

Towards a Typology of Relative Clauses in Sinitic: Headedness and Relativization Strategies*

Résumé

Les propositions relatives (PRs) des langues sinitiques ont attiré une attention considérable dans les études typologiques, notamment en raison de la corrélation extrêmement rare des ordres Verbe-Objet et Rel-N (Tang 2006, Dryer 2013b). En ce qui concerne les différences structurelles des PRs dans les langues sinitiques, bien que des études précédentes aient mis en évidence plusieurs questions cruciales (voir par exemple Liu 2005), il reste encore beaucoup de travail à faire dans ce domaine. Se basant sur un échantillon de 44 langues sinitiques, dans cet article nous allons essayer d'esquisser une typologie des PRs dans les langues sinitiques selon deux paramètres : la position de la tête et les stratégies de relativisation. En outre, nous allons mettre en évidence des corrélations et des implications significatives qui limitent la diversité dans le domaine de la relativisation parmi les langues sinitiques.

Abstract

The study of relative clauses (RCs) in Sinitic has attracted considerable attention in typological literature, especially because of the exceedingly rare correlation of Verb-Object order and prenominal relatives (see Tang 2006, Dryer 2013b). As to the structural differences of RCs within Sinitic, although previous studies have brought to light several key issues (see e.g. Liu 2005), there is much work yet to be done in this area. Basing on data from a convenience sample of 44 Sinitic languages, in this paper we will try to sketch a typology of relativization in Sinitic languages according to two parameters, namely the position of the head and relativization strategies. Also, we will highlight some meaningful correlations and implications constraining diversity in the domain of relativization in Sinitic.

Keywords: Relative clause; Typology; Sinitic.

1. Introduction

Relative clauses (henceforth: RCs) in Sinitic languages have attracted much attention in typological research, above all because of the rare combination of VO and REL-N order: in Dryer's (2013b) sample, only 5 out of 879 languages show this correlation, and three of them are Sinitic. Comparative work within Sinitic, on the other hand, has often focussed on the history of individual markers of relativization (see e.g. Zhao 1999, Shi 2002, Wang 2008), which are anyway usually lumped together with other markers of modification, as we shall see. Significant progress in the understanding of variation within Sinitic has been made since Liu's (2005) seminal paper on the typology of relativizers in Sinitic, and with subsequent work by Dong (2003), Fang (2004), Tang (2006; 2008), Chen (2007) and Liu (2008), *inter alios*. Nevertheless, many issues have yet to be explored, especially in the context of family- and areal-wide comparison.

Building on insights from the recent literature, the present paper aims at sketching a typology of RCs in Sinitic. To this end, we analyzed a convenience sample of 44 Chinese languages, considering

* Traditional Chinese characters have been used as a default throughout the article. However, in order to be consistent with the sources quoted, simplified characters will also be employed in examples. I did not add characters when the sources did not provide them. The *Pinyin* system is used for the transliteration of Standard Mandarin. For all other varieties, I used (italicized) transcriptions as provided by the sources; when no transcription is provided, I used SMALLCAPS (toneless) Pinyin transcriptions following the Standard Mandarin reading of the characters. The glosses follow the general guidelines of the Leipzig Glossing Rules when applicable; additional glosses include ASP 'aspect,' ASSOC 'associative,' CP 'comparative,' EXP 'experiential,' PC 'phase complement,' SFP 'sentence-final particle,' SP 'structural particle,' and SUF 'suffix.'

the following parameters: a. position of the head; b. relativization strategy. We will show that REL-N order is actually dominant, but it is not the only possibility: left-headed RCs are occasionally found in Southern dialects and, possibly, even in colloquial Standard Mandarin, and a head-internal analysis can be argued for a subtype of object relatives. Then, we will discuss the distribution of relativization patterns, showing that there are marked differences not only between Northern and Central/Southern China, but also among Central and Southern dialects, and among Northern dialects themselves. We will also highlight some meaningful correlations and implications constraining diversity in the domain of relativization in Sinitic.

This paper is organized as follows. Firstly, I shall introduce the theoretical background of my research, focusing on the status of RCs in Chinese linguistics. Secondly, I shall present my sample and data, showing the extent of variation on the parameters considered and highlighting some meaningful correlations. I shall then discuss the genetic and areal distribution of relativization patterns in the Sinitic family. Lastly, I shall summarize my conclusions and provide some suggestions for further research.

2. Theoretical background: relative clauses in Chinese linguistics

Relative clauses are a very frequent and cross-linguistically pervasive type of subordinate clauses, which have been intensively researched in many domains of the language sciences (Wiechmann 2015: 7-8). Below are some common definitions of RCs:

Relative clauses (...) are clause-size modifiers embedded in the noun phrase. to some extent their syntax parallels that of the other major type of subordinate clauses—verbal complements embedded in the verb phrase (...).
(Givón 2001: 175; his italics)

I define relative clauses as subordinate clauses with a semantic pivot which they share with the matrix. (...) Prototypically, the formal realization of the semantic pivot is a noun phrase (...) often called the head noun.
(Wu 2011: 570)

A construction is considered a relative clause (...) if it is a clause which, either alone or in combination with a noun, denotes something and if the thing denoted has a semantic role within the relative clause. If there is a noun inside or outside the relative clause that denotes the thing also denoted by the clause, that noun will be referred to as the **head** of the relative clause.
(Dryer 2013a; his emphasis)

Thus, RCs are considered to be subordinate clauses with the function of ‘modifying’ a head noun (or, better, NP), i.e. of further specifying its meaning somehow; they are distinguished from other modifiers of an NP by the fact that they have clausal status.

