1. Introduction

Typologically speaking, adjectival expressions like relative clauses rarely precede a demonstrative in a prenominal position (cf. Greenberg 1963; Cinque 2005). The word order, nevertheless, is commonly observed among Chinese dialects. In fact, the division between restrictive and non-restrictive relative clauses in Chinese has long been a controversial issue. More specifically, Mandarin relative clauses, marked by the particle *de*, may show up in two positions within the noun phrase, either before the demonstrative-numeral-classifier sequence (DNC) or after the DNC, as shown in (1). We will refer to the pre-DNC relative as RC\textsubscript{1} and the post-DNC relative as RC\textsubscript{2}:

(1) (RC\textsubscript{1}) Demonstrative Numeral Classifier (RC\textsubscript{2}) Noun

Chao (1968) takes the two positions of relative clauses as indicating two different interpretations, that is, RC\textsubscript{1} is restrictive but RC\textsubscript{2} is descriptive (non-restrictive), as illustrated in (2a, b) respectively:

(2) a. [da i yanjing de] nei-wei xiansheng shi shei?
   wear glasses DE that-Cl mister be who
   'Who is the gentleman who is wearing glasses (not the one who is not wearing glasses)?'

b. nei-wei [dai yanjing de] xiansheng shi shei?
   that-Cl wear glasses DE mister be who
   'Who is the gentleman (who incidentally is) wearing glasses?'

The above distinction between restrictive and descriptive relatives has received a lot of discussion in the literature. For instance, Huang (1982) and Constant (2011a, b) accept his view on positions and interpretations. On the other hand, while

\footnote{Chao’s use of the term “descriptive” is often taken to be equivalent to non-restrictive or appositive. Note also that Chao does not exclude the possibility that RC\textsubscript{2} can be restrictive when it is stressed.}
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maintaining that positions are correlated with interpretations, Lü (1999) and Tsai (1994) take RC₁ to be non-restrictive and RC₂ restrictive, based on an (in)definiteness asymmetry between RC₁ of (3a) and RC₂ of (3b):

(3) a. *zuotian si-le [conglai bu xizao de] san-ge ren.
    yesterday die-Prf ever not bathe DE three-Cl person
    ‘Yesterday three people who never bathed died.’

b. zuotian si-le san-ge [conglai bu xizao de] ren.
    yesterday die-Prf three-Cl ever not bathe DE person
    ‘Yesterday three people who never bathed died.’

Still, some others such as Zhang (2001), Del Gobbo (2003, 2004, 2005), and Shi (2010) claim that all Chinese relatives, be it RC₁ or RC₂, can only be interpreted as restrictive relatives.

In contrast to RC₁ and RC₂, relative clauses modifying a proper name or pronoun (abbreviated as RMP hereafter) have received less attention in the literature. However, such relatives seem to be very good candidates where the non-restrictive interpretation of a relative clause should be found. Indeed, Lin (2003) argues that both RC₁ and RC₂ are restrictive but the non-restrictive interpretation is possible when an individual-level relative modifies a proper name or pronoun as illustrated by (4):

(4) [hen ai chi niupai de] Laowang jintian que dian-le yupai.
    very love eat beef-steak DE Laowang today but order-Asp fish-steak
    ‘(To our surprise), Laowang, who loves eating beef steak very much, ordered fish steak today.’

Del Gobbo (2010) accepts Lin’s position but claims that such non-restrictives are “integrated non-restrictive” relatives in the sense of Cinque (2006, 2008). On the other hand, Shi (2010) maintains that all RMPs, including those modifying a proper name, are restrictive.

The goal of this chapter is to examine the restrictive/non-restrictive debate from both the syntactic and semantic perspectives, while discussing what would be the possible cause for such a perplexing debate in a cross-linguistic context. Our presentation is organized as follows: In section 2, we give an overview of complicated issues associated with all sorts of syntactic and semantic construals of RMPs. Sections 3 and 4 then point out difficulties encountered in previous analyses, concluding that RMPs behave more in line with so-called “integrated non-restrictive” relatives in Italian. In section 5, we argue that there is a conceptual connection between RC₁ and a special class of secondary predicates observed in Huang (1987). Based on cross-linguistic evidence for the semantics of proper names from languages such as Portuguese, Modern Greek, Hungarian, Syrian Arabic, Russian, and so on, section 6 offers a novel account for the restrictive/non-restrictive paradox of construing modifiers of proper names or pronouns. In section 7, we discuss cross-linguistic variations on non-restrictive relatives, and conclude this article with section 8.
2. Review of the Status of RMPs

When a relative clause modifies a proper name or pronoun, intuitively it should be construed as non-restrictive, because the denotation of a proper name is independent of any modifier. Reasonable though the intuition is, this assumption has been challenged by some linguists. In particular, Del Gobbo (2003) shows that RMPs manifest syntactic properties of restrictive relatives and Shi (2010) argues that all RMPs are semantically restrictive. In this section, we will review the literature’s discussion of this issue.

2.1. SYNTACTIC ARGUMENTS

In line with her analysis of RC₁ and RC₂, Del Gobbo (2003) argues that even RMPs are restrictive and provides syntactic arguments for this position on the basis of the binding theory.

According to Safir (1986), a pronoun inside a non-restrictive relative cannot be bound by a quantifier from outside the relative. Del Gobbo (2003) shows that Mandarin RMPs allow binding from outside the relative, as shown in (5). Therefore, according to her, Mandarin relatives anchored to an entity-denoting name must be restrictive rather than non-restrictive.

(5) [mei yi ge xuesheng,] dou xihuan shi ta daoshi de Huang laoshi.
   every one Cl student Distr like he advisor DE Huang teacher
   ‘Every student likes professor Huang, who is his advisor.’ (Del Gobbo 2003: 144)

For this argument, Constant (2011a) comments that (5) is actually an example of what Fox (2000) refers to as telescoping “illusory binding.” He shows that English non-restrictives allow the same kind of telescoping binding.² To leave aside whether or not (5) involves the telescoping phenomenon, our own intuition is that (5), if not ungrammatical, is a very unnatural sentence, contrary to Del Gobbo’s judgment.

Constant (2011a), following Potts (2003) and Fox (2000), argues that to control for telescoping, a downward entailing quantifier should be used. Once such a quantifier is used, it becomes impossible to bind a pronoun or anaphor contained inside a relative that modifies an entity-denoting name. Consider the contrast between (6a, b) taken from Constant (2011a: 20). The ungrammaticality of (6b) shows that unlike the restrictive relative in (6a), a Mandarin RMP does not allow binding from outside.

(6) a. ban-li mei-you nusheng yuanyi he [bi ziji, ai de] ren tanlianai.
   class-Loc not-have girl willing with compare self short Rel person go.out
   ‘No girl in class is willing to go out with a person shorter than herself.’

² His example is (i) (Constant 2011a: 19)

(i) [Each contestant], was asked ten questions about [his], wife, who had to sit behind the scenes and couldn’t help [him].
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Thus, Safir’s binding test does not successfully prove that RMPs are not non-restrictive. Note also that when a downward-entailing subject is replaced by a proper name, binding from outside becomes possible, as will be shown in the next paragraph.

Del Gobbo’s (2003, 2005) other related argument is based on Giorgi’s (1984) observation that the long-distance anaphor *proprio ‘self’* in Italian can be bound by the head of the relative or the matrix subject if it is inside a restrictive relative, but it can only be bound by the head of the relative if it is inside a non-restrictive relative.

(7) Gianni, pensa che Mario, che t’ama la propria,... moglie, sia intelligente.
    Gianni thinks that Mario, who loves his own wife, is smart.

