3SG-MEN these six CL drive taxi DE where have week-end FORCE
“How could they, those/the four who are taxi drivers, have time to enjoy a week-end?”

Dem has the effect of licensing a modifier for singular pronouns and functioning as a Determiner that introduces an argument to a sentence (30), a Num-CL can also function as D (38).

(38)a. *wo/ni/ta* **(yi (ge))* *kai* *chuzu de* *nar* *dou renshi*
 1SG/2SG/3SG **(one CL)* drive taxi DE where DOU know
 e.g. “I’m a taxi-driver, so I know everywhere.”

b. *wo/ni/ta* *(yi (ge))* *kai* *chuzu de* *nar* *bu renshi?!*
 1SG/2SG/3SG (one CL) drive taxi DE where not know
 e.g. “Is there a place that me, a taxi-driver, don’t know?!”

c. *wo/ni/ta* **(yi (ge))* *kai* *chuzu de* *shoutou bu fuyu*
 1SG/2SG/3SG **(one CL)* drive taxi DE hand not affluent
 e.g. “I, a taxi-driver, my life is not rich.”

In subject positions of non-existential/presentational sentences, Dem and Num differ slightly in meaning. With Dem, the person (denoted by the pronoun) distinguishes himself from the rest taxi-drivers. The presupposition is: I know every street. It doesn't imply that all taxi-drives know every street in town. When Num is used, the presupposition is: all taxi-drivers know the streets. Because I am a taxi-driver, so I know every street.

In other words, when singular pronoun is the head noun, in [Pron_{SG} Num RC] it restricts the RC, i.e. modifying the RC in a way an attributive adjective modifies the NP. In [Pron_{SG} Dem RC], the pronoun and the RC co-index.

Plural pronouns, all marked by the morpheme *men*, allow Dem (Num-CL) but don't require them in the corresponding sentences (39).

(39) a. *wo/ni/ta* *men (zhei si ge)* *kai* *chuzu de* *dou bu fuyu*
 1SG/2SG/3SG MEN (this four CL) drive taxi DE DOU not affluent
 “All six of us/you/them who are taxi-drivers are all not very rich.”

b. *wo/ni/ta* *men (zhei si ge)* *kai* *chuzu de nar* *bu renshi?!*
 1SG/2SG/3SG MEN (this four CL) drive taxi DE where not know
 “How could there be a place that the six of us/you/them who are taxi-drivers don't know?”

c. *wo/ni/ta* *men (zhei si ge)* *kai* *chuzu de* *shoutou bu fuyu*
 1SG/2SG/3SG MEN (this four CL) drive taxi DE hand not affluent
 “The six of us/you/them who are taxi-drivers are all not very rich.”

For *women* “1PL EXCLUSIVE” and *nimen* “2PL” complex pronouns with Dem, the semantics of [*wo/ni-men* Dem RC] is the same as having a Num in singular pronoun-initial RC ([Pron_{SG} Num RC]). Namely, the main predicate scopes over **all** members denoted by the RC, and the pronoun identifies the same set of entities as those identified by the RC.

In other words, the restrictive pronoun meaning (where the pronoun pick up a subset of RC, and the main predicate scopes over the pronoun) is not available for

women “1PL EXCLUSIVE” and *nimen* “2PL”.

When the pronoun is *zanmen* “1PL INCLUSIVE” and *tamen* “3PL”, the pronoun is used as an appositive modifier to the RC in [Pron RC], and they can be “restrictive clause” to the RC in [Pron Dem RC], both meanings can be derived in [Pron Num RC].

- (40) *Lai, (*kuaile de)³ zan-men 96jie de gan yi bei!*
 Come (*happy DE) 1SG(INC)-MEN 96grade DE dry one glass
 “Come on, let’s/let us who are graduated in 1996, have a glass (of beer)!”

