

Re-diagnosing Appositivity: Evidence for Prenominal Appositives from Mandarin

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1 Introduction

Non-restrictive or “appositive” relative clauses convey supplementing information about the phrase they attach to. While English appositives are identifiable by comma intonation, as in (1b), diagnosing appositivity in other languages can be non-trivial. What cluster of fixed properties define appositives cross-linguistically?

- (1) a. The man [that is wearing glasses]_{CP} is my friend. *Restrictive*
 b. The man, [who is wearing glasses]_{CP}, is my friend. *Appositive*

This paper comes at the typological question by way of a language-internal question. How does the positioning of a Mandarin relative clause relate to the options for its interpretation? I argue that Mandarin has prenominal appositive relatives, and that these occur in the post-demonstrative position within the nominal. This finding is remarkable given claims by Potts (2003), Del Gobbo (2005) and De Vries (2006) that prenominal appositives do not exist, and indicates the need to reassess theories designed to guarantee their impossibility.

My main source of evidence is that Mandarin relative clauses pass a range of appositivity diagnostics, including three specific tests that Del Gobbo (2005) claims they fail. However, we can also observe (with Del Gobbo) that Mandarin appositives lack a number of features often taken to be diagnostic of appositivity—comma intonation, relative height within the nominal, and the ability to attach to non-nominal anchors. Thus, if there can be any unified notion of appositivity, these features must not derive from it.

The notion of appositivity that I rely on here is a fundamentally semantic one. Appositive relatives are just those that convey supplementing “conventional implicature” meaning, in the sense of Potts (2003). The features of English appositives that Mandarin appositives fail to display do not derive from this core notion, and should be removed from our collective “toolbox” of appositivity diagnostics. I remain neutral on the controversial issue of how to treat appositives in the syntax (see De Vries 2006 for an overview), and suspect that cross-linguistically, this question does not have a single answer.

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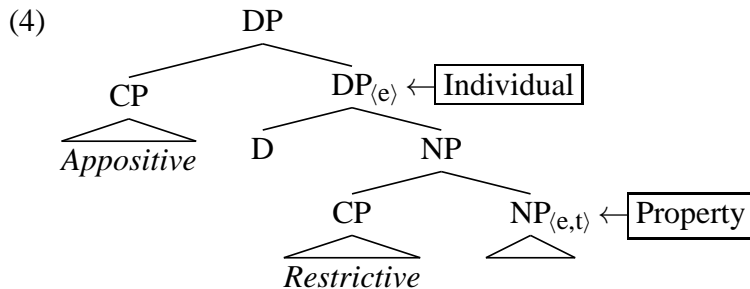
1.1 Mandarin Relative Clause Positions

Mandarin relative clauses show up in two positions within the nominal domain, as in (2). I will refer to these positions as RC₁ and RC₂, and take the dividing landmark between them to be instantiated by a demonstrative, numeral, ordinal, quantifier, classifier, or any combination thereof.¹ Chao (1968) refers to clauses in RC₁ as *restrictive*, and gives the paraphrases in (3), which suggest that RC₂ clauses are on a par with English appositives.

$$(2) \left[\text{RC}_1^* \left\{ \begin{array}{l} \text{Demonstrative (Numeral) Classifier} \\ \{ \text{Numeral} \mid \text{Ordinal} \} \text{ Classifier} \\ \text{Quantifier (Classifier)} \end{array} \right\} \text{RC}_2^* \text{ Noun} \right]_{\text{DP}}$$

- (3) a. [[*Dài yǎnjìng de*]_{CP} *nèi wèi xiānsheng*]_{DP} *shì shéi?* (Chao 1968)
 wear glasses DE that CL mister be who
 ‘Who is the gentleman who is wearing glasses (not the one who isn’t)?’
- b. [*Nèi wèi [dài yǎnjìng de]*]_{CP} *xiānsheng*]_{DP} *shì shéi?*
 that CL wear glasses DE mister be who
 ‘Who is that gentleman (who incidentally is) wearing glasses?’

However this classic analysis of Mandarin relative clause positioning is problematic for a number of reasons. First, it is hard to reconcile the Mandarin ordering facts with any standard view of the syntax/semantics of restrictive vs. appositive clauses. On one common view, restrictive relatives, as property-modifiers, adjoin to NP, whereas appositives directly modify an entity-denoting DP, as in (4). If this view is correct, it is mysterious why in Mandarin an appositive relative would appear closer to the noun than the restrictive version.²



Second, Del Gobbo (2003, 2005) and Lin (2003: 203–207) present convincing cases in which, counter to Chao’s expectations, a clause in RC₂ must be interpreted as restrictive. For example, in (5), from Del Gobbo (2003: 56), the DP containing the relative clause is headed by a quantificational expression, and so the clause must be restrictive, by Ross’s (1967) diagnostic, as in (6).

¹I’m ignoring a third position for relative clauses which is highly restricted, discussed by Huang *et al.* (2009: 215).

²Even under Chierchia’s (1998) proposal that as a language without determiners, Mandarin NP will denote (e)-level kinds, we still predict that atom-modifying appositives should out-scope restrictives. Intuitively, once we’ve narrowed down to the denotation of an atom, we have no means of shifting back to the particular property or kind denotation we had at NP to add a restriction.