This (somewhat) clear distinction between RCs and other modifiers is not often found in descriptive work on Sinitic languages, especially those written in Chinese. Generally speaking, Sinitic languages mostly make use of one and the same marker and construction for adnominal modification (genitive, ‘associative,’¹ adjectival, and relative clauses) and for nominalization (Xu & Matthews 2011; Lu 2013, *inter alios*), as e.g. Mandarin 的 *de*:

(1) 張三的詞典

¹ The term ‘associative’ is used in Yap & Matthews (2008) and in Xu & Matthews (2011) to label a subtype of adnominal relation, but its meaning is never made explicit. In Li & Thompson (1981: 113), “associative phrases” are defined as “a type of modification where two noun phrases [...] are linked by the particle *-de*”; they also add that “the precise meaning of the association or connection is determined entirely by the meanings of the two noun phrases involved,” hence giving a very broad definition of ‘associative.’

Zhāngsān de cídiǎn
Zhangsan GEN dictionary
'Zhangsan's dictionary'

(2) 德國的作家

Déguó de zuòjiā
Germany ASSOC writer
'German writer(s)'

(3) 聰明的學生

cōngmíng de xuésheng
clever ASSOC student
'clever student(s)'

(4) 說英語的同學

shuō Yīngyǔ de tóngxué
speak English REL classmate
'the classmate(s) who speaks English'

(5) 說英語的

shuō Yīngyǔ de
speak English NMLZ
'the one who speaks English / those who speak English'

Arguably, because of the identity of all constructions modifying the NP in most Sinitic languages (and, most importantly, in the standard language), almost all descriptions written in Chinese tend to subsume all of those under the same (macro-)category of 'modifiers' (定語 *dìngyǔ* or 修飾語 *xiūshìyǔ*; see Liu 2005: 3), and the markers are usually termed just 'structural particle(s)' (結構助詞 *jiégòu zhùcí*). Thus, most often, RCs are not singled out as a construction type with specific properties, but just as an instance of modification by a clause (see e.g. Yue 1995, *inter alia*). In some English-language works on Mandarin, many 的 *de*-marked adnominal modifiers (especially, adjectives) are treated as relative clauses or small clauses, and 的 *de* has been analyzed as a determiner (see e.g. Simpson 2001 and the references cited in Paul 2015: 140), thus blurring again the distinction between RCs and other modifiers.

On the other hand, some English-language publications point out the overlap of RCs and nominalized clauses. In Li & Thompson's influential grammar of Mandarin, relative clauses are actually seen as a subtype of nominalization (1981: 580): "[a] nominalization can be called a relative clause if the head noun that it modifies refers to some unspecified participant in the situation named by the nominalization." In their discussion of the (Jieyang) Chaozhou relativizer and nominalizer *kai*,⁵⁵ Xu & Matthews suggest that the latter function may derive from the former via the deletion of the head (exx. from Yap & Matthews 2008: 323; tones omitted in the source):

(6) *lai tsio p'aʔkang kai naŋ loŋ si gua-sēn-kiā*
come here work REL people all COP outside-province-SUF
'Those people who came here to work are all from other provinces'

- (7) *lai tsio p'aʔkang kai loŋ si gua-sě̃n-kiā*
 come here work REL/NOM all COP outside-province-SUF
 ‘Those who came here to work are all from other provinces’

The identity of markers of nominalization and of adnominal modification is common not only for Chinese, but also for Sino-Tibetan languages in general (Yap & Matthews 2008: 110).

It has also been proposed that Sinitic, as well as many other Asian languages, have no relative clauses as traditionally defined in the general linguistic literature. Comrie (2003: 29) speaks of “general noun-modifying constructions” to indicate just any clause-sized modifier attached to the NP, without any syntactic operation as movement or gap-filling, and connected to the head noun by semantic-pragmatic relations. See the following Cantonese example (Chan, Matthews & Yip 2011: 219):

- (8) 返學個對鞋
faan1 hok6 go2 deoi3 haai4
 return school that pair shoe
 ‘the shoes for going to school’

Here the head 鞋 *haai4* is not an argument of the verb 返 *faan1* ‘to return,’ but is rather pragmatically associated with it; the distinction between these noun-modifying constructions and ‘true’ (from a syntactic point of view) RCs may prove difficult, or even impossible (Chan, Matthews & Yip 2011: 219). Moreover, Sinitic RCs are also formally indistinguishable from “fact-S” constructions (also “noun complement clauses”), i.e. “sentential complements with a nominal head” (Comrie, 1998: 51); compare (Li & Thompson 1981: 587; our glosses):

- (9) *wǒ tí-chūlai de yìjiàn*
 1SG raise-come.out REL opinion
 ‘the opinion that I put forth’

- (10) *fǎn É de yìjiàn*
 oppose Russia COMP opinion
 ‘the opinion that (e.g. we) should oppose Russia’

According to Li & Thompson, the difference between (9) and (10) is that in the latter “the head noun is always abstract and does not refer to *any* entity (...) in the modifying clause” (1981: 585; their italics), whereas in (9) the head noun *yìjiàn* ‘opinion’ refers to the object of the verb *tí-chūlai* ‘raise, put forth’ in the RC. Thus, the difference becomes apparent on the semantic level, but the constructions themselves are homonymous. LaPolla (forthcoming) also suggests that the notion of ‘relative clause’ cannot be fruitfully applied to Sino-Tibetan languages, arguing that all Mandarin pre-head noun-modifying constructions are noun-noun compounds, with the modifying clause acting as a nominal.