Both restrictive and appositive meanings in (40) are possible: it can be that there are people around the table who did not graduate in 1996 and therefore don’t join the toasting; or everyone join the toasts. The reference of the complex DP depends on that of the RC. In (41), when the pronoun *zanmen* is not modified, everyone (the speaker and all the addressees in the context) must take part in the toasting.

- (41) *Lai, (*kuaile de) zan-men gan yi bei!*
 Come (*happy DE) 1SG(INC)-MEN dry one glass
 ‘Come on, let’s have a glass (of beer)!’

In other words, the relative clause does restrict the reference of the pronoun in imperatives. *wo-men* “1PL EXCLUSIVE” cannot occur in imperatives, the *ni-men* “2PL”, and *ta-men* “3PL” behaves like *zan-men* “1PL INCLUSIVE”, they allow both restrictive and appositive RCs.

Del Gobbo (2001) cites Delorme and Dougherty (1972), who claim that only appositive relative clauses can modify first and second person pronouns, changing “you” into “we” yields ungrammaticality:

- (42) a. We, who are women, think that you, who are men, should go now.
 b. *We, who are women, think that we, who are men, should go now.

If we use the inclusive pronoun *zanmen*, (42) cannot be replicated in Mandarin as both sentences will be bad (43). When we change the inclusive pronoun to exclusive pronoun *women* “1PL EXC”, (42) can then be replicated (44).

- (43) a. **zanmen ji ge nude jue de nimen ji ge nande gai zou le.*
 1PL INC several CL woman think 2PL several CL man should go LE
 b. **zanmen ji ge nude jue de zanmen/women ji ge nande*

³ Simple pronouns can be modified by adjectives, although fairly unnatural.

- (i) a. *?(?)kuaile de women*
 pleased DE 1PL(EXCLUSIVE)
 b. *? xingfu de ta*
 happy DE 3SG

However complex pronouns as indicated in (40, 41) cannot be modified by adjectives.

1PL INC several CL woman think 1PL INC/1PL EXC several CL man
gai zou le.
 should go LE

(44) a. *women ji ge nude jue de nimen ji ge nande*
 1PL EXC several CL woman think 2PL several CL man

gai zou le.
 should go LE

“We women think that you men should go now.”

b. **women ji ge nude jue de zanmen/women ji ge nande*
 1PL EXC several CL woman think 1PL INC/1PL EXC several CL man

gai zou le.
 should go LE

English doesn’t have the inclusive vs. exclusive distinction, thus the contrast has been attributed to the property of pronoun’s modifier. Mandarin shows that the restrictive/appositive distinction should be attributed to the interpretation of pronoun as well as the morpheme Dem/Num.

To sum up, Pron-initial RCs require an extracted subject gap. The pronoun cannot be further modified by adjectives, but when modified by post pronoun RC, the plural pronouns (except 1PL EXCLUSIVE) license both restrictive and attributive RC. In subject position, pronouns (except 1PL EXCLUSIVE and 2PL) can restrict the reference of the Num-RC-(NP), with or without the “antecedent” NP; and co-indexing with its antecedent in Dem-RC-(NP). 1PL EXCLUSIVE and 2PL can only co-indexing with the RC-(NP).

3.2 Dem/Num and the structural positions of Pron-initial RCs

Pron-initial RCs can occur in existential sentences (45), in subject position, they need either a Dem or a Num-CL. For singular pronouns, taking 3rd person as an example (which carries over to 1st and 2nd person), Dem is required (45-a1), Num-CL degrades (45-a2), and a bare head pronoun-RC (45-a3) is ungrammatical.

(45) — *zheng zai cao ping shang tang zhe ne.*
 right at grass ground up lie ASP FORCE

a1.

Pron _{SG}	Dem	CL	RC		NP
<i>ta zhei</i>	<i>ge</i>	<i>[mei jiao zuoye de]</i>		<i>??(ban-ganbu)</i>	
3SG	this	CL not.have hand.in homework DE		class-leader.	

 “She, a class president who didn’t turn in her homework is lying on the grass.”

a2.