(5) *Měi gè [dàifu kàn de]_{CP} xiǎoháir dōu dé-dào-le yī gè tángguǒ.*
 each CL doctor see DE kid DISTR get-reach-PFV one CL candy
 ‘Every kid that the doctor saw got a candy.’

- (6) a. Every student that wears socks is a swinger. (Ross 1967)
 b. #Every student, who wears socks, is a swinger.

Having shown that RC₂ is not always appositive, Del Gobbo goes on to make the stronger claim that Mandarin in fact lacks appositives entirely. But this claim cannot be right either. The following example from a news article in the Penn Chinese Treebank (Xue *et al.* 2005) is one intuitively clear case of an appositive. In section 3, we’ll see specific evidence that Mandarin relative clauses like this one are indeed appositive, by a variety of diagnostics.

- (7) Context: ‘The first industrial project set into motion—Jindao’s polished rice processing plant—was already completed and put into operation last year.’

[*Zhèi gè [yóu ... gōngsī yú ... gōngsī děng liánhé tóuzī*
 this CL by company and company etcetera join invest
sānqiānwàn měiyuán xīngjiàn de]_{CP} jīng-mǐ jiāgōng chǎng]_{DP} ...
 30.million dollar construct DE refine-rice process plant

‘[This polished rice processing plant, [which was constructed as a \$30M joint venture between Macao’s Far East Group, the Hainan Province Grain Oil Group, and others]_{CP}]_{DP} adopts the most advanced ... ’

2 What’s Wrong with Prenominal Appositives?

Potts (2003), Del Gobbo (2005), and De Vries (2006) all hope to derive the presumed non-existence of prenominal appositives from basic principles. However the principles underlying such explanations are not systematic or well-understood.

The semantics Potts (2003) provides for supplements is insensitive to linear order, and thus predicts the form [apposition, anchor] should have the same meaning as the attested English form [anchor, apposition]. However, Potts questions this systematic flexibility, stating (p. 184) that “we must ensure that nominal appositions always involve right-adjunction of the appositive to the anchor in the syntax”, and observing (p. 141) that languages that forbid right-adjunction appear to lack clearly appositive relatives. At the same time, Potts (2003: 141) admits that this correlation does not amount to an explanation. In fact, without this explanation, Potts’ account of supplements could be seen as predicting that prenominal appositives should exist.

Del Gobbo (2005) and De Vries (2006), on the other hand, claim that the linear ordering of appositive modifiers is not only fixed as rightward of the anchor, but also derivable from more primitive notions. Del Gobbo’s states that “[i]n order for the appositive relative pronoun to be correctly interpreted as E-type, it needs to temporally follow the ‘head’ it modifies.” The assumption here seems to be that some general principle rules out the use of an E(vans)-type pronoun that looks forward for its syntactic “antecedent”. However, this cannot be correct, given examples like (8) from Elbourne (2001: 270), credited to Bach and Peters:

(8) Every pilot who shot at **it** hit the MiG that chased him.

De Vries (2006: 239, 264) pursues a pragmatic explanation, ruling out prenominal appositives based on the fact that “in a discourse one can add information only to something that has already been mentioned”. However this functional account is also untenable, given examples like (9), where the supplement “built to last” precedes the first mention of the individual being specified.

(9) Built to last, the HP Wireless Elite Keyboard provides a full featured . . .

To sum up, there is no compelling reason to believe that prenominal appositive relative clauses should be impossible. Given that other types of supplementing material can precede their anchors, a restriction against prenominal appositives would be exceptional, and require an extra stipulation.

3 Diagnosing Mandarin Appositivity

Based on the following ten diagnostics, Del Gobbo (2003, 2005) concludes that Mandarin lacks appositives.³ In this section, I take a closer look at the diagnostics, and argue that the opposite conclusion is in fact justified.

- (10) a. Quantified NP’s can’t be antecedents of appositives.
- b. Pronouns in appositives can’t be bound by quantifiers from outside.
- c. Phrases modified by appositives can’t be in the scope of negation.
- d. Restrictives can stack, appositives can’t.
- e. Restrictive meaning is presupposed, appositive meaning isn’t.
- f. Appositives are DP-final, following restrictive modifiers.
- g. Appositives can contain root-level adverbs like *frankly*, restrictives can’t.
- h. Appositives can qualify unmodified proper names, restrictives can’t.
- i. Appositives allow pied-piping of complex wh- DP’s, restrictives don’t.
- j. Antecedents of appositives can be XP’s of any syntactic category.

Each diagnostic distinguishes restrictives from appositives by providing a context that rules out either one or the other. Specifically (10a–d) give contexts that rule out appositives, while (10g–j) rule out restrictives. The remaining diagnostics (10ef) are two-sided tests that provide one context of each type.