Del Gobbo argues that the Chinese long distance anaphor *ziji ‘self’* can be bound by both the head of the relative and the matrix subject when the relative modifies a proper name. We agree with her on this point, though her example is better replaced with a more natural one such as (8). (8a) shows that the long distance anaphor *ziji* is bound by the head of the relative and (8b) shows that it is bound by the matrix subject.

(8) a. Wo renwei xianglai jiu zhi ai ziji, de Xiaolizi shi gai
    I think always JIU only love self DE Xiaolizi be should
    fa xing fa xing xing.
    self.exam
    ‘I think Xiaolizi, who always only loves himself, should really do self-examination.’

b. Liu jiangjun, bu xiangxin yizhi gen zai ziji, shenbian de Xiaolizi
    Liu general not believe always follow at self around DE Xiaolizi
    hui bei pan ta.
    will betray him
    ‘General Liu does not believe that Xiaolizi, who always stays around him, would
    betray him.’

The possibility of long distance binding in (8b) contrasts with the impossibility of long distance binding in (6). A contradictory result thus arises. This contradiction has a reasonable explanation when Huang and Liu’s (2001) analysis of Chinese *ziji ‘self’* is taken into account. They argue that Chinese *ziji* is ambiguous between a pure anaphor and a pragmatic logophor. The former is subject to Condition A, which requires that the anaphor be locally bound, while the latter can be long distance bound by the matrix subject or the speaker. Following Sells (1987), Huang and Liu (2001) assume that “a logophor refers to a person whose (a) speech or thought, (b) attitude or state of consciousness, and/or (c) point of view, or perspective, is being reported.” This person may be the speaker or an internal protagonist denoted by the matrix subject. Given this definition of logophors, the contrast between (6) and (8b) can be explained as follows. The long distance binding in (8b) is expected because *ziji* in (8b) is
a logophor whose thought is reported. In contrast to (8b), the matrix subject *mei-you nusheng* ‘no girl’ is not an individual-denoting NP to which a thought or attitude can be ascribed. Therefore, a logophoric construal of *ziji* in (6) is impossible.

The implication of the above logophoric account for the contrast between (6) and (8b) is that it is not safe to use the anaphor *ziji* as a test of restrictiveness or non-restrictiveness. Long distance binding of *ziji* belongs to the domain of logophoric study, and therefore no clear conclusion can be reached from it with respect to the distinction between restrictiveness and non-restrictiveness.

Del Gobbo’s third test is to use root-level adverbs, which are only compatible with non-restrictive relatives but not with restrictive ones. She argues that root-level adverbs such as *shunbianshuo* ‘incidentally’ do not occur in relatives modifying individual-denoting names. However, Constant (2011a) argues that the Chinese expression *shunbianshuo* patterns more closely with English injections like ‘by the way’ than with true root-level adverbs such as *frankly* or *incidentally*. He thinks that *guji* ‘reckon’ and *bacheng* ‘80 percent’ are more like true root-level adverbs and cites the following example to support the claim that relatives modifying individual-denoting names do not resist root-level adverbs:

(9) wo zui xihuan de Zhongguo shiren you Li Bai, Du Fu, 
     I most like DE China poet have Li Bai Du Fu 
     hai you [guji ni mei kan-guo de] Xu Zhimo, 
     also have reckon you have not read-EXP DE Xu Zhimo 
   ‘My favorite Chinese poets are Li Bai, Du Fu, and also Xu Zhimo, who you probably haven’t read.’

Unfortunately, *guji* ‘reckon’ and *bacheng* ‘80 percent’ are not good candidates of root-level adverbs. *Guji* ‘reckon’ is more like a verb. Its subject is normally the first person subject *wo* ‘I,’ which can be deleted due to pro-drop. So in (9) *wo* ‘I’ can be added before *guji* without affecting the meaning and grammaticality. Moreover, if *guji* is placed after the subject *ni* ‘you,’ the sentence becomes ungrammatical.

As for *bacheng* ‘80 percent,’ this adverb may have a speaker-oriented interpretation, but such an interpretation is compatible with restrictive relative clauses as well, as shown by (10):

(10) Zhangsan tiao-le (nei)-jian ta laopo bacheng bu hui xihuan de yifu. 
     Zhangsan pick.out-Asp that-Cl his wife 80.percent not will like DE clothes 
   ‘Zhangsan picked out the/a dress which his wife probably will not like.’

So if *guji* in the relative clause in (9) is replaced by *bacheng*, it still cannot be concluded that the relative clause must be non-restrictive.

A significant implication of (10) is that in Chinese adverbs conveying the speaker’s cognitive or epistemic attitude toward a proposition do not need to surface at the root clause. The adverb *hen buxing* ‘very unfortunately’ is similar. It can occur not only in a relative modifying an individual-denoting name but also in a restrictive relative. This fact makes the test of root-level adverbs not reliable.
From the above discussion, we can say that Del Gobbo’s (2003) binding tests and root-level adverb test are not conclusive evidence for the lack of non-restrictive relatives in Chinese.

2.1.2. Review of Del Gobbo (2010)
Interestingly, in Del Gobbo (2010), she slightly changes her viewpoint. Contra her position in a series of articles that all Chinese relatives are restrictives, Del Gobbo (2010) accepts Lin’s (2003) position that RMPs can be non-restrictive. However, even for such non-restrictives, she argues that they are not like the familiar English non-restrictives but are “integrated non-restrictives” in the sense of Cinque (2008). Cinque (2008) observes that Italian has two types of non-restrictive relatives. The integrated ones are introduced by che/cui, as illustrated by the following examples:

(11)  
(a) Inviterò anche Giorgio, che/cui abita qui vicino.  
I will invite also G., that/who lives nearby.
(b) Inviterò anche Giorgio, [PP di cui]/*che avete certamente sentito parlare.  
I will invite also G., of whom/that you have certainly heard.

This type of non-restrictives is virtually identical to restrictive constructions. The other type is “non-integrated non-restrictives,” which are introduced by il quale, as shown in (12):

(12)  
(a) Inviterò anche Giorgio, il quale abita lì vicino.  
I will invite also G., who lives nearby.
(b) Inviterò anche Giorgio, [PP del quale]/*che avete certamente sentito parlare.  
I will invite also G., of whom/that you have certainly heard.

The second type is essentially similar to the familiar English non-restrictives. These two types of non-restrictives display different syntactic properties. Del Gobbo (2010) applies Cinque’s tests to differentiate these two types of non-restrictives to Chinese RMPs, arguing that they belong to the type of integrated non-restrictives. The following are the three arguments that Del Gobbo (2010) uses to support her position.

First, Italian non-integrated non-restrictives may have independent illocutionary force, but integrated non-restrictives may not. According to Del Gobbo, Chinese RMPs pattern with the latter because it is not possible to have an interrogative non-restrictive relative with the matrix clause remaining declarative, as shown by (13):

(13) *Wo xuan le dedao le duoshao piao de Zhangsan.  
The correct translation is: I choose Asp obtain Asp how many tickets DE Zhangsan  
‘I chose Zhangsan, who received how many votes?’ (Del Gobbo 2010: 405)

Second, non-integrated non-restrictives can have split antecedents, but integrated ones may not. Del Gobbo shows that Chinese RMPs do not allow split antecedents, as illustrated in (14):
Third, non-integrated non-restrictives allow antecedents of different categories such as DP, AP, PP, and so on, but integrated non-restrictives can only take a DP as their antecedent. Chinese relatives are also like integrated non-restrictives in this respect.