Although the strategies for marking all adnominal modifiers and nominalization *typically* overlap in Sinitic, we do believe that it is worth treating RCs separately, especially as far as the issue of headedness is concerned. Moreover, the markers of adnominal modification and nominalization may not coincide e.g. in some Wu, Xiang, and also Yue dialects (Chao 1956[1928]; Yue 1995; Wu 2005; *contra* Lu 2013: 128); in some cases, even different types of adnominal modification employ different strategies. A good example of such a ‘division of labour’ comes from Tiantai (Dai 2006: 99-100):

- (11) 我拉個做格生活

$\acute{h}\text{ɔ}^{214}$ - $la\text{ʔ}kou\ tsou^{55}$ $ko\text{ʔ}$ saj^{33} $\acute{h}u\text{ə}\text{ʔ}^{23}$
 1SG-PL do REL work
 ‘The work we do’

(12) 生活是我拉個做格
 saj^{33} $\acute{h}u\text{ə}\text{ʔ}^{23}$ $z\text{ʔ}^{21}$ $\acute{h}\text{ɔ}^{214}$ - $la\text{ʔ}kou\ tsou^{55}$ $ka\text{ʔ}$
 work COP 1SG-PL do NOM
 ‘We did this work’

If we compare (11) and (12), we see that the relativizer 格 $ko\text{ʔ}$ is not homophonous with the nominalizer 格 $ka\text{ʔ}$, although the relationship between the two seems rather obvious. Moreover, if the relationship is one of possession, the marker is 个 $ko\text{ʔ}$, homophonous but written with a different character (in Dai 2006), and the nominalized version would be 个 kou^{55} rather than $ka\text{ʔ}$. According to Dai’s (2006: 100) analysis, $ko\text{ʔ}$ is the weakened form of what were possibly different markers, with possessive 个 kou^{55} arguably deriving from the classifier 个 $kou^{(55)}$ whereas 格 $ka\text{ʔ}$, may have a different origin. Thus, in this paper we chose to use the term ‘relativizer,’ even though we will often be dealing with generic markers of modification and nominalisation.

With the caveats exposed above in mind, for the purposes of our survey we define a relative clause as a clause-sized (non-argumental) modifier built around a verb and headed, as (4) and (6); since we believe that verbs and adjectives can and should be distinguished in at least *some* Sinitic varieties, notably Mandarin (Paul 2015; cf. Francis & Matthews 2005 on Cantonese), we exclude adjectival predicates from the domain of RCs. Nevertheless, nominalized clauses/headless RCs, as well as other adnominal modifiers, will be also discussed for the purpose of finding correlations.

3. Our survey

As stated in the introduction, for our survey of relativization patterns we built a convenience sample of 44 Sinitic languages, chosen to represent all major branches of Sinitic and the main areal subdivisions of the family, namely Northern, Central and Southern (Norman 1988, 2003). Ours is not a balanced sample of Sinitic, as not all families and areas are equally represented; nevertheless, given the preliminary nature of the present survey and considering the fact that there are at least two representatives for each major group/area, we believe that the sample is varied enough to enable us to make some tentative generalisations.

Also, as is often the case in typological surveys, data differs in quantity and quality for each variety considered. The data comes from articles, grammars, appended texts, and web corpora; for a couple of languages we had all four, whereas for most of them we had either only one source available, or a combination of two or three of the above. Also, whereas for some varieties we had detailed studies of relativization available, for many others we had only (brief) mentions in grammars, or even just unanalyzed examples in the texts. In Table 1, we provide a list of the varieties in our sample, with their affiliation and with the indication of the sources consulted.

Language	Group	Article(s)	Grammar(s)	Text(s)	Corpus(-ora)
Mandarin	Mandarin	X	X	X	X
Xi’an	Mandarin		X	X	
Ganyu	Mandarin		X	X	
Luoyang	Mandarin		X	X	
Xunxian	Mandarin		X		

Nanjing	Mandarin		X	X	
Xuzhou	Mandarin		X	X	
Boshan	Mandarin		X	X	
Yantai	Mandarin	X			
Jinxiang	Mandarin		X	X	
Lianshui (Nanlu)	Mandarin	X	X	X	
Kunming	Mandarin		X	X	
Yancheng	Mandarin		X	X	
Yongshou	Mandarin	X			
Huolu	Jin		X	X	
Xinzhou	Jin		X	X	
Heshun	Jin		X	X	
Huojia	Jin		X	X	
Shenmu	Jin		X		
Tiantai	Wu		X		
Shanghai	Wu		X	X	X
Suzhou	Wu	X	X	X	
Wenzhou	Wu	X	X		X
Haimen	Wu		X	X	
Xiuning	Hui		X	X	
Jixi	Hui	X			
Changsha	Xiang	X			
Xiangtan	Xiang		X		
Hengyang	Xiang	X			
Xinhua	Xiang	X			
Loudi	Xiang	X			
Qianshan	Gan		X	X	
Nanchang	Gan		X	X	
Taiwanese Hakka	Hakka	X	X	X	X
Meixian	Hakka		X		
Xinyi	Yue		X	X	
Cantonese (HK)	Yue	X	X		X
Kaiping	Yue	X	X	X	
Chaozhou (Jieyang)	Min	X	X		
Taiwanese Southern Min	Min	X	X		X
Hui'an	Min	X	X		
Leizhou	Min		X	X	
Fuzhou	Min		X	X	
Chenghai	Min	X			