Before going any further, we can observe that “appositive-defeating” diagnostics like (10a–d) are incapable of shedding light on whether Mandarin has or lacks appositives. At best, these tests tell us that individual clauses are not appositive, and hence restrictive. For example according to test (10a), the relative clause in (5) must be restrictive. But this particular clause being restrictive leaves entirely open the question of whether an appositive could appear in the same syntactic position (say, in a sentence without the quantifier). Del Gobbo (2003, 2004, 2005) tacitly

³For the sources of these tests, see Del Gobbo’s work. I ignore the VP and NP ellipsis tests discussed by Zhang (2001) and Del Gobbo (2004) for reasons of space. For discussion of challenges running the ellipsis tests in Mandarin, see Lin (2003: 220).

takes the existence of restrictives in RC₂ to be evidence against the possibility that RC₂ can be appositive. However, logically, there is another possibility, which is that RC₂ can host both clause types. In fact, the restrictive-defeating diagnostics discussed in the next section show clearly that this is the case.⁴

3.1 Successful Diagnostics that Rule out Restrictives

3.1.1 The Presupposed Meaning Test

Comrie (1981: 132) and others observe that restrictive relatives convey presupposed meaning, whereas appositives must convey new information—cf. Potts' (2003: 148) “anti-backgrounding”. Thus, a context that ensures the content of a relative clause is new can serve as a diagnostic that rules out restrictives, as in (11).

- (11) Context: I met an interesting couple flying to Chicago yesterday.
- a. The woman, who hadn't slept on the previous flight, was bleary-eyed.
 - b. #The woman that hadn't slept on the previous flight was bleary-eyed.

Example (12) is a parallel case in Mandarin. Since the teacher's having just come back from Japan is new information, the clause in (12) must be appositive. Furthermore, (13) shows that in the same context, the appositive is unacceptable if it appears in RC₁. This is exactly what we expect if RC₁ is reserved for restrictives, as on the present analysis.

- (12) Context: Introducing a guest speaker, out of the blue.
- Zhèi wèi [gāng cóng Rìběn huí-lái de]_{CP} lǎoshi yào gěi wǒmen
 this CL just from Japan back-come DE teacher will for us
 jiǎng jīngjì.
 speak economy
 ‘This teacher, who has just returned from Japan, will speak on economics.’
- (13) ??[Gāng cóng Rìběn huí-lái de]_{CP} zhèi wèi lǎoshi yào ...
 just from Japan back-come DE this CL teacher will

3.1.2 The Root-Level Adverb Test

A second diagnostic that rules out restrictives is the root-level adverb test. While appositives can contain root-level adverbs like *frankly*, restrictives can't, as in the following example from Emonds (1979: 64):

- (14) a. The boys, who have frankly lost their case, should give up.
 b. The boys that have (#frankly) lost their case should give up.

Not every root-level modifier embeds in Mandarin relatives.⁵ However two adverbs with the desired root-level profile are *gūjì* ‘reckon’ and *bāchéng* ‘80 percent’. In (15), we see that *gūjì* is impossible inside RC₁, which has only a restrictive

⁴Of the six restrictive-defeating tests in (10), the only one I will avoid throughout is the pied-piping test, since it can't be run in a wh- in-situ language like Mandarin (Del Gobbo 2003: 62).

reading. By contrast, RC₂ accepts *gūjì*, as in (16), and the presence of the adverb disambiguates to the non-restrictive reading.

- (15) a. [*Kǎoshì huì bù jǐgé de*]_{CP} *nèi xiē xuéshēng yīnggāi gèng nǚlì.*
 test will not pass DE that few student should more try.hard
 ‘The students that won’t pass should put in more effort.’
 ≠ ‘Those students, who won’t pass, should put in more effort.’
- b. # [*Gūjì kǎoshì huì bù jǐgé de*]_{CP} *nèi xiē xuéshēng yīnggāi ...*
 reckon test will not pass DE that few student should
 Intended #1: ‘The students that I reckon won’t pass should ...’
 Intended #2: ‘Those students, who I reckon won’t pass, should ...’
- (16) a. *Nèi xiē [kǎoshì huì bù jǐgé de]_{CP} xuéshēng yīnggāi gèng nǚlì.*
 that few test will not pass DE student should more try.hard
 (i) ‘The students that won’t pass the test should put in more effort.’
 (ii) ‘Those students, who won’t pass the test, should put in more effort.’
- b. *Nèi xiē [gūjì kǎoshì huì bù jǐgé de]_{CP} xuéshēng yīnggāi ...*
 that few reckon test will not pass DE student should
 ‘Those students, who I reckon won’t pass, should put in more effort.’
 ≠ ‘The students that I reckon won’t pass should put in more effort.’

3.1.3 The Singleton Anchor Test

In general, proper names and other singleton-denoting expressions can take appositive modifiers, but resist restrictive modification, as in (17). Based on this diagnostic, Lin (2003), who otherwise accepts the claim that Mandarin lacks appositives, presents examples like (18) to argue that Mandarin relatives can be appositive, just in case the modified expression is a pronoun or proper name.

- (17) a. Einstein, who had early speech difficulties, was already a top student by elementary school.
 b. *Einstein that had early speech difficulties was ...
- (18) *Shuō yě qíguài, [bù ài chī niúpái de]_{CP} Zhāngsān jīngrán yě diǎn-le niúpái.*
 say also strange not love eat steak DE Zhangsan surprisingly also order-PFV steak
 ‘Strangely, Zhangsan, who doesn’t like steak, actually ordered steak too.’