We agree with Del Gobbo on the above discussion. Chinese RMPs are like the Italian integrated *che/cui* non-restrictives rather than the non-integrated *il quale* non-restrictives. As mentioned, according to Cinque (2008), the integrated non-restrictives are virtually identical to the restrictive constructions. Thus, if Del Gobbo is correct, this means that RMPs are syntactically more like restrictive constructions than non-restrictive constructions.

3. Semantic Considerations

In the previous section, we saw that Chinese RMPs display some properties similar to the so-called “integrated non-restrictives” in Italian, which are syntactically more like restrictive constructions than non-restrictive ones. An interesting question to ask then is whether RMPs also display semantic properties similar to those of restrictive constructions. Potts’s (2005) discussion of English non-restrictive relatives is a good starting point to examine this issue. In what follows, we will summarize his discussion and compare Mandarin RMPs with English non-restrictive relatives.

Potts (2005) takes non-restrictive relatives as “supplementing” expressions, which contribute conventional implicature (CI) along a separate dimension of semantic composition. He lists a range of defining properties for CIs as given in (15), adapted from Constant (2011b):


a. anti-backgrounding: can’t repeat backgrounded information (or is redundant)
b. independence: at-issue meaning can be calculated independently from CI 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

Consider the property of anti-backgrounding first. McCawley (1981:117) observes that a non-restrictive relative cannot be naturally repeated in a question-answer pair:

(16) Appositive Resist Repetition (McCawley 1981)
Q: Does John, who speaks French, often go to France for work?
A: a. Yes, John often goes to France for work.
   b. *Yes, John, who speaks French, often goes to France for work.*
Del Gobbo (2003) uses this restriction as a test to show that Chinese RMPs are not non-restrictive relatives in that an RMP which appears in a question can be repeated in the answer, as shown by (17):

(17) Q: xihuan yinyue de Zhangsan changchang qu yinyuehui ma?  
like music DE Zhangsan often go concert  
'Does music-liking Zhangsan often go to concerts?'

A: dui, xihuan yinyue de Zhangsan changchang qu yinyuehui.  
right like music DE Zhangsan often go concert  
'Yes, music-liking Zhangsan often goes to concerts.'

For the above argument, Constant (2011a) says that Del Gobbo does not make it clear whether the proper name Zhangsan in (17) denotes an individual or a property and that his consultants accept the dialogue only if there are a number of Zhangsans in the context. In addition, he points out that if the proper name Zhangsan in (17) is replaced with the popular author Wang Xiaobo, the repetition of the relative clause becomes distinctly unnatural.

On the other hand, we find that in many other non-question answer contexts, repetition of an RMP leads to an unnatural sentence due to redundancy. For example, the unnaturalness of the discourse in (18) is particularly striking when (18) is compared with (19), where the head noun modified by the relative is not a proper name but a common noun. This indicates that the content of an RMP cannot be something that is already familiar in discourse.

(18) Zhang xiaojie hen ai piaoliang #Hen ai piaoliang de Zhang xiaojie  
Miss very love beautiful very love beautiful DE Miss  
mai-le xuduo yifu.  
buy-Asp many clothes  
'Miss Zhang loves being beautiful very much. #Miss Zhang, who loves being beautiful very much, bought many clothes.'

(19) Women ban shang you xie xuesheng hen ai piaoliang.  
our class in have some student very love beautiful  
(You xie bu ai.) Hen ai piaoliang de naxie  
have some not love very love beautiful DE those  
xuesheng shang ke dou bu zhuaxin.  
student attend class all not attentive  
'In our class some students love being beautiful very much. (Some don’t.) Those students who love being beautiful are not attentive in class.'

Fang’s (2008) study of Chinese relatives points to the same conclusion. According to her, when a relative clause modifies a pronoun (as in (20)) or a proper name (as in (21)), it cannot be anaphoric or part of the common ground knowledge but must convey new information. In this respect, Mandarin RMPs are like English non-restrictive relatives in that both display what Potts (2003, 2005) calls the “anti-backgrounding effect.”
At first glance, property (b) seems to be valid, too, because taking away a Mandarin relative modifying a proper name normally does not affect the rest of the sentence. However, this is not always true. Consider example (4), reproduced below:

(4) hen ai chi niupai de Laowang jintian que dian-le yupai very love eat beef-steak DE Laowang today but order-Asp fish-steak ‘(To our surprise), Laowang, who loves eating beef steak very much, ordered fish steak today.’

(4) contains a functional word que in the matrix clause, which expresses an adversative relation between two propositions. In (4), the two propositions in opposition are: the proposition that Laowang loves eating beef steak and the proposition that he ordered fish steak today. Both propositions are required arguments of the functional word que. This is confirmed by the fact that deletion of the relative clause hen ai chi niupai de ‘who loves eating beef steak’ in (4) makes the sentence incomplete, as is shown by (22), which contrasts with (23).

(22) Laowang jintian que dian-le yupai. Laowang today but order-Asp fish-steak ‘Laowang ordered fish steak today.’

(23) Laowang hen ai chi niupai, jintian que dian-le yupai. Laowang very love eat beef-steak today but order-Asp fish-steak ‘Laowang loves eating beef steak very much, but today he ordered a fish steak.’

Examples (4) and (23) clearly show that the meaning of an RMP is not always supplementary and cannot be calculated at a dimension completely independent of the meaning of the matrix clause.

Property (c) and property (e) can be discussed together. In most cases, it seems that RMPs cannot be denied or questioned. For example, in (24) and (25), the truth of the proposition that Wang Daming has fled abroad is entailed, even though they are embedded under the scope of a negation or question.

(24) tao qu guowai de Wang Daming bei zhuadao le bu shi zhen de. flee go abroad DE Wang Daming Pass get.caught Asp not be true DE ‘It is not true that Wang Daming, who has fled abroad, has been caught.’
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(25) tao qu guowai de Wang Daming bei zhuadao le ma?  
    flee go abroad DE Wang Daming Pass get.caught Asp Q  
    ‘Is it the case that Wang Daming, who has fled abroad, has been caught?’

In (24), the negative matrix predicate *bu shi zhen de* ‘is not true’ only negates the proposition that Wang Daming has been caught but not the proposition that Wang Daming has fled abroad. Similarly, (25) only questions whether Wang Daming has been caught, but not whether Wang Daming has fled abroad. In both cases, the speaker is committed to the truth of the RMP.

However, unlike English non-restrictives, when an RMP is embedded to an attitude verb, its scope can be restricted to the embedded clause, as is illustrated by (26), provided to us by Hsiu-Chen Liao (personal communication).

(26) Scenario: The information file that the judge possesses indicates that Wang Daming has fled to America.  
    faguan renwei yao zhuadao ta o guowai de Wang Daming bu tai keneng,  
    judge think want catch flee go abroad DE Wang Daming not too possible,  
    dan qishi wo zhidao ta yizhi duo zai taiwan, yinggai hen you xiwang zhuadao  
    but in.fact I know he always hide in Taiwan should very have hope catch  
    Intended: ‘The judge thinks that Wang Daming has fled abroad and to catch him is not possible, but in fact I know he has been hiding in Taiwan. There should be a high possibility to catch him.’

We don’t know what makes attitude verbs more special than negation and question, but example (26) clearly has an interpretation, confirmed by many speakers, that the content denoted by the relative *tao qu guowai de* ‘who has fled to America’ can be embedded under the matrix subject’s, that is, the judge’s, beliefs, thus falsifying both property (c) and (e). This interpretation indicates that an RMP does not have to have the widest scope, and hence does not commit the speaker to its truth.