Pron _{SG}	Num	CL	RC		NP
<i>??ta yi</i>	<i>ge</i>	<i>[mei jiao zuoye de]</i>		<i>(ban-ganbu)</i>	
3SG one	CL not.have hand.in homework DE			class-leader.	

a3.

Pron _{SG}	RC		NP
<i>*ta [mei jiao zuoye de]</i>		<i>(ban-ganbu)</i>	
3SG not.have hand.in homework DE		class-leader.	

- a4. *Ta*
3SG
“She is lying on the grass.”

- b1.

Pron _{PL}	Dem	Num	CL	RC		NP
	<i>tamen</i>	<i>nei</i>	<i>san</i>	<i>ge</i>	[<i>mei jiao zuoye de</i>]	(<i>ban-ganbu</i>)
	they	that	three	CL	not.have hand.in homework	DE class-leader

“Those three class presidents who haven’t handed in their homework are lying on the grass.”

- b2.

Pron _{PL}	Num	CL		RC		NP
	<i>tamen</i>	<i>san</i>	<i>ge</i>	[<i>mei jiao zuoye de</i>]	(<i>ban-ganbu</i>)	
	they	three	CL	not.have hand.in homework	DE class-leader	

“Those three class presidents who haven’t handed in their homework are lying on the grass.”

- b3.

Pron _{PL}		RC			NP
	? <i>tamen</i>	[<i>mei jiao zuoye de</i>]	?(<i>ban-ganbu</i>)		
	they	not.have hand.in homework	DE class-leader		

“Those three class presidents who haven’t handed in their homework are lying on the grass.”

- b4. *Tamen*
they
“They are lying on the grass.”

For plural pronouns, when they are subjects in existential sentences, both Dem and Num-CL can make the complex pronoun a suitable DP, a pronoun with bare-RC (45-b3) is not perfect if the antecedent NP is not pronounced (45-b3). Dem in the RC of a singular complex pronoun forces the antecedent NP (45-a1) to be pronounced.

Locative Inversion is a place where we see the Definiteness Effect, i.e. a Dem preceded NP cannot be licensed.

- (46) **cao ping shang tang zhe zhei ge xuesheng.*
Grass ground up lie ASP this CL student

When the Ground is promoted, simple pronouns cannot be licensed (47-a4, 47-b4), but complex pronouns with Dem preceding the RC can be licensed. Again, in complex singular pronouns, Dem forces an overt antecedent (47-a1); when the pronoun is plural, no such requirement is necessary (47-b1). Num-CL can license a complex plural pronominal DP (47-b2), but it cannot license a DP with a singular pronoun (47-a2).

- (47) *cao ping shang tang zhe* _____
grass ground up lie ASP

- a1.

Pron _{SG}	Dem	CL	RC		NP
	<i>ta</i>	<i>zhei</i>	<i>ge</i>	[<i>mei jiao zuoye de</i>]	??(<i>ban-ganbu</i>)

*(*ke hai-shi bu jiejie wenti*).

but yet-be not solve problem

“Nana finally found him, someone who studied medicine, but still that doesn't help much.” (For instance, only a doctor can do the job, not a pharmacist).

- b. *Nana zhongyu zhaodao le ta men (si ge) xue yao de le.*
Nana finally find LE 3SG MEN (four CL) learn medicine DE LE.
“Nana finally found them, the four who studied medicine.”

To sum up, simple pronouns show the Definiteness Effect while complex pronouns don't. Dem cannot precede or follow a simple pronoun in Mandarin, but it can precede a post pronoun RC. In a complex singular pronoun, an obligatory Dem forces an overt antecedent; when the pronoun is plural, the Dem is optional and the NP doesn't have to be pronounced. A complex plural pronominal DP in the object position can be licensed without any Dem or Num. Dem and Num are also crucial in licensing complex singular pronouns in the object position of resultatives, only a Dem can license a complete sentence.