By contrast, Del Gobbo (2003: 142–144) maintains that even Mandarin clauses modifying entity-denoting names are restrictive in some sense, claiming they can

⁵Del Gobbo (2003: 53–54) takes the inability of *shùnbìànshuō* ‘by the way’ to occur in Mandarin relative clauses as evidence that Mandarin lacks appositives. However this expression patterns more closely with English interjections than with adverbs like *frankly*, and is nearly always set off prosodically at the begin of the utterance. Thus it may be prosodic unembeddability rather than a semantic clash that prevents this expression from occurring in relatives clauses.

be bound into, and resist root-level adverbs. However these claims are not convincing. When considering the binding facts, it is important to control for cases where appositives appear to allowing binding, as in (19). In particular, this example could be a case of the “illusory binding” that Fox (2000: 56) discusses as *telescoping* (following Roberts 1987).

- (19) [Each contestant]_i was asked ten questions about [his]_i wife, who had to sit behind the scenes and couldn’t help [him]_i.

To avoid this complication, Potts (2003: 107), in running the binding test on English appositives, is careful to use downward entailing quantifiers, which Fox (2000) cites as ruling out the option of telescoping (Evans 1980). When we test Mandarin quantifiers in the scope of negation, the result is a solid judgment that binding into an appositive is impossible:⁶

- (20) #*Bān-lǐ méi-yǒu rén_i yuànyì hé*
class-LOC not-have person willing with
[*jīngcháng tōu tā_i de dōngxi de*]_{CP} *Lǐsì zuò yīqǐ.*
often steal he POSS thing DE Lisi sit together
‘Nobody_i in class wants to sit with Lisi, who often steals his_i things.’

3.2 Inapplicable Diagnostics that Rule Out Restrictives

The presupposition test, root-adverb test, and singleton anchor test provided highly suggestive evidence that Mandarin possesses appositive relatives, and furthermore, that these clauses occupy the post-demonstrative RC₂ position, as Chao (1968) had originally hypothesized. In this section, I look at two tests that seem to give the opposite result. I resolve the conflict by arguing that these diagnostics depend on language-specific particulars in the syntax of relativization and the availability of specific movement and type-shifting operations. Thus, these tests are not good candidates for diagnosing appositivity cross-linguistically.

3.2.1 The Relative Clause Ordering Test

According to the relative clause ordering test, restrictives appear closer to the noun than appositives, as in (21). This diagnostic, adapted from Jackendoff (1977: 169), is plausibly grounded in the fact that restrictives are intersective property modifiers, whereas appositives can only attach to individual-denoting expressions, higher up in the nominal.

- (21) a. The girl that I saw, who John dislikes, is beautiful. (Del Gobbo 2003)
b. *The girl, who John dislikes, that I saw is beautiful.

⁶Note, a minimally different example binding into a restrictive is possible. If the singleton anchor in (20) is replaced with a property-denoting expression like *rén* ‘person’, the result is acceptable and means ‘Nobody_i in class wants to sit with someone who steals his_i things.’

We have already seen that Mandarin appositives typically occur in RC₂, closer to the noun than restrictives occurring in RC₁. Furthermore, in examples containing both types of relative clause, we see overt evidence that the appositive is closer:⁷

- (22) ... [*zuì zǎo bèi jièshào dào Zhōngguó de*]_{CP₁}
 most early PASS introduce to China DE
 [*wéi shù bù duō de*]_{CP₂} *jǐ míng Ōu-Měi gēxīng* ...
 be number not many DE several CL Europe-America pop.star
 ‘As one of [those Western stars [who were known to China early on]_{CP₁} ,
 [who are not many in number]_{CP₂}]_{DP} , Richard Marx has ...

Given these facts, it is worth reconsidering Jackendoff’s diagnostic. It is reasonable to suppose that the tendency for appositives to appear higher in the syntax arises from a real difference in how restrictive and appositive modifiers are interpreted. However I propose that this correspondence between appositiveness and syntactic height is no less overridable than any correspondence of meaning with (surface) syntax. Specifically, if a restrictive relative were raised from its underlying position, and interpreted via reconstruction, nothing would prevent it from surfacing further from the noun than appositive modifiers. Similarly, if an appositive were able to take scope higher than its surface position, nothing would prevent it from appearing closer to the noun than a restrictive modifier. Thus, the only defensible ordering generalization is the more conservative version given as follows:

- (23) An appositives will surface higher than a restrictive *unless* one or both of the clauses is interpreted as having scope different from its surface position.

In fact, we already have evidence for both types of mismatch from English. Emonds (1979: 222) discusses exceptions to Jackendoff’s ordering principle involving extraposition of a restrictive around an appositive into a sentence-final position, as in (24). This is clear evidence that restrictive relatives can surface higher than where they scope. Conversely, we find examples of entity-modifiers embedded within NP, as in *industrious* in (25). This shows that individual-modifying semantics do not imply DP-modifying surface syntax.

- (24) We found the movie, which cost plenty, that you so highly recommended.

- (25) The industrious Greeks built the parthenon in only fifteen years.