The last property to consider is property (d). In English, a non-restrictive relative is not used to restrict the head noun to which they are anchored. Is this also true of Mandarin RMPs? Based on semantic considerations, Shi (2010) argues that Mandarin relatives, including RMPs, are always restrictive. In what follows we will briefly discuss his argument.

Contra Lin’s (2003) claim that proper names can only be modified by relatives denoting permanent properties, Shi (2010) cites examples to prove that stage-level relatives may modify a proper name or pronoun as well, as illustrated in (27):

(27) zheng zai jingzuo yundong de Zhou Botong turan da jiao  
    right Prog sit-in stage.a.demonstration DE Zhou Botong suddenly big scream  
    yi sheng, tiao-le qilai  
    one voice jump-Asp up.come  
    ‘Zhou Botung, who was sitting in to stage a demonstration, suddenly screamed loudly and jumped up.’ (Shi 2010: 327)

Moreover, he claims that both individual-level and stage-level relatives are restrictive. He uses the following examples to support the restrictive interpretation of RMPs:
(28) nimen hui kandao pao de geng kuai de Liuxiang.
you will see run De more fast DE Liuxiang
‘You will see a Liuxiang who runs faster.’

(29) puopuo yan li de Guorong shi ge you xianhui
mother-in-law eye in DE Guorong be Cl both virtuous-and-intelligent
you nenggan de hao xifu.
and capable DE good daughter-in-law
‘The Guorong in the eyes of the mother-in-law is a good daughter-in-law who is virtuous and intelligent and capable.’

According to Shi, though there is only one individual referred to as Liuxiang in the real world, the timeline can divide him into different stages, that is, the past Liuxiang, the current Liuxiang, and the future Liuxiang. In (28), the future Liuxiang who has a property of running faster (than before) is contrastive to the past Liuxiang, who has a property of running less fast. Therefore, the relative clause pao de geng kuai de ‘who will run faster’ in (28) should be analyzed as restrictive in that it helps pick out which stage of Liuxiang the speaker is referring to. On this analysis, the denotation of the proper name Liuxiang is not so much an individual as a property.

Likewise, Shi says that different people may have different images of the same individual, and those different images may cognitively constitute a non-singleton set which a relative clause may further restrict to a smaller subset. The relative clause in (29) is therefore restrictive rather than non-restrictive, despite the superficial unique reference of the proper name.

Shi’s (2010) analysis of (28) and (29) is reasonable, especially when we understand it within Carlson’s (1977) framework. According to Carlson, there are three subdomains of ontological entities in the world: stages, objects, and kinds. Stages are “time-space slices” of individuals; objects are the most familiar things like Obama or this book; kinds are individuals themselves such as the species whales or lions. Stages are realizations of individuals at different times and/or spaces. On this analysis, the denotation of a proper name can be a set of stages realizing the individual referred to by the proper name, and the relative modifying it can indeed be construed as restricting that set of stages.

The above result is in fact not surprising, given that English proper names can also denote properties and can be modified by a relative clause. In such cases, the definite article the must be used as in the example the John that I knew. Unlike English, Chinese does not have articles. Therefore, there is no definite article in the Chinese examples (28) and (29).

Now what is important is the question of whether Mandarin RMPs are always restrictive in the sense of Shi (2010). In what follows, we briefly comment on this claim. First consider the following example:

(30) qinfen de Zhongguo ren.
industrious DE Chinese people
i. ‘All the Chinese people, who are industrious, . . .’
ii. ‘Chinese people who are industrious . . . (Some Chinese people are not industrious)
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(30) is ambiguous between two readings. On one reading—the totality reading, all the Chinese people are entailed to be industrious. The other reading does not have the totality entailment but instead implies that some Chinese people are not industrious. This is the familiar restrictive versus non-restrictive contrast.

The restrictive reading of (30) is not a problem when zhongguo ren is treated as a common noun that denotes a set of Chinese people, that is, stages realizing the kind individual denoted by zhongguo ren. On this interpretation, the denotation of the relative clause qinfen de ‘who are industrious’ intersects with the denotation of the common noun it modifies, as is usual.

The totality reading is more challenging. On this reading, the relative clause is not predicated of the stages realizing the kind individual denoted by zhongguo ren, but is predicated of the kind individual itself. In this sense, the totality reading is not a restrictive one because no stages except the individual itself are involved.

The only possibility for Shi’s analysis to maintain the restrictive interpretation of (30) is to say that there are many different cognitive images for Chinese people as a whole, namely, a non-singleton set consisting of Chinese people with the image of being industrious, Chinese people with the image of being conservative, and so on and so forth. We are not sure how plausible this analysis is, but intuitively there exists a distinction between Shi’s examples (28), (29), and our example (30). Namely, while there is a strong intuition about the contrastive interpretation of (28) and (29), we do not have the same contrastive intuition for the totality reading of (30). For example, when hearing (30), we do not feel that we are contrasting industrious Chinese people with clever Chinese people or whatever. In fact, this seems to be generally the case when the relative clause is an individual-level property such as (31–33):

(31) you-zhe yi tou wuliou toufa de Liu xiaojie qishi shi wei moter.
    have-Asp one head dark hair DE Liu Miss in.fact be Cl model
    ‘Miss Liu, who has dark black hair, is in fact a model.’

(32) juyou hei ren xietong de Obama dangxuan meiguo di shishisiren
    possess black people blood DE Obama elected America the forty.fourth
    zongtong.
    president
    ‘Obama, who has black blood, was elected the 44th president.’

(33) shii nüren de women juede shi nanren de nimen dei zou.
    be women DE we think be man DE you should leave
    ‘We women think that you men should leave.’ (Hu 2008: 50)

(31) has two readings. On one reading, the context has a number of Miss Lius. In this context, the relative clause in (31) is restrictive and contrastive between the property of having dark black hair and the property of not having dark black hair. However, (31) can also be true in a context that contains only one Miss Liu. In such a context, we do not feel that we are contrasting or need to contrast the property of having dark black hair with some other property that Miss Liu might have. (32) is similar. In this example, we are not contrasting the Obama who has black blood with the Obama who doesn’t have black blood. Nor does it seem that we are contrastling Obama’s property of being a black with his other properties. Instead, it seems that the property of being
a black is used to indicate a contrast between being a black and winning the election. (33) is even more interesting. On the one hand, the world is such that once you are born a male or female, that property won’t change. So the relative clauses in (33) can’t invoke a contrastive set of individuals between we women and we non-women or between you men and you non-men. On the other hand, (33) can be true in a situation in which the only permanent property that we or you share in common is womanhood or manhood. In this context, there is no way to claim that the relative clause is restrictive. We conclude that (31–33) provide very robust evidence that RMPs can have the non-restrictive interpretation, contrary to what Shi (2010) claims.

The implication of the above discussion is this. It is reasonable to say that stage-level relatives modifying a proper name or pronoun can be analyzed as restrictive as Shi (2010) proposes under the assumption that individuals consist of stages as proposed in Carlson (1977). In contrast, when the relative clause modifying a proper name or pronoun is an individual-level relative, it is difficult to obtain the restrictive interpretation in many contexts. Such relatives do not seem to restrict the references of proper names or pronouns and must be non-restrictive in some sense. Given that non-restrictive interpretations are possible after all for individual-level relatives, such interpretations should in principle be available for stage-level relatives as well. We suspect that this interpretation is intuitively blurred simply because restrictive interpretations are easily available for stage-level relatives.