Table 1. Our sample

Somewhat improperly, we use ‘Taiwanese Hakka’ as a cover term for the varieties of Hakka spoken in Taiwan, but we will refer specifically to the individual varieties when needed. In what follows, we shall illustrate the range of variation we observed in the languages of the sample according to each parameter considered.

3.1 *Position of the head*

The combination of VO basic word order and head-final relatives, as mentioned in the introduction, is one of the most outstanding typological features of Sinitic, and REL-N order is overwhelmingly dominant in the family. Nevertheless, exceptions to this very robust trend can be found, for instance, in

the extreme South of China. In our sample, Hui'an (Southern Min) and Kaiping (Yue) both have what seem to be head-initial relatives:

- (13) *lu3 e0 hit7-8 kɔ1 thak8-4 tɔŋ1-bun2 e0*
 female NOM that CLF study Chinese REL
 'That girl who studies Chinese' (Chen 2008: 573)

- (14) *neiy²¹ 个细民仔著红衫个系我个妹*
 GE XIMINZI ZHUO HONG SHAN GE XI WO GE MEI
 that CLF child wear red shirt REL/NOM² COP 1SG POSS young.sister
 'That child wearing red clothes is my little sister' (Yue 1995: 292)

Moreover, a head-initial analysis has been proposed also for two Mandarin constructions. The first one is the so-called 'postposed relative clause'; it is typical of legal (standard Chinese) texts (15), but is also found in colloquial Mandarin (16):

- (15) 司法工作人员私放罪犯的 [...]
sīfǎ gōngzuò-rényuán sī-fàng zuìfàn de
 judicature working-personnel illicit-release criminal REL
 'judiciary staff members who illicitly release a criminal [...]' (Dong 2003: 121)

- (16) 你们班里你万一有谁吸毒的, 谁这个瞎搞的,
nǐ-men bān-li nǐ wànyī yǒu shéi xī-dú de shéi zhè-ge xiāgǎo de
 2SG-PL class-loc 2SG supposing there.be s.o. do-drug REL s.o. this-CL mess.around REL
 谁挟抢的, 这难受得了啊!
shéi jiā qiāng de zhè nánshòu déliǎo a
 s.o. carry gun REL this unhappy awful SFP
 'In your class, if there is anyone who does drugs, messes around, or carries a gun, s/he will have a really hard time!' (Fang 2004: 151)

In (15) and (16), the RCs are placed after the noun phrase they modify. Dong (2003) believes that these RCs are marked with respect to 'ordinary' right-headed RCs, as they can be used only in hypothetical contexts (i.e. they cannot be used to express an actual event); however, Zhao (2009: 87) also provides examples in which the postposed clause is not hypothetical:

- (17) 女作家撰写历史小说的, 孟瑶算是数一数二的了
nǚ-zuòjiā zhuànxié lìshǐ xiǎoshuō de Mèng Yáo suànshì shǔyīshǔ'èr de le
 female-author write history novel REL Meng Yao consider.to.be. one.of.the.best SP PERF
 'Among female authors who write historical novels, Meng Yao is regarded as one of the best'

Zhao believes that these are not true RCs, but rather sentences with a subject-predicate construction as predicates (主謂謂語句 *zhǔ-wèi wèiyǔ jù*). According to her, this is shown by the fact that there can be a pause between the NP and the modifying clause, and a particle (as e.g. 啊 *a*) can be added before

² Yue (1995: 292) believes that 个 GE here is a nominaliser, but we suggest that it can be interpreted as a relativiser too, hence the double gloss.

the pause (see below, ex. 20). Moreover, conjunctions and adverbial modifiers can be added to the modifying clause. Compare (15) and (18):

- (18) 司法工作人员凡私放罪犯的 [...]
sīfǎ gōngzuò-rényuán fán sī-fàng zuìfàn de
 judiciary working-personnel all illicit-release criminal REL
 ‘all judiciary staff members who illicitly releases a criminal [...]’ (Zhao 2009: 88)

The pause argument does not seem to be particularly relevant, in our opinion, since a pause before or after a dependent clause is not unusual, and is normally used e.g. in English for non-restrictive relative clauses (*Paul, who lives in London*; and see ex. 20 below). Actually, as pointed out by Liu (2008: 13), a pause between a head and modifier is odd when the latter comes *before* the head NP, but not when it is placed after it.