3.2.2 The Non-Nominal Anchor Test

The basic observation underlying the non-nominal anchor test, which traces back to Ross (1969), is that English appositives can attach to anchors of any syntactic category, whereas restrictives can only modify nominal expressions. For example, (26)

⁷This attested example from the Penn Chinese Treebank has both relatives in RC₁, which is surprising on the present view that appositives are fixed to RC₂. However, if the quantifier and classifier *jǐ míng* ‘several CL’ are removed and speakers are given a choice (in the context of the original article) of where to insert *nèi xiē* ‘those few’, the preference is to make the restrictive RC₁ and the appositive RC₂. This suggests that quantifiers like *jǐ* ‘several’ need to be distinguished from demonstratives in the syntax, and that the positioning of relatives is sensitive to this difference.

shows an appositive can anchor to the AP *courageous*, whereas a restrictive cannot directly modify AP (cf. “the kind of courageous. . .”). This diagnostic has been a regular player in discussions of appositivity, including work by Jackendoff (1977), Sells (1985a), Potts (2003), De Vries (2006) and others.

- (26) a. Mary is [courageous]_{AP}, which I will never be.
 b. *Mary is [courageous]_{AP} that only a fool would be.

One way of looking at these data is as a remarkable fact about appositives—that they are free to attach to various syntactic categories. Another way of looking at the same data is as a remarkable fact about English non-nominals—that they are able to denote individuals. Crucially, as Sells (1985b), Potts (2002), and Del Gobbo (2003: 152) have argued, this second remarkable condition must hold for appositives like (26a) to be licensed. This general ability of English non-nominals to covertly shift to type ⟨e⟩ is reflected in their ability to stand as arguments, and to be resumed with pronominal *that*, as in (27). However the shift from property to individual isn’t freely available. As (28) shows, AP modifiers can’t be picked up by *that*, and fail to license appositives.

- (27) a. Courageous is a good thing to be.
 b. Mary is courageous_i. That_i is something that I will never be.
 (28) a. The courageous_i lion trainers opened the cage.
 *That_i is what I want to be.
 b. *The courageous, which is what I want to be, trainers opened the cage.

This raises the larger issue of what, in a given language, controls which expressions can freely shift to ⟨e⟩ and thereby introduce discourse referents. I will not explore this issue further here, but merely observe that without a clear answer to this question, we should not have any expectation about whether a language will permit non-nominally anchored appositives.

Turning to Mandarin, Del Gobbo (2003: 51–52) shows that relatives cannot modify non-nominals, and I will not dispute this. However we can also observe that unambiguously non-nominal constituents seem to resist ⟨e⟩-level uses more generally. For example, (29) shows that the PP *zài chuáng xiàmiàn* ‘under the bed’ is unable to stand as a subject equated with a nominal predicate headed by *dìfang* ‘place’.⁸ Thus, if previous research is correct in saying that appositives need to attach to expressions of type ⟨e⟩, we predict that Mandarin, even if it allows appositives, will lack non-nominally anchored appositives.

- (29) ??[*Zài chuáng xiàmiàn*]_{PP} *shì mǎo zuì xǐhuan de dìfang*.
 at bed underside be cat most like DE place
 ‘Under the bed is the cat’s favorite place.’

Lin (2003: 226) provides another line of thought on the lack of Mandarin non-nominally anchored appositives. For Lin, the problem lies in the simple fact that

⁸With respect to PP specifically, Li (1990: 29–35) presents the related finding that Mandarin PP’s are unable to occur in Case positions.

Mandarin relatives use the linking element *de*, which is lexically restricted to occur with nominals. While this explanation may feel overly stipulative, it is worth considering that a clause’s inability to modify a non-nominal may reduce to a trivial fact of how relatives are built in a given language. If this is the case, the non-nominal anchor test for appositivity loses its weight.

Finally, Cinque (2006: 17) shows that in Italian, syntactically “non-integrated” appositives can attach to non-nominal anchors, but a second class of “integrated” appositives are restricted to DP anchors. Based on the Italian facts, we can conclude that the ability to attach to non-nominal anchors may diagnose non-integrated syntax, but cannot be directly correlated with appositive semantics. Indeed, it is not clear how we would begin to derive this syntactic anchoring behavior from the core notion of appositives as supplements.

3.3 Additional Tests for Supplementing Meaning

Potts (2003: 147–160) lays out the formal properties of conventional implicature or “supplementing” meaning as in (30). Beyond the presupposition test from above (corresponding to Potts’ anti-backgrounding), the properties of independence and undeniability confirm that Mandarin relatives can convey supplementing content.

- (30) a. *anti-backgrounding*: can’t repeat backgrounded information (or is redundant)
 b. *independence*: at-issue meaning can be calculated independently from conventional implicature meaning
 c. *undeniability*: can’t be denied or questioned with epistemic riders
 d. *non-restrictiveness*: can’t be used to restrict
 e. *scopelessness*: always interpreted with widest scope, regardless of embedding

Sentence (31) is a case of a relative clause that is fundamentally independent from the meaning of the sentence it embeds in. Here, the at-issue content is just the proposition “The teacher thought that Lisi had done the prank”, which can be evaluated independently of the supplementing content “Lisi was at home”. Crucially, the supplementing content can’t be construed as embedded under the teacher’s beliefs. The sentence commits the speaker to the claim that Lisi was at home, without making any commitment about where the teacher believes Lisi was. This kind of speaker-orientation is another hallmark of conventional implicature meaning.