4. Interim Summary

To sum up, we have reviewed some syntactic and semantic properties of Mandarin RMPs. It seems that they have more properties of restrictive relatives than those of non-restrictive relatives, as is summarized in (34):

(34) Properties of RMPs similar to those of English non-restrictives:
   a. anti-backgrounding effect
   b. resistance of pronominal binding from outside (not reliable test)

(35) Properties of RMPs that are not similar to those of English non-restrictives:
   a. not allowing split antecedents
   b. not allowing non-DP anchors
   c. not having independent illocutionary force
   d. not always independent of the matrix clause in terms of meaning
   e. not necessarily speaker-oriented or having widest scope
   f. deniable (under scope of attitude verbs)

This result is somewhat surprising. On the one hand, we admit that RMPs can be non-restrictive, in particular those RMPs denoting individual-level properties. On the other hand, RMPs display syntactic and semantic properties that are more like those of restrictive relatives. The contradiction in question reveals that Chinese RMPs are
indeed not of the same type as those of English non-restrictive relatives, which are semantically and syntactically independent of the matrix clause. The properties listed in (34) and (35) strongly suggest that though RMPs are semantically non-restrictive, they are syntactically part of the DP to which they adjoin and form an integrated structure with the remaining constituents of the sentence. This explains why they are not semantically independent of the other constituents of the sentence and can scope under attitude verbs. In other words, we syntactically restrict the semantically non-restrictive relatives to possess certain aspects of meaning composition that restrictive relatives share in common. In this sense, Del Gobbo’s (2010) extension of Cinque’s “integrated non-restrictives” to Chinese RMPs seems to be on the right track.

5. The Syntax of Mandarin Relatives

5.1. DE-CONSTRUCTIONS REVISITED

In terms of syntax, there is also evidence showing that Chinese relative clauses behave in line with Italian integrated non-restrictives like (36):

(36) Giorgio, che francamente non si sarebbemai dovuto comportare così
    ‘Giorgio, who (lit. that) frankly should never have behaved like that’

For one thing, both RC₁ and RC₂ in Chinese allow a speech act adverbial such as laoshishuo ‘frankly speaking’ (cf. Thorne 1972; Emonds 1979; Cinque 2008), as evidenced by the following examples:

(37) wo mei zema [laoshishuo biaoxian hen cha de] xuesheng.
    ‘I did not scold that, who, frankly speaking, performed very poorly.’

(38) wo mei zema [laoshishuo biaoxian hen cha de] nage xuesheng.
    ‘I did not scold that student, who, frankly speaking, performed very poorly.’

The same observation applies to cases with a speaker-oriented evidential adverb such as xianran ‘obviously’:

(39) wo mei zema [xianran biaoxian hen cha de] xuesheng.
    ‘I did not scold that, who obviously performed very poorly.’

(40) wo mei zema [xianran biaoxian hen cha de] nage xuesheng.
    ‘I did not scold that student, who obviously performed very poorly.’

For another, just like their Italian counterpart in (41), Chinese parasitic gaps may occur in both post- and pre-demonstrative relatives in (42) and (43). This suggests
that an operator-variable dependency rather than an E-type construal is involved (cf. Cinque 2008):

(41) La sola persona che quelli che conoscono bene non possono non ammirare Gianni.
    ‘The only person that those that know well cannot but admire is Gianni.’

(42) nage [wo [yi jian e] jiu xihuan de] xuesheng that I once meet then like DE student
    ‘the student who I like once meeting.’

(43) [wo [yi jian e] jiu xihuan de] nage xuesheng I once meet then like DE that student
    ‘the student who I like once meeting.’

Although for most part we agree with Del Gobbo that Chinese RMPs are integrated non-restrictives, we disagree with her syntactic derivation of RMPs based on the following considerations: Typology-wise, Del Gobbo (2010) attributes the lack of relative pronouns in Chinese to the failure of cyclic c-command in licensing prenominal relativization. This move results in unnecessary complications on the syntactic side. The real reason, in our opinion, is simply that Chinese nominal wh’s are variables (cf. Cheng 1991; Li 1992; Tsai 1994; Lin 1996), and cannot function as relative operators. Our analysis thus predicts that we should be able to spot relative usages of genuine wh-adverbs in Chinese. This is indeed the case with weishenme ‘why’ and zenithang ‘how’ in (44a, b) (see also Ning 1993; Huang, Li, and Li 2009): In contrast to their nominal counterparts, these wh-adverbs can clearly be construed as relative rather than interrogative:

(44) a. [xiaozhang weishenme yao qinzi chuxi de yuanyn] chancellor why will in.person attend DE reason
    he Akiu you henda de guanxi.
    with Akiu have very.big DE relation
    ‘The reason why the chancellor will attend in person has a lot to do with Akiu.’

b. dajia dou dui [xiaozhang zenithang chufa zuobi de fangshi] people all about chancellor how punish cheating DE way
    gandao haoqi.
    feel curious
    ‘People all feel curious about the way how the chancellor will punish cheating.’

Furthermore, contra Del Gobbo (2010), we are against the idea of treating de as a complementizer, one crucial reason being that de-construals within nominal projections do not form a homogeneous group (cf. Tsai 2011): on the one hand, relative de of RC works exactly like adjectival de in licensing topicalization and ellipsis, as evidenced by the parallel between (45a, b) and (46a, b):

(45) a. qunzi, Zhaoma mai-le yi-jian hong de e. (topicalization)
    skirt Zhaoma buy-Prf one-Cl red DE
    ‘(As for) skirts, Zhaoma bought a red one.’
Restricting Non-restrictive Relatives in Mandarin Chinese

On the other hand, relative de of RC₁ licenses neither topicalization nor ellipsis, as shown by the ungrammaticality of (47a, b):

\[(46)\]

a. \[qunzi, Zhaoma mai-le yi-jian Akiu feng de eₖ.\] (topicalization)
Zhaoma buy-Prf one-Cl Akiu sew DE skirt
\[\text{‘(As for) skirts, Zhaoma bought one which Akiu sewed.’}\]

b. \[Zhaoma mai-le yi-jian Xiaodi feng de qunzi.\] (ellipsis)
Zhaoma buy-Prf one-Cl Xiaodi sew DE skirt
\[\text{‘Zhaoma bought a skirt which Akiu sewed, and also bought one which Xiaodi sewed.’}\]

We therefore propose instead that RC₂ are situated in the SPEC of ModP headed by de. Here de serves as a formal licensor (or a head-governor in GB-theoretical terms),³ while triggering the matching type of relativization (cf. Aoun and Li 2003). The idea is sketched in the following diagram:

\[(48)\]

³ For a minimalist account of the head-government effects displayed by modifier de, see Tsai (2011), where formal licensing in Rizzi’s (1990) sense is reinvented as an “insurance” bought by Merge so that the No Tampering Condition (NTC) is strictly observed by subsequent operations such as deletion under identity at PF. As formulated in Chomsky (2007, 2008), NTC requires that Merge of X and Y leaves the two syntactic objects unchanged.
Relative de of RC\textsubscript{1}, on the other hand, may well function as a particle cliticized to the relative clause in question, and trigger the raising type of relativization, as illustrated below:

\[(49)\]
\[
\text{... DP} \quad \text{RC\textsubscript{1}} \quad \text{DP\textsubscript{k}} \quad \text{RC\textsubscript{1}} \quad de \quad na-jian qunzi
\]

\[\text{Akiu feng } t_{k}\]

5.2. WHERE HAVE ALL THE NON-RESTRICTIVES GONE?

One of the important observations made in Huang (1987) concerns the parallelism between the pair of sentences in (50a, b) and those in (51a, b):

\[(50)\]
\[\begin{array}{l}
\text{a. There is a flying plane. } \quad \text{(restrictive)} \\
\text{b. There is a plane flying. } \quad \text{(descriptive)}
\end{array}\]

\[(51)\]
\[\begin{array}{l}
\text{a. tian-shang you yi-jia [ziyou aoxiang de] feiji. } \quad \text{(restrictive)} \\
\text{sky-top have one-Cl free fly DE plane} \\
\text{‘In the sky there is a plane which is flying freely.’} \\
\text{b. tian-shang you yi-jia feiji [ziyou aoxiang] } \quad \text{(descriptive)} \\
\text{sky-top have one-Cl plane free fly} \\
\text{‘In the sky there is a plane (and it’s) flying freely.’} \\
\text{‘In the sky there is a plane, which is flying freely.’}
\end{array}\]

Huang points out that the adjectival of (50a) patterns with the RC\textsubscript{2} of (51a) in terms of their restrictive function, whereas the secondary predicates of (50b) and (51b) are both descriptive in nature. This gives us necessary leverage to study the predicative properties of RC\textsubscript{1}.