As to her second argument, it is unclear to us whether the insertion of the adverb 凡 *fán* ‘all’ really proves anything; compare:

- (19) 凡进行有性生殖的生物 [...]
fán jinxing yǒuxìng shēngzhí de shēngwù
 all perform sexual reproduction REL organism
 ‘all organisms that engage in sexual reproduction [...]’ (web example)³

In (19), we have an ordinary head-final RC in which 凡 *fán* can be present or absent without any meaningful change in the structure of the sentence. Hence, we believe that examples as (15), (17), and (18) might be analyzed as post-NP RC constructions. If anything, Zhao’s remarks point out what could be a possible source for this unusual word order, namely topicalization. Compare (15) and (20):

- (20) 司法工作人员啊, 私放罪犯的
sīfǎ gōngzuò-rényuán a sī-fàng zuìfàn de
 judiciary working-personnel SFP illicit-release criminal REL
 处五年以下有期徒刑或者拘役
chǔ wǔ nián yǐxià yǒuqī túxíng huò jūyì
 sentence five years under fixed-term imprisonment or detention
 ‘all judiciary staff members who illicitly releases a criminal are subject to detention or imprisonment for a maximum of five years’ (Zhao 2009: 88)

In example (20), the modified NP is marked with the (topic) particle 啊 *a*, and is separated from the modifying clause by a pause; this may be interpreted as topicalization. If this analysis is correct, the NP-REL order would be the by-product of topicalization of the head NP. Unfortunately, we do not have enough data on Hui’an (13) and Kaiping (14) to assess whether such an analysis might also hold for those languages, although it does seem intuitively plausible; we will also suggest an alternative account for these two dialects later (§4).

Example (16), on the other hand, looks significantly different. Here there appears to be no corresponding REL-NP construction, since having 誰 *shéi* ‘who, someone, anyone’ in its indefinite usage as the head of a prenominal RC is ungrammatical (*吸毒的誰都会被开除的 **xī-dú de shéi dōu*

³ http://61.189.240.78/res/seniorbio/teach/e_book/031/058.htm (last access: 15/6/2016).

huì bèi kāichú de ‘all those who do drugs will be expelled’;⁴ as pointed out by Fang (2004: 151-152), with an indefinite pronoun virtually only postposed relatives are grammatical. Hence, a topicalization analysis should not apply here. If Fang’s treatment is correct, this would constitute a type of RC that can actually only be head-initial.

The second construction for which a head-initial analysis has been proposed is found in colloquial Mandarin only; I term this the ‘*tā*’ construction (see below, §3.2.3):

- (21) 你比如说你跟着那种水平不高的英语老师,
nǐ bǐrú-shuō nǐ gēn-zhe nà zhǒng shuǐpíng bù-gāo de Yīngyǔ lǎoshī
 2SG for.instance-say 2SG follow-DUR that type level not-high SP English teacher
 他根本不知道那个纯正的英语发音,
tā gēnběn bù zhīdào nà ge chúnzhèng de Yīngyǔ fāyīn
 3SG at.all not know that CL pure SP English pronunciation
 他英语语法也不怎么样, 你就全完了
tā Yīngyǔ yǔfǎ yě bù-zěnmeyàng, nǐ jiù quán wán le
 3SG English grammar too not-so.great 2SG then entirely finish PERF
 ‘If, say, you follow that kind of English teacher whose level is not so high, who doesn’t know pure English pronunciation, and who has bad grammar, then you’re lost’ (Fang 2004: 151)

Here the ‘empty’ pronoun 他 *tā* ‘he’ can be omitted (Fang 2004: 152; see below, §3.2.4). This construction is significantly different from the postnominal RCs seen above in that it is non-restrictive; from the prosodic point of view, it is also a loose construction, with a pause between the head NP and each RC, and is regarded as a not very grammaticalized structure (see Liu 2008: 13). This confirms the tendency for postnominal RCs to be less cohesive with respect to the NP they modify, if compared to prenominal RCs. Besides, if the analysis of constructions like (21) as RCs is correct, this is about the only case in which a Chinese RC is always to be understood as non-restrictive, the tendency being that the restrictive interpretation is generally available (see below, §3.2.1; Tang 2007: 140).

Besides the position of the head respective to the RC, another (sub-)parameter which we considered is that of head-external vs. head-internal status. As said above, the overwhelming tendency for Sinitic appears to be that of having only head-final RCs; however, exceptions can be found, again. Head-internal RCs have been reported for Wenzhou (Wu), and belong to two subtypes, i.e. ‘double-headed’ and ‘single-headed’ (Hu, Cecchetto & Guasti 2015):

- (22) *ŋa33-bo21 ho342 na42-ŋ44 keʔ0 na42-ŋ44*
 grandma draw child REL child
 ‘The child who the grandma draws’

- (23) *ŋa33-bo21 ho342 na42-ŋ44 keʔ0*
 grandma draw child REL
 ‘The child who the grandma draws / the grandma who draws the child’

Whereas for (22) only the object interpretation is available, (23) is reportedly ambiguous between an object and a subject interpretation. According to Hu, Gavarró & Guasti, double-headed RC constructions with a resumptive NP, inconsistent with prescriptive grammar, are possible also in colloquial Mandarin (2016: 9):

⁴ Example courtesy of Hu Shenai.