3.3 One of the derivations for Pron-initial RCs

The fact that a complex pronoun can co-occur with Dem already makes Mandarin different from languages like English and Norwegian. What's more, a Dem inserted complex pronoun can occur in the places where a simple pronoun cannot, such as the Definiteness Effect position.

English Pronouns cannot be modified easily, in Standard English, only 1st and 2nd plural can be modified by a RC. In some varieties of American English, a complex pronoun can take the accusative form in nominative position.

- (50) a. %*Us linguists love beauty.*
b. *Life is difficult for us students.*

In Norwegian, pronouns can be modified easily, and the modified pronouns all take the Nominative form (Hestvik, 1992).

- (51) a. *hun/*henne med rød hatt*
she / her with red hat
b. *hun/*henne uten hår på hod-et*
she/ her without hair on head-the
c. *hun/*henne som går der*
she/ her that walks there

(from Hestvik 1992, changing

han “he” to *hun* “she”, as Tarald Taraldsen suggested due to the fact that nominatives and accusatives of masculine third singular often have the same form in many Norwegian dialects.)

Case, a position marker, isn't sensitive to positions in complex pronouns. Dem, which can only be licensed in the preverbal position of an existential sentence when the DP is simple (52), can be licensed in both positions when occurring inside a complex pronoun. In this respect, the Mandarin Dem is similar to a Case marker.

- (52) a. ?? (??zai) zhuang shang zuo zhe nei ge haizi.
 at bed up sit ZHE that CL child
- b. nei ge haizi zheng zai zhuang shang zuo zhe ne
 that CL child right at bed up sit ZHE NE
 “That/the child is sitting on the bed.”

Although Dem cannot be licensed in complex pronouns in Norwegian, post-NP definite articles can be licensed.

- (53) a. *den han som jeg snakket med (Hestvik 1992, note 12)
 that/it he that I talked with
- b. han gutt-en som jeg snakket med
 he boy-the that I talked with

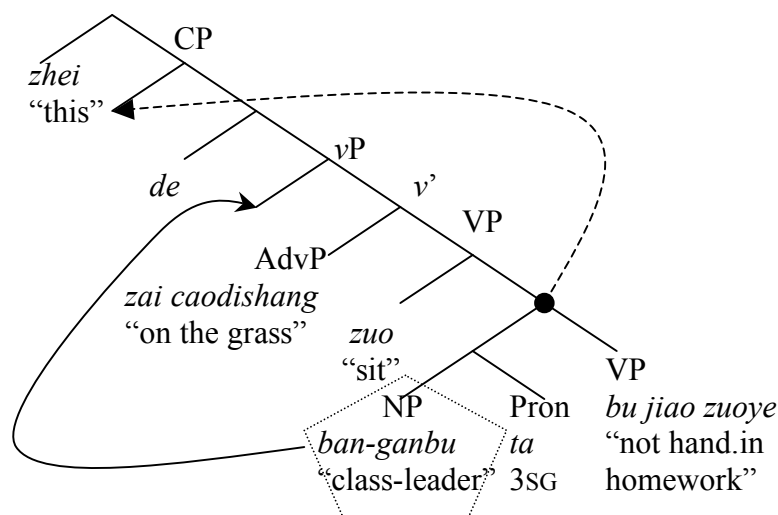
Again pointed out to me by Tarald Taraldsen, proximal demonstratives in Norwegian have the same form as the third person pronoun *den* “it”, *det* “it, expletive” and *de* “they”. Thus the ungrammaticality of (53a) can be related to the ungrammaticality of having stacked pronouns.

If Mandarin Dem is also closer to the Norwegian definite (*-en, -et, -a*) suffix, then the difference between Mandarin and Norwegian is where the morpheme occurs: Pron D RC N (Mandarin) vs. Pron N D RC (Norwegian). The word order difference can in part be explained by the hypothesis that Dem is a case marker as Nominative on pronoun is.