First, it has been established by Huang (1987) that Chinese secondary predication observes some form of (in)definiteness restriction, as illustrated by the pair of sentences below:

\[(52)\]
\[\begin{array}{l}
\text{a. wo jiao-guo san-ge xuesheng [conglai bu xizao]. } \quad \text{I teach-Exp three-Cl student ever not bathe} \\
\text{‘I taught three students, who never bathed.’} \\
\text{b. *wo zai zhao san-ge xuesheng [conglai bu xizao].} \\
\text{I Prg find three-Cl student ever not bathe} \\
\text{‘I am looking for three students, who never bathed.’}
\end{array}\]

For the construal of (52a) to be valid, the subject of secondary predication (i.e., the object san-ge xuesheng ‘three students’) must acquire specificity through aspectual
licensing from the main predicate. Otherwise, the predication would fail, as is the case with (52b), where the progressive aspect on the create-type verb simply lacks the capacity of making the object specific. Curiously enough, the same effect shows up for either a proper name or a definite expression as the subject of secondary predication, as evidenced by (53a, b):

(53) a. *wo jiao-guo Akiu [conglai bu xizao].
    I teach-Exp Akiu ever not bathe
    ‘I taught Akiu, who never bathed.’

    b. *wo jiao-guo na-san-ge xuesheng [conglai bu xizao].
    I teach-Exp that-three-Cl student ever not bathe
    ‘I taught those three students, who never bathed.’

Huang attributes the kind of effects to a conflict between the existential force carried by the experiential aspect -guo and the definiteness of the object (cf. Barwise and Cooper 1981).

Along this line of inquiry, Tsai (1994) points out another curiosity: RC behaves very much like Chinese secondary predicates in regard to the (in)definiteness restriction, notably in unaccusative constructions such as (54a–c):

(54) a. *zuotian si-le [[conglai bu xizao de] Akiu].
    yesterday die-Prf ever not bathe DE Akiu
    ‘Yesterday three people who never bathed died.’

    b. *zuotian si-le [[conglai bu xizao de] na-san-ge ren].
    yesterday die-Prf ever not bathe DE that-three-Cl person
    ‘Yesterday those three people who never bathed died.’

Here the existential force comes from the unaccusative predicate si-le ‘die-Prf’ instead, but the effect remains the same nonetheless. By contrast, RC never causes any trouble in this respect, and seems totally immune to the restriction, as evidenced by the following example:

(55) zuotian si-le [san-ge [conglai bu xizao de] ren].
    yesterday die-Prf three-Cl ever not bathe DE person
    ‘Yesterday three people who never bathed died.’

This parallelism strongly suggests that RC and secondary predicates may indeed belong to the same class of descriptive expressions in Chinese, namely, integrated non-restrictives of some sort.
6. Semantic Composition of Integrated Non-Restrictive Modification

6.1. A DIFFICULTY

Having argued that RMPs can be non-restrictive and having proposed a syntax for non-restrictive modification, we now turn to semantic composition of such constructions. Before engaging in it, let us make a brief digression about semantic composition of restrictive modification. A well-accepted assumption about restrictive relatives (RR) is that they denote properties of individuals, just as adjectival modifiers, and the semantics of an ‘RR + Noun’ construction is obtained via Heim and Kratzer’s (1998) rule of Predicate Modification, where the denotation of the restrictive relative intersects with that of the common noun it modifies.

For example, the meaning of renzhen dushu de xuesheng ‘students who study hard’ is compositionally derived as follows, where $\left[ \alpha \right]$ means the denotation of $\alpha$:

\[
\begin{align*}
\text{renzhen dushu de xuesheng} & \\
\text{a. } \left[ \text{renzhen du shu de} \right] & = \lambda x. x \text{ studies hard} \\
\text{b. } \left[ \text{xuesheng} \right] & = \lambda x. x \text{ is a student} \\
\text{c. } \left[ \text{renzhen dushu de xuesheng} \right] & \text{ (by Heim and Kratzer’s Predicate Modification)} \\
& = \lambda x. [\text{CP}] (x) = 1 \text{ and } [\text{NP}] (x) = 1 \\
& = \lambda x. x \text{ studies hard and } x \text{ is a student}
\end{align*}
\]

There are several possibilities concerning how a relative clause is turned into a property. It might be that the functional word $de$ serves as a lambda abstractor binding the gap inside the relative clause, or it might be that $de$ is semantically vacuous but the relative clause involves a null wh-operator interpreted as a lambda binder. In this chapter, we will not try to decide how the meaning of a relative clause is derived. For the purpose of this chapter, it suffices to assume that a Chinese relative clause denotes a property of individuals just like English relative clauses.

Returning to RMPs, we propose that they are adjoined to the proper names they modify as illustrated in (57):

\[
\begin{align*}
\text{(57)} & \\
\text{DP} & \\
\text{NP}_2 & \\
\text{CP} & \\
\text{NP}_1 & \\
\text{juyou herein xietong de posses black. people blood} & \text{DE Obama}
\end{align*}
\]

\[\text{Note that relative clauses are of type } \langle e,t \rangle \text{ and common nouns are also of type } \langle e,t \rangle. \text{ Two type } \langle e,t \rangle \text{ expressions cannot combine via functional application. Therefore, the rule of Predicate Modification, given in (i) below, is designed to deal with this type of mismatch.}\]
The usual assumption for the meaning of proper names is that they denote the unique referent named by the proper name. For example, John means the individual named 'John.' If this direct reference theory such as Kripke (1980) is adopted, this means that the meaning of the DP node (and NP₂ as well) in (57) is a truth value, because the relative clause is a property of type <e,t> and the proper name is an individual of type e. This is an undesirable result, as this implies that no further semantic computation is possible beyond the DP. For example, if the DP in (57) is the subject of dangxuan meiguo di sishisiren zongtong 'was elected the forty-fourth president of America,' the two constituents can't combine because the subject is a truth value of type t but the VP is a property of type <e,t>, which requires an individual as its argument. Confronting such an obstacle, we have two choices: either we give up the denotation of proper names as an individual or we give up the denotation of a non-restrictive relative clause as a property of type <e,t>. In what follows, we would like to explore the first strategy, based on Matushansky's (2006) cross-linguistic study of proper names.

6.2 MATUSHANSKY’S (2006) TREATMENT OF PROPER NAMES AS TYPE <E,T> EXPRESSIONS

According to Matushansky’s (2006) study, in some languages such as European Portuguese, Pima, some Italian, Spanish, Scandinavian and German dialects, Catalan, and so on, proper names in argument positions obligatorily come with a definite article as in (58), a Portuguese sentence:

(58) o president nomeou a Maria ministra.
    the-M.SG president named-3SG the-F.SG Maria minister
    ‘The president named Mary the minister.’ (Matushansky 2006: 285)

The standard approach to this fact is to assume that the definite article is semantically vacuous, as in Longobardi (1994).