- (24) *māma qīn xiǎopéngyou de xiǎopéngyou*
 grandma kiss child REL child
 ‘the child that the mother kisses’

This type of RC was elicited from both children and adult native speakers; interestingly, resumptive constituents were much more common in object RCs than in subject RCs and, as a matter of fact, adult speakers produced only object RCs with a ‘second head’ (Hu, Gavarró & Guasti 2016: 13). However, the participants in this research were interviewed in Zhejiang province, and the authors of this study did not take into consideration their linguistic background (Hu Shenai, p.c.); hence, the acceptance of resumptive NPs could be due to (Wu) dialectal influence. Although such double-headed RCs are sometimes produced in elicitation tasks, they basically never occur in spontaneous speech, at least in Standard Mandarin;⁵ hence, Wenzhou and, possibly, Wenzhou Mandarin seem to stand out in this respect.

Another Sinitic language for which a head-internal analysis of RCs has been proposed is Cantonese; again, the construction at issue is the object RC. As we will see in greater detail below (§3.2.2), Cantonese makes use of a ‘RC - (DEM) - CLF - NP’ construction, in which a classifier is the main marker of relativization, with an optional demonstrative. In the case of object RCs, both a head-final (25a) and a head-internal (25b) analysis could be argued for (Chan, Matthews & Yip 2011: 214):

- (25a) 佢食嗰粒糖好好味
 [RC *keoi5 sik6 go2 lap1 __i*] [head noun *tong2i*] *hou2 hou2mei6*
 3SG eat that CLF candy very yummy

- (25b) 佢食嗰粒糖好好味
 [NP/S *keoi5 sik6 go2 lap1 tong2*] *hou2 hou2mei6*
 3SG eat that CLF candy very yummy
 ‘The candy she eats is very yummy’

In the head-internal analysis, the RC 佢食嗰粒糖 *keoi5 sik6 go2 lap1 tong2* ‘the candy she eats’ “has the internal structure of a SVO clause, but, in terms of its external syntax, it behaves as a NP, functioning as the subject of the main clause” (Chan, Matthews & Yip 2011: 214); NP/S, thus, indicates that the constituent has the internal syntax of a clause (with object *in situ*), but the external syntax of a NP (possible objections to this interpretation for Cantonese RCs may be found in Matthews & Yip 2004: 275-276). What is interesting, in our perspective, is that such an analysis could in principle be applied to any variety which has an object RC construction analogous to that of Cantonese; as we shall see below (§3.2.2), this is the case for many Sinitic languages.⁶

3.2 Relativization strategy

As mentioned above (§§1, 2), RCs in Chinese linguistics have often been treated just as an instance of modification of an NP, and the focus has mostly been on the structural particle used to mark this relationship of modification. However, patterns of relativization in Sinitic languages are much more

⁵ I would like to thank an anonymous reviewer for pointing this out to me.

⁶ Such an analysis has been ruled out for (Jieyang) Chaozhou and Hui’an on phonological grounds; specifically, tone sandhi patterns suggest that in these languages the object NP is not contained within the RC (Chen 2008: 575-576).

diverse, and, besides making use of structural particles with different origins, may also rely on other strategies. We divided the patterns of relativization attested in the languages of our sample into four groups:⁷

- a. relativization based on a structural particle
- b. relativization based on a demonstrative or on a classifier (or both)
- c. other (minor) strategies of relativization
- d. zero-marked relativization

These four patterns may be further divided into subtypes, as we shall see below.

3.2.1 Relativization based on a structural particle: the SP-construction

In reference grammars of Standard Mandarin, one usually finds only one type of RC constructions; namely, the ‘RC - REL - NP’ strategy exemplified above (4). This type of construction is found in virtually all Sinitic languages, and is characterized by the use of a dedicated marker of modification, i.e. what is usually termed a structural particle (SP; see above, 2); hence, I call this the ‘SP-construction’ or ‘SP-RC.’ A typical feature of this construction is that it is in itself open to several interpretations, as to specificity (specific *vs.* nonspecific/generic; see Krifka *et al.* 1995, Liu 2005),⁸ number (singular *vs.* plural) and restrictiveness (although, as said above, only the restrictive interpretation appears to be always possible; see Matthews & Yip 2004, Tang 2007).⁹ Compare the possible interpretations of the following Mandarin RCs:

(26) *sān ge dài yǎnjìng de xuésheng*
 three CL wear glassed REL student
 ‘Three students who wear glasses’ (specific or nonspecific/generic) (Zhang 2006: 2)

(27) 吃螃蟹的毛利人
chī pángxiè de Máolìrén
 eat crab REL Māori
 ‘the Māori who eat crab’ (i.e. as opposed to those who do not)
 ‘the Māori, who eat crab’ (Liu 2008: 13)

Moreover, in Mandarin and several other varieties, as e.g. Yongshou (a Mandarin dialect; Tang 2008), a demonstrative can be added to obtain a specific reading (Wu 2009):

⁷ This classification partly overlaps with that discussed in Liu (2005). He proposes a classification of relativization strategies in three groups: a. demonstratives or demonstrative-classifier constructions used as relativizers; b. bare classifiers used as relativizers; c. aspect markers used as relativizers. However, since our proposal is aimed at sketching a comprehensive typology, we included also ‘canonical’ relativization based on a structural particle, which constitute a non-homogeneous family of construction and deserve a detailed analysis (see 3.2.1); also, among ‘minor’ strategies we included a wider range of constructions, rather than only those based on aspect markers, and we discuss also zero-marked relativization.

⁸ For some diagnostic tests for genericity, see Krifka *et al.* (1995).