- (31) *Lǎoshī yǐwéi shì yīzhí zài jiā-li de Lǐsì zuò-le èzùojù.*
 teacher think.wrongly be all.along at home-LOC DE Lisi do-PFV prank
 ‘The teacher thought that it was Lisi, who had actually been at home all along, who had done the prank.’

In recent work, Del Gobbo (2009) applies the term “appositive” to Mandarin relative clauses anchored to singletons, but maintains these are unlike typical appositives in contributing at-issue meaning.⁹ However the interpretation of (31) is not compatible with this claim. The fact that the relative content fails to interact se-

mantically with its embedding context speaks strongly against not only an analysis as a restrictive, but also the possibility that the relative contributes at-issue meaning.

Finally, the property of unquestionability separates appositives from restrictives. As (32) shows, restrictive content can be questioned by epistemic riders, while appositive content can't.

- (32) a. If they hosted a party, then the party that they hosted was quiet.
 b. #If they hosted a party, then the party, which they hosted, was quiet.

The following examples give parallel cases in Mandarin. In (33), the content of a restrictive is called into question by the preceding *if* antecedent. By contrast, the relative clause in (34) is unquestionable, which is what we expect from appositives.

- (33) *Yàoshi tāmen liǎ yǒu yī gè rén bù ài chī ròu,*
 if they two have one CL person not like eat meat
 [*bù ài chī ròu de*]_{CP} *nèi gè rén kěyǐ chī zhè gè sù-cài.*
 not like eat meat DE that CL person can eat this CL vegetable-dish
 ‘If one of the two of them doesn’t like to eat meat, then the one that doesn’t like meat can eat this vegetable dish.’

- (34) (#*Yàoshi Lǐsì bù ài chī ròu,*) [*bù ài chī ròu de*]_{CP} *Lǐsì kěyǐ chī...*
 if Lisi not like eat meat not like eat meat DE Lisi can eat
 ‘(If Lisi doesn’t like to eat meat, then) Lisi, who doesn’t like meat, can eat this vegetable dish.’

With the addition of these tests, we now have a total of five diagnostics that succeed in demonstrating that Mandarin has appositives. These tests either get directly at properties of supplementing meaning, or in the case of the root-level adverb and singleton anchor tests, plausibly derive from such properties.

4 Towards an Account of Mandarin Relative Clause Positioning

Having shown that Mandarin possesses appositive relative clauses, we can take a fresh look at Chao’s problem of relative clause positioning. The problem, in its most general form is: given a Mandarin relative clause with a particular meaning, within a particular nominal phrase, where in that phrase will it be pronounced? On the one hand, we have made real progress on this question. We have seen that appositivity is reliably diagnosable, and that with few exceptions, if a clause is appositive, it will appear in the post-demonstrative RC₂ position, as Chao predicts. On the other hand, we seem to have taken a step backward. We have seen from Del Gobbo’s and other examples that appositives are not alone in occupying the RC₂ position. What then controls the positioning of restrictives?

I will not solve this general problem here, but I can offer one factor that I believe will have a role to play in any solution. Across a wide range of cases, speakers

⁹Del Gobbo (2010: 414) also refers to an underlying semantic distinction between “canonical” appositives and Chinese appositives, although what this difference amounts to is not spelled out.

agree that when a restrictive relative clause is used contrastively, it must be in RC₁, as in (35). In fact, the push for contrastive material to appear in RC₁ is enough to override the constraint Del Gobbo (2005) postulates against having individual-level modifiers in this position, as shown by (36).

(35) Context: This shop only has one flavor that I like, and one that Lisi likes.

a. [*Wǒ xǐhuan de*]_{CP} *nèi gè wèidào shì qiǎokèlì (de)*.
 I like DE that CL flavor be chocolate DE

‘The flavor that I like is chocolate.’

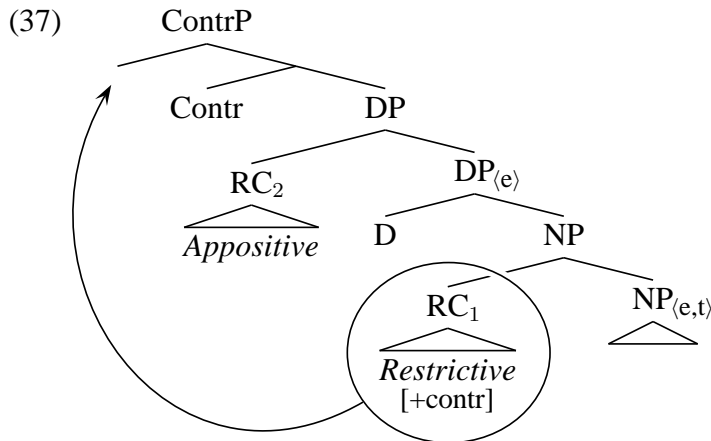
b. #*Nèi gè [wǒ xǐhuan de]_{CP} wèidào shì qiǎokèlì (de)*.
 that CL I like DE flavor be chocolate DE

(36) Context: They have two girls. One has brown eyes, and one has blue.

[*Yǒu hēi yǎnjīng de*]_{CP} *nèi gè nǚhái shì jiějie*.
 have black eye DE that CL girl be older.sister

‘The girl with brown eyes is older.’