However, based on naming constructions across languages, Matushansky (2006) provides evidence showing that proper names are no different from common nouns in that both are underlyingly predicates of type <e,t>. One piece of evidence comes from Modern Greek, where proper names are subject to case-agreement. In Modern Greek (and Latin, Icelandic, and Albanian as well), the definite article is obligatorily with proper names in argument positions as in the object in (59a) and the subject in (59b). But in naming constructions unmodified proper names appear without an article, such as Petro in (59a, b):

(59) Naming constructions
   a. vaftisa to Yani Petro.
      baptized-1sg the-Acc Yani-Acc Petro-Acc
      ‘I baptized Yani Petro.’

(i) Predicate Modification (PM)
If α is a branching node, {β,γ} is the set of α’s daughters and [β] and [γ] are both in D, then
[α] = λx ∈ De: [β](x) = [γ](x) = 1
Note that in Modern Greek, the case of a nominal predicate in a small clause must be the same as that of the small clause subject. Thus, in (60a), the nominal predicate of the small clause complement of the ECM verb \textit{consider} case-agrees with the ACC feature of the small clause subject. When passivization renders the small clause subject nominative, the small clause predicate becomes nominative, too.

\begin{enumerate}
\item \begin{tabular}{l}
O \[\text{Yanis vaftistike Petros.}\
The-Nom \[\text{Yanis-Nom baptize-Pass.3sg Petros-Nom}\
\end{tabular}
\begin{tabular}{l}
\text{‘Yanis was baptized Petro.’} \\
(Matushansky 2006: 286)
\end{tabular}
\end{enumerate}

The parallel between (59a, b) and (60a, b) shows that the proper name in a naming construction behaves exactly like a small clause predicate.

In addition to Case-agreement languages, Matushansky also points out that in Case-marking languages without Case-agreement, the case on the proper name is the general predicative case, as is shown by languages as diverse as Hungarian, Syrian Arabic, and Russian:

\begin{enumerate}
\item \begin{tabular}{l}
theoro to Yani ilithio.\
consider-1sg the-Acc Yani-Acc idiot-Masc-Acc
\end{tabular}
\begin{tabular}{l}
\text{‘I consider Yani an idiot.’}
\end{tabular}
\item \begin{tabular}{l}
o Yanis theorite ilithios.\
The-Nom Yanis-Nom consider-Pass.3sg idiot-Nom
\end{tabular}
\begin{tabular}{l}
\text{‘Yanis is considered an idiot.’} \\
(Matushansky 2006: 287)
\end{tabular}
\end{enumerate}

Naming constructions in Korean (and Welsh as well) also give support for the predicative function of proper names in that they appear with the copular particle, as shown in (62):

\begin{enumerate}
\item \begin{tabular}{l}
la’ny-om,-at Mari-nak nevezt-em el.\
the daughter-1sg-Acc Mary-Dat named-1sg PREVERB
\end{tabular}
\begin{tabular}{l}
\text{‘I named my daughter Mary’} \\
(Matushansky 2005)
\end{tabular}
\end{enumerate}

In view of the above evidence, Matushansky (2006) concludes that proper names should be analyzed as bare nouns, that is, predicates, just as common nouns are. Therefore, languages where a definite article appears with proper names are the normal situation, and it is the absence of the definite article in most European languages such as English that must be explained. According to this view, the definite article that occurs with proper names has the standard semantics rather than being semantically vacuous. He also proposes an interesting explanation of the absence of the definite article in languages such as English in terms of m-merger. To discuss the details of his analysis is beyond the scope of this chapter. It suffices for us to assume that proper names are predicates underlyingly, at least in some languages.
6.3. SEMANTIC COMPOSITION OF NON-RESTRICTIVE RMPs

Given Matushansky’s analysis of proper names, we assume that proper names are predicates of type \(<e,t>\) just like bare nouns, as given in (63):

\[(63)\]
\[
\begin{align*}
\text{a. } & [[\text{Zhangsan}]] = \lambda x. x = \text{Zhangsan} \\
\text{b. } & [[\text{xuesheng}]] = \lambda x. x \text{ is a student}
\end{align*}
\]

One difference between bare nouns and proper names is that the latter denote a singleton set, that is, a set consisting of only the referent named by the proper name, whereas the former normally have more than one member in their denotation. Recall that earlier we said that an individual consists of temporal-spatial slices, which are stages realizing the individual. In (63a), the subscript ‘i’ is used to indicate the individual as a whole rather than the stages realizing that individual. In the latter case, a proper name has a common noun denotation as given in (64), where the subscript ‘s’ indicates stages:

\[(64)\]
\[
[[\text{Zhangsan}_s]] = \lambda x. R(x, \text{Zhangsan}_i)
\]

Here the symbol ‘R’ in ‘R(x, \text{Zhangsan}_i)’ is Carlson’s (1977) realization relation. ‘R(x, \text{Zhangsan}_i)’ means that x is a realization, that is, stage, of the individual \(\text{Zhangsan}_i\). So under our approach, proper names are always predicates of type \(<e,t>\).

But if individual-denoting proper names are predicates of type \(<e,t>\), how do they end up denoting an individual? Here we will follow Matushansky (2006) in assuming that they are closed by a definite article with a standard semantics. More precisely, we assume that there is a null iota operator under the head D, in spite of the fact that there is no overt article at all in Mandarin Chinese. An illustration of the meaning of a DP containing a proper name is given in (65):

\[(65)\]
\[
\begin{align*}
\text{a. } & \text{DP} \\
& \begin{array}{c}
D \\
\iota
\end{array}
\begin{array}{c}
\text{NP} \\
\text{Zhangsan}
\end{array}
\end{align*}
\]

Note that the iota operator is not only available for proper names but also for common nouns. It is a well-known fact that bare nouns in Chinese may refer to definite entities. For example, the subject ‘ji ‘chicken’ in (66a) and the object ‘shu ‘book’ can be construed as definite noun phrases:

\[(66)\]
\[
\begin{align*}
\text{a. } & \text{ji chile.} \\
& \text{chicken eat-Asp} \\
& \text{‘The chicken already ate.’}
\end{align*}
\]
Therefore, the iota operation is an independently needed mechanism to obtain the definite interpretation for bare nouns.

With the preceding as background, we now discuss the semantic composition of non-restrictive relatives. We propose that non-restrictive modification involving RMPs has a syntactic representation like (67a) and is semantically computed as in (67b–d):

(67) a. 
   
   \[
   \text{DP} \\
   \text{D} \\
   \text{NP}_2 \\
   \text{t} \\
   \text{CP} \\
   \text{NP}_1 \\
   \text{juyou heren xietong de} \\
   \text{possess black people blood} \\
   \text{DE} \\
   \text{Obama}
   \]

b. \[
\left[\text{Obama}\right] = \lambda x. x = \text{Obama}
\]
c. \[
\left[\left[\text{CP juyou heren xietong de}\right]\right] = \lambda x. x \text{ has the blood of black people}
\]
d. \[
\left[\left[\text{NP}_1\right]\right] = \lambda x. [\left[\text{CP}\right]\!(x) = 1 \text{ and } \left[\left[\text{NP}_2\right]\!(x) = 1\right] \text{ (Predicate Modification)}
\]
   \quad = \lambda x. x \text{ has the blood of black people and } x = \text{Obama}
\]
e. \[
\left[\left[\text{DP}\right]\right] = \text{The } x \text{ such that } x \text{ has the blood of black people and } x = \text{Obama}
\]

In the above computation, it is worth special noting about the combination of the relative clause with the proper name. The non-restrictive relative is a predicate of type <e,t> and the proper name is also a predicate of type <e,t>. Therefore, they cannot combine directly. But the configuration matches Heim and Kratzer’s rule of Predicate Modification, which was originally designed for restrictive modification. So the two type <e,t> expressions can combine, yielding an output that is again a type <e,t> predicate, which is closed by the iota operator. Therefore, the final denotation of the DP in (67a) is an individual with the property denoted by the relative clause. This makes further semantic computation possible, as desired.