⁹ However, note that, for instance, so-called ‘outer modifiers’ (as e.g. *dài yǎnjìng de sān ge xuésheng* ‘three students [specific] who wear glasses’) necessarily imply a specific reading. On the interaction between determiners (specifically, demonstrative-classifier phrases), word order and the restrictive *vs.* non-restrictive interpretation for Chinese RCs, see Zhang (2006), Tang (2007).

- (28) *wǒ zuótiān kànjàn de nà gè rén*
 1SG yesterday see REL DEM that person
 ‘The person that I saw yesterday’ (specific)

However, the SP-construction does not behave consistently in all the languages we surveyed. For instance, in Cantonese the combination of a SP and a demonstrative is considered to be a ‘Mandarinism,’ and not representative of native Cantonese syntax (Matthews & Yip 2004: 273):

- (29) 佢唱嘅嗰首歌
keoi5 coeng3 ge3 go2 sau2 go1
 3SG sing REL that CL song
 ‘the song she sings’

The same applies to Hui’an, a Min dialect: the addition of a demonstrative after the SP *e2* is perceived as unnatural and, again, as a possible Mandarinism (Chen 2008: 572).

Moreover, although a specific reading is not entirely ruled out, SP-RCs in Cantonese (at least, in the colloquial register) normally indicate a generic referent (Matthews & Yip 2004: 278). Also, the bare SP-construction always has a generic interpretation, for instance, in Yongshou (30), in Hui’an (31) and in (Jieyang) Chaozhou (32):

- (30) 爱看古书的老师
 AI KAN GUSHU DE LAOSHI
 love read old-books REL teacher
 ‘teachers who love to read ancient books’ (Tang 2008: 245)

- (31) *tsɔ1 e2-4 tshu5*
 rent REL house
 ‘rented houses’ (Chen 2008: 569)

- (32) *hau²¹³⁻⁵³ tā²¹³⁻⁵³ suŋ⁵³⁻³⁵ ts’io²¹³ kai⁵⁵⁻¹¹ nan⁵⁵*
 like say joke REL person
 ‘people who like to make jokes’ (Xu 2007: 114)

According to our sources, if no determiners are added, this type of RCs cannot refer to a specific entity, but only to a subset of teachers, houses, and people, respectively. We may remark that this is in line with the general tendency for bare NPs in Sinitic to have primarily a generic reading (see Krifka 1995, Liu 2002; cf. Cheng & Sybesma 2005).

Thus, in short, what emerges from our survey of SP-constructions is that in some languages, as e.g. Standard Mandarin, SP-RCs are fairly open both to different interpretations and to combination with other determiners and/or quantifiers, whereas in others the combination with demonstratives, classifiers, etc. is not normally allowed; also, the tendency for SP-RCs in some languages is to be understood as having generic/nonspecific reference, either as the only option (as in Yongshou, Hui’an, and Chaozhou) or as the preferred option (as in Cantonese and Jixi).

On the other hand, in our sample we did not find languages in which the SP-construction is used only for specific reference. We thus suggest that there may be an implication of the type:

- (33) SP-RC with specific reference \supset SP-RC with generic/nonspecific reference

That is, generic reference appears to be the unmarked option for SP-RCs.

Note that the SPs we refer to here are not etymologically homogeneous. Generally speaking, markers of adnominal modification in Sinitic languages may be divided into two (macro-)groups, patterning fairly well with the North/South division within Sinitic (Yue 2003, Wu 2005; see below, §4): namely, 的 *de*-type and 個 *gè*-type relativizers. 的 *de*-type relativizers, the ‘Northern’ type, are, as is obvious, cognates to Mandarin 的 *de* and are normally identified by their dental initial ([t]);¹⁰ 個 *gè*-type relativizers, the ‘Southern’ type, typically have a velar initial (mostly, [k]). 的 *de*-type relativizers probably derive from a demonstrative (的 *de* < 底 *dǐ* ‘that, what’; see Ōta 1958, Aldridge 2013), although there are competing hypotheses on this (see Wu 2005: 267-268, Lu 2013: 128-129). 個 *gè*-type relativizers, on the other hand, are often said to derive from a generic classifier cognate to Mandarin 個 *gè*, which in turn derives from an Archaic Chinese classifier for bamboo, 箇 *gè* (Shi & Li 2002, Lu 2013); see e.g. Cantonese 嘅 *ge3* < 個 *go3* ‘CLF’ (Yap & Matthews 2008). Besides that, in Southwestern Mandarin and, also, Hui dialects (Jixi), one finds relativizers with a nasal initial ([n]), probably deriving from a distal demonstrative (Kunming Mandarin *nə44* REL < *nə212* ‘that’; Gui 2000, Lu 2013). In Fuzhou, the relativizer is *i*, usually written with the character 其 *qí* ‘that, POSS, 3SG’ (Committee 1998); the choice of the character is motivated by the proposed etymon 其 *qí* in its use as a possessive and (arguably) classifier, but there are doubts as to the origin of the marker, with some suggesting it might derive, again, from a generic classifier 個 *gè* (Zhao 1999: 47).¹¹ However, there appear to be no significant differences in the synchronic behavior of relativizers with different etyma; above all, fully grammaticalized classifier-derived relatives are not equivalent to ‘ordinary’ classifiers used as relatives, as we shall see in the next section.