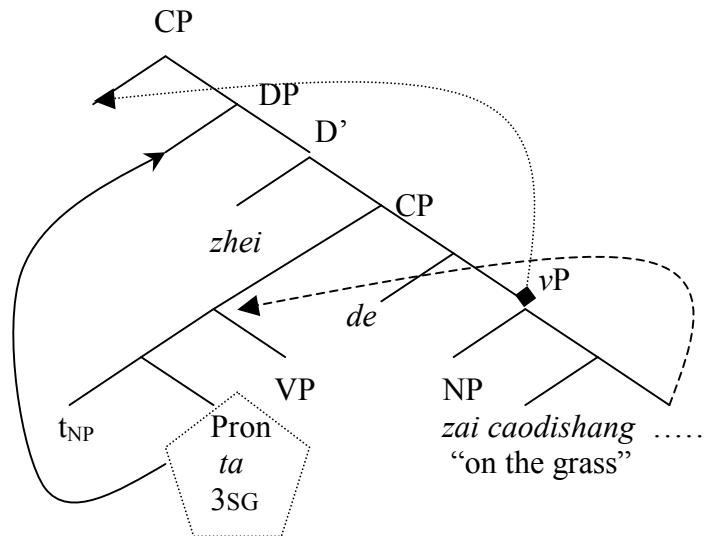
Leaving Norwegian aside, for complex pronouns in Mandarin, Dem is similar to the case markers that are lost in complex pronouns.

Thinking of Kayne (2002), pronoun and its antecedent starts of their derivation together [*John he*]. I take the NP as merging with the pronoun and propose the derivation for (47-a1) is as in (54). Here, the NP doesn’t come into the derivation with any specified reference, which features will be gained during the derivation.

- (54) a. Similar to the derivation of N-initial RCs, the NP raises up to the Spec of a verbal projection that licenses a subject and thus becomes the subject of the main predicate. Then raise the remnant to spec of *de* and Merge Dem.



- b. Raise Pron to spec of D; raise the vP.



The derivation in (54b) can be refined once we have a clearer understanding of the verbal-aspectual system. What is important for the present analysis is that there is a NP raising to A-position in (54a) which is also found in (26b).

There are three semantic types of Pron-initial RCs in subject positions. First, the RC specifies the reference of the pronoun, as in (40). Plural pronouns, except 1PL EXCLUSIVE, in imperatives belong to this group. Secondly, pronouns (except 1PL EXCLUSIVE and 2PL) restrict the reference of a Num preceded RC. Thirdly, 1PL EXCLUSIVE and 2PL pronouns co-index with their antecedents in Dem preceded RCs.

In existential sentences, all pronouns co-indexes with their antecedent RC-(NP). Yet in singular pronouns, an obligatory Dem forces an overt antecedent; when the pronoun is plural, Dem is not required, and the NP doesn't have to be pronounced.

The derivation in (54) will at most capture the derivation of singular pronouns in existential sentences, in the Definiteness Effect position. It would be wrong to assume that it covers the derivation of all instances of Pron-initial RCs in all the aforementioned cases. The licensing of IP is consciously simplified, thus the interweaving licensing of a complex DP and its predicate is not represented. However, the raising of NP to A-position, the important step that captures the subject/object asymmetry is represented. This step should exist in all Pron-initial RCs.

4. Conclusion

Sportiche (2008) and Kayne (2007), take French *qui* and the English complementizer *that* as instances of a relative pronoun and a demonstrative, respectively. It is not apparent how the present analysis carries over to French and English⁴, however, both N-initial and Pron-initial RCs respect subject/object

⁴ However, Taraldsen (2002) analyzes Vallader *qui* as *que* plus an *i* morpheme that is related to *id* “it”, a special type of expletive (note 3). If expletive in existential involves a raising of

asymmetry on the extraction gap, which is shared by the French *que/qui* alternation, as well as the English **that*-trace effect. Therefore, the shared NP raising step in (54a) and (26b) should exist in the subject related positions.

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there (Kayne 2006), the links among Mandarin, English, Romance and Norwegian should be all related to the raising a certain phrase.