These facts suggest an analysis whereby restrictives raise from RC₁ to RC₂, driven by the presence of contrast, and possibly by other factors as well. Such an analysis is sketched in (37), where ContrP is intended as an illustrative device, not a claim about a specific projection within the nominal periphery.



Initial support for a raising analysis of RC₁ can be found in scope ambiguities of ordinals. If we accept that the low-scope reading of (38) is derived by raising the ordinal leftward out of the relative, following Bhatt (2006: 27, 69), then the fact that the relative clause surfaces leftmost implies it has moved across the raised ordinal.

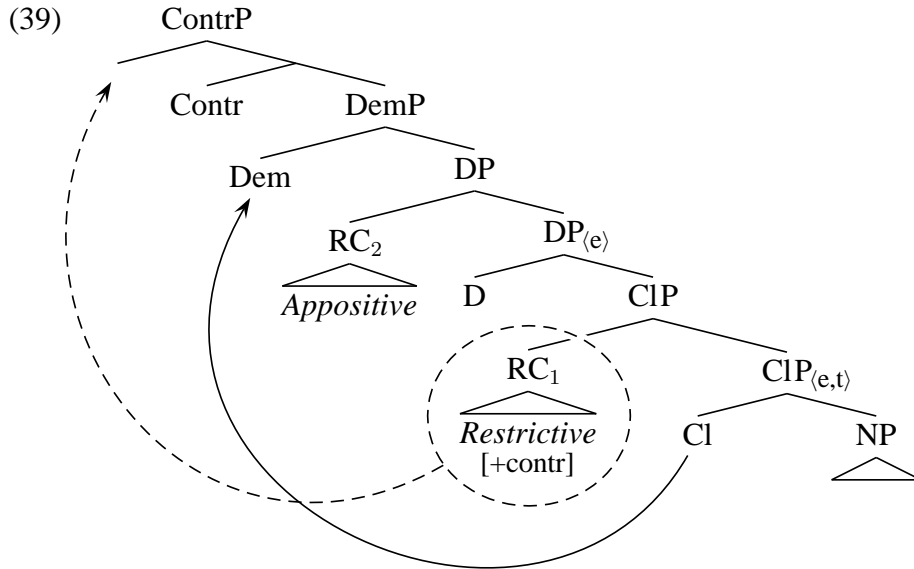
(38) [*Tā shuō wǒmen yīnggāi kàn de*]_{CP} *dì yī běn xiǎoshuō shì Huó-zhe*.
 he say we should read DE ORD one CL novel be live-DUR

‘The first novel he said we should read is *To Live*.’

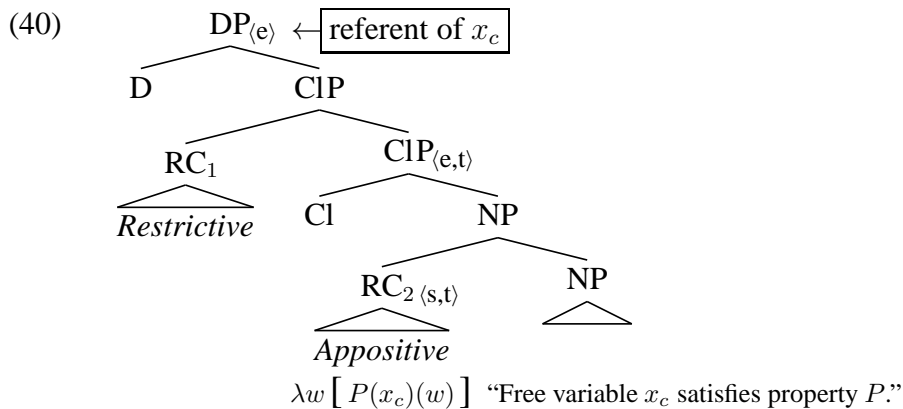
(a) He said we should **first** read *To Live* (and then read other novels).

(b) He **first** said we should read *To Live* (then recommended other novels).

But even if such a raising analysis is motivated, there is still a mystery as to why Mandarin appositives appear so low within the nominal. Specifically, if appositives modify DP, why do DP-internal classifiers surface leftward of appositives? One mechanical solution to this problem is to posit successive head-raising of the classifier across the appositive, as in (39). I will not explore further here whether this type of movement is in fact justified.



An alternative to the syntactic account above is to develop a semantics that is able to interpret the surface structure as is. Suppose we take the radical view that appositives are propositional, rather than property-denoting, with the missing argument already saturated by a contextually determined free variable. On this view, sketched in (40), the appositive does not combine compositionally with its surroundings at all, and thus can be interpreted in-situ even embedded within the DP it anchors to. The challenges for such an account are first, to explain why the appositive shows up where it does, as opposed to anywhere else, and second, to determine the constraints on how the free variable finds its reference. At a first pass, we might say that this variable anchors to the nearest discourse referent.



5 Conclusions

We've seen there is a wealth of evidence supporting the claim that Mandarin has appositives, and furthermore that these are "typical" appositives in terms of their semantic contribution. This finding goes against various claims that prenominal appositives are ruled out on principled grounds. However we saw that arguments for banning prenominal appositives were not convincing. In fact, work on Turkish (Kan 2009: 123–133) and Japanese (Kameshima 1989: 194–241) indicates that Mandarin is probably not alone in possessing prenominal appositives.