It is worth emphasizing that non-restrictive modification, as proposed in (67), involves exactly the same rule of Predicate Modification as restrictive modification. The only difference is that non-restrictive relatives modify a noun denoting a singleton set, whereas restrictive relatives modify a noun denoting a non-singleton set. We believe that this result is a welcome one. In Mandarin Chinese, prenominal non-restrictive modification doesn’t seem to be syntactically distinct from prenominal restrictive modification. If the syntax is the same for both restrictive and non-restrictive modification, there is no reason to expect a different syntax-semantics mapping rule.
the other hand, the difference between restrictive modification and non-restrictive modification can be ascribed to a minimal meaning difference between the nouns modified. When the noun modified by the relative denotes a (contextually restricted) singleton set, the meaning is non-restrictive. When the noun modified by the relative denotes a non-singleton set, the meaning is restrictive.

The proposed analysis of non-restrictive modification actually has cross-linguistic support. In English, in addition to post-nominal non-restrictive relatives, we also find non-restrictive adjectives in a prenominal position. Here are some examples:

(68)  
a. The Texan president returned to Houston. (Leffel 2011: 1) 
b. The industrious Greeks built beautiful monuments. (Solt 2011)

The adjective Texan in (68a) must be non-restrictive in that there was only one president. (68b) is ambiguous in that it can be understood either as some industrious Greeks, as opposed to the lazy ones, who built the monuments or as Greeks as a whole. The Chinese RMPs can be said to be parallel to the above examples. In particular, it should be noted that the position of a non-restrictive adjective is also a position for restrictive adjective, as the ambiguity of (68b) shows. This indicates that our proposed analysis of Chinese RMPs is not without grounds in terms of both the syntax and the semantics.

The proposed semantics of RMPs has an important implication on the debate that we mentioned at the outset with respect to the interpretation of RC₁ and RC₂, especially RC₂. Recall that Chao (1968) claimed that RC₂ has a descriptive interpretation when not stressed. Given our analysis of non-restrictive modification, his claim seems to be correct, because RMPs as discussed in this chapter occupy exactly the RC₂ position following a null iota operator. RC₂ gets a descriptive interpretation when the common noun is confined to denote a single individual by the context of utterance.

7. Cross-Linguistic Variations

It has been occasionally reported that prenominal relatives cannot be non-restrictive, and attempts have been made to explain this claim (Del Gobbo 2005; Potts 2005; De Vries 2006). In particular, these studies suggest that linear ordering of non-restrictive modifiers can only be fixed as rightward of the anchor. Del Gobbo (2005) further suggests that non-restrictive relatives are instances of E-type anaphora and a non-restrictive E-type relative pronoun must temporally follow the head it modifies. Since Chinese relatives are prenominal, the relative always precedes the head, thus disallowing the possibility of non-restrictive relatives.

Despite the above studies, prenominal relatives in some languages have been reported to be either restrictive or non-restrictive, for example, Malayalam (Asher and Kumari 1997: 55), Marathi (Pandharipande 1997: 80–84), Kannada (Sridhar 1990: 51–52), and Turkish (Kornfilt 1997: 1.1.2.3.2; Göksel and Kerslake 1998: §25.2). For example, in the absence of any determiner, the following Amharic sentence is ambiguous between the restrictive and non-restrictive reading, according to Prenominal Relative Clauses (2010: example (239)):
If these authors are correct, the (im)possibility of a non-restrictive relative is not a simple matter of the linear ordering of the relative clause in relation to the head it modifies. This in turn implies that Del Gobbo’s E-type strategy to account for the cross-linguistic variation of non-restrictive modification might not be on the right track (also see Constant 2011a for an empirical argument against this approach). In light of this, we would like to make an alternative parameter to account for cross-linguistic variation on non-restrictive relatives based on the semantics of proper names.

Longobardi (1999) argues that object and kind reference to nominal structures is cross-linguistically parametrized. In English, referential status of a proper name may occur with no overtly realized D, whereas in Romance it necessarily depends on a D position overtly occupied either by the noun itself or by an expletive article. This analysis suggests that a proper name in a given language can be assigned referential status with no overtly realized D or is dependent upon D to obtain referential status. In other words, the denotation of a proper name can be of type $e$, type $<e,t>$, or ambiguous. Restrictive or non-restrictive interpretation of a relative can be taken as consequences of the denotation of the proper name in a given language. If a proper name is of type $e$ inherently, as Longobardi (1999) suggests for English, then the relative must be non-restrictive. In contrast, if a proper name is inherently of type $<e,t>$ and has no N-to-D movement, as we propose for Mandarin Chinese, then the relative must be restrictive. In such languages, superficial non-restrictive modification is derived from the fact that proper names denote singleton sets. Finally, if a proper name is ambiguous between type $e$ and $<e,t>$, as is possibly the case for Amharic, then either restrictive or non-restrictive interpretation is possible depending upon which semantic type of the proper name is involved.⁵

8. Conclusion

In this chapter, we reviewed the debate over the restrictive versus non-restrictive distinction of Chinese prenominal relatives with a special focus on name-modifying relatives. Evidence shows that relatives modifying a proper name possess more properties of restrictive relatives than those of non-restrictive relatives. Semantically, however, there are clear cases where a name-modifying relative is not used to restrict the reference of the proper name. We thus agree with Del Gobbo (2010) that name-modifying relatives are a type of “integrated non-restrictives.” The restrictive versus non-restrictive dilemma receives a plausible account under the treatment of proper names as predicates of type $<e,t>$. On the assumption that proper names are type $<e,t>$ expressions, name-modifying relatives can be semantically computed

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⁵ English proper names might be ambiguous between type $e$ and $<e,t>$, too, because of examples such as the John that I met yesterday.
via exactly the same rule of restrictive predicate modification proposed by Heim and Kratzer (1998). The restrictive versus non-restrictive distinction is ascribed to the fact that proper names may denote singleton sets in addition to a non-singleton set (when understood as stages of individuals), whereas common nouns normally denote non-singleton sets. When the predicate modified by a relative denotes a singleton set, the non-restrictive interpretation is derived; when the predicate modified by a relative denotes a non-singleton set, a restrictive interpretation is derived. In this sense, the non-restrictive interpretation is still a restrictive modifier. Perhaps this analysis may explain why people’s intuitions about the distinction between RC₁ and RC₂ vary so much from speaker to speaker. Along the above line of thought, we also propose that cross-linguistic variations in the (im)possibility of non-restrictive relatives can be ascribed to the inherent semantic type of proper names, which can be either type 🌟, type 🌟, or ambiguous. Finally, we present a syntactic distinction between RC₁ and RC₂ with respect to their capacity of formal licensing. That is, while RC₂ allows topicalization/ellipsis of its head noun, RC₁ does not carry the same clout. Furthermore, we point out that RC₁ and secondary predicates share the same trait in Chinese, that is, the (in)definiteness restriction in Huang’s (1987) sense. All these point to the conclusion that RMPs may indeed belong to a special type of descriptive expressions, namely, integrated non-restrictives with properties of restrictive relatives.

References

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