With respect to the appositivity diagnostics employed in the literature, we found an underlying inconsistency. Some of the tests succeeded in diagnosing the presence of Mandarin appositives, and these tests plausibly derive from the definitional notion that appositives convey supplementing meaning. However other traditional diagnostics failed to correlate with Mandarin appositivity. This second class of tests may diagnose non-integrated syntax, but cannot be relied on to diagnose appositivity. Thus, contra Del Gobbo (2009), Mandarin appositives do not represent a new sub-class of appositive, but rather motivate a reduction to core appositivity diagnostics that are viable cross-linguistically.

Finally, while predicting Mandarin relative clause placement is still an open question, I hope to have shown that the appositivity of the clause has a role to play. In particular, we saw that Mandarin appositives occur deeply embedded within the nominal, below demonstratives, classifiers, and restrictive relatives. This surprising fact suggests either that restrictives and classifiers are raised in the syntax but interpreted via reconstruction, or else that appositives should be allowed to anchor at a distance. Sorting out these and other possibilities is a problem for future work.

References

- Bhatt, R. 2006. *Covert Modality in Non-finite Contexts*. Berlin: Walter de Gruyter.
- Chao, Y. R. 1968. *A Grammar of Spoken Chinese*. Berkeley: University of California Press.
- Chierchia, G. 1998. Reference to kinds across languages. *Natural Language Semantics* 6.339–405.
- Cinque, G. 2006. Two types of appositives. *University of Venice Working Papers in Linguistics* 16.7–56.
- Comrie, B. 1981. *Language Universals and Linguistic Typology: Syntax and Morphology*. University of Chicago Press.
- De Vries, M. 2006. The syntax of appositive relativization: On specifying coordination, false free relatives, and promotion. *Linguistic Inquiry* 37.229–270.
- Del Gobbo, F. 2003. *Appositives at the Interface*. Irvine: University of California dissertation.
- 2004. On prenominal relative clauses and appositive adjectives. In *Proc. WCCFL*, ed. by B. Schmeiser, V. Chand, A. Kelleher, & A. Rodriguez, volume 23, 182–194.
- 2005. Chinese relative clauses: Restrictive, descriptive or appositive. In *Proc. XXX Incontro di Grammatica Generativa*, ed. by L. Brugè, G. Giusti, N. Munaro, W. Schweikert, & G. Turano.

- 2009. More appositives in heaven and earth than are dreamt of in your linguistics. LSA Presentation.
- 2010. On Chinese appositive relative clauses. *Journal of East Asian Linguistics* 19.385–417.
- Elbourne, P. 2001. E-Type anaphora as NP-Deletion. *Natural Language Semantics* 9.241–288.
- Emonds, J. 1979. Appositive relatives have no properties. *Linguistic Inquiry* 10.211–243.
- Evans, G. 1980. Pronouns. *Linguistic Inquiry* 11.337–362.
- Fox, D. 2000. *Economy and Semantic Interpretation*. Cambridge, MA: MIT Press.
- Huang, C. J., Y. A. Li, & Y. Li. 2009. *The Syntax of Chinese*. Cambridge University Press.
- Jackendoff, R. S. 1977. *X̄ Syntax: A Study of Phrase Structure*. Cambridge, MA: MIT Press.
- Kameshima, N. 1989. *The syntax of restrictive and nonrestrictive relative clauses in Japanese*. Madison: University of Wisconsin dissertation.
- Kan, S. 2009. Prosodic domains and the syntax-prosody mapping in Turkish. Master's thesis, Boğaziçi University.
- Li, Y. A. 1990. *Order and Constituency in Mandarin Chinese*. Dordrecht, Netherlands: Kluwer Academic Publishers.
- Lin, J. 2003. On Restrictive and Nonrestrictive Relative Clauses in Mandarin Chinese. *Qīnghuá Xuébào [Tsinghua Journal of Chinese Studies]* 32.257–296.
- Potts, C. 2002. The syntax and semantics of As-parentheticals. *Natural Language and Linguistic Theory* 20.623–689.
- 2003. *The Logic of Conventional Implicatures*. Santa Cruz: University of California dissertation.
- Roberts, C. 1987. *Modal Subordination, Anaphora, and Distributivity*. Amherst: University of Massachusetts dissertation.
- Ross, J. R. 1967. *Constraints on Variables in Syntax*. MIT dissertation.
- 1969. Adjectives as noun phrases. In *Modern Studies in English: Readings in Transformational Grammar*, ed. by D. A. Reibel & S. A. Schane, 352–360. Englewood Cliffs, NJ: Prentice-Hall.
- Sells, P. 1985a. *Anaphora and the Nature of Semantic Representation*. Stanford University: Center for the Study of Language and Information.
- 1985b. *Restrictive and Non-Restrictive Modification*. Stanford University: Center for the Study of Language and Information.
- Xue, N., F. Xia, F. Chiou, & M. Palmer. 2005. The Penn Chinese TreeBank: phrase structure annotation of a large corpus. *Natural Language Engineering* 11.207–238.
- Zhang, N. 2001. On the absence of nonrestrictive relatives in Chinese. Ms. ZAS Berlin <<http://www.usc.edu/dept/LAS/ealc/chinling/articles/appositives.pdf>> Retrieved July 11, 2011.