3.2.2 Relativization based on a demonstrative or classifier: the DEM/CL-construction

Besides the well-known SP-construction, many (if not all; see Lu 2013) Sinitic languages make use of a relativization strategy based either on a demonstrative or on a classifier: I term these, respectively, the ‘DEM-construction’ and the ‘CL-construction’; I shall also use the hyperonym ‘DEM/CL-construction’ to refer to both of them.

In both construction types, the co-occurrence of a demonstrative and a classifier is usually possible. However, in the DEM-construction the demonstrative is the only obligatory constituent, whereas in the CL-construction the required element is the classifier. (Colloquial) Mandarin is representative of the DEM-RC type (34), whereas Cantonese is representative of the CL-RC type (35):

(34) 张作霖应该到达这天 [...]

¹⁰ In an area of Northern China spanning over the Mandarin and Jin groups, one also finds markers of relativization with a lateral ([l]) initial; although their origin does not appear to be entirely clear, they are often considered to be cognates to 的 *de* as well (Zhao 1999: 47). In the same area, a very reduced form is also found, i.e. Boshan ə, the actual shape of which depends on the rhyme of the constituent it attaches to ([ə] after [i], [ɤ] after [u], etc.; Qian 1993:24-25); this marker actually has a broad array of functions, and it appears to be the product of extreme reduction of different markers, most likely including something cognate to 的 *de*.

¹¹ We may remark that a close match with the relativizer *i* in Fuzhou would be 伊 *i⁴⁴* ‘3sg’; although the connection between a personal pronoun and a relativizer may not seem obvious at first sight, an analogous case may be found in the Yizhang dialect of Hunan (not included in our sample), in which 渠 *kei⁴⁴* ‘3sg’ is just as close to the relativizer 个 *kei* (Wu 2005: 282; cf. Yue 2003: 115).

Zhāng Zuòlín yīnggāi dàodá zhè tiān [...]
Zhang Zuolin should arrive this day
'The day on which Zhang Zuolin should have arrived [...]' (Liu 2005: 4)

- (35) 我寫咗(個)封信好長嘅
ngo5 se2-zo2 (go2) fung1 seon3 hou2 coeng4 ge3
1SG write-PFV that CLF letter very long SP
'the letter I wrote is long' (Matthews & Yip 2004: 275)

Demonstratives and classifiers appear to be, in a sense, 'less grammaticalized' as relativizers than SPs, as hinted at in the preceding section, as they are typically restricted to specific/definite readings (Liu 2005: 5), as mentioned in several descriptions of individual varieties (see e.g. Matthews & Yip 2004, Wang & Gu 2006, Xu 2007, Chen 2008, Tang 2008). Compare the following Mandarin sentences (Liu 2005: 5):

- (36) a. 妈妈买这衣服很新潮
Māma mǎi zhè yīfu hěn xīncháo
Mum buy this clothes very fashionable
'The clothes which mum bought are very fashionable (specific/definite)'
b. 妈妈买的衣服很新潮
Māma mǎi de yīfu hěn xīncháo
Mum buy REL clothes very fashionable
'The clothes which mum buys/bought are very fashionable (specific/definite or generic)'¹²

Whereas the SP-RC in (36b) is open both to a specific/definite and to a generic reading (see above, §3.2.1), for the DEM-RC in (36a) only the specific/definite reading is available. This is hardly surprising, given that the use of DEMs or CLs as markers of relativization is intimately connected with their use as markers of definiteness (quasi-articles; see Fang 2002, Liu 2005); however, at least in Beijing Mandarin, only the proximal demonstrative 这 *zhè* 'this' is said to have grammaticalized as a definite article (Fang 2002), but both 这 *zhè* and the distal demonstrative 那 *nà* 'that' may apparently be used as relativizers:

- (37) *wǒ zuóer jiàn nài rén*
1SG yesterday see that person
'That person I saw yesterday' (Wu 2009: 2)

Arguably, here deixis plays a role: the distal demonstrative, despite being a 'less ideal' candidate for relativization, is more appropriate for its deictic value.

Moreover, the restriction to specific referents for the DEM/CL-construction does not necessarily apply for all languages. For instance, (38) is said to be acceptable in Mandarin, although its interpretation is generic (Liu 2005: 6):

- (38) 玩蹦极这游客还挺多的

¹² The opposition between a simple present and a past tense in the English translations of (36a-b) does not directly reflect a similar distinction in the original Mandarin sentences; rather, we used this to stress the difference between a habitual reading, correlating with generic semantics, and an episodic reading, correlating with specificity.

wán bèngjí zhè yóukè hái tíng duō de
play bungee this tourist still very many SP
'There are still many tourists who do bungee jumping'

Note, however, that according to Liu this use of DEM-RCs with generic reference is actually only *marginally* acceptable and “not very natural” (2005: 5; our translation). We interpret this a sign of further grammaticalization of DEMs as relativizers, which however are still not as grammaticalized as SPs (hence the limited acceptability). A language in which CL-RCs may also have generic reference is Yantai (Liu & Shi 2012: 42):

(39) 吃毒奶粉些孩够可怜了
CHI DU NAIFEN XIE HAI GOU KELIAN LE
eat poison milk-powder CL child very pitiable SFP
'The children who ate poisoned milk powder are so pitiable'

However, restrictions apply here too: the generic reading is available only with the ‘indefinite’ classifier 些 XIE ‘some, a small amount’ and with the all-purpose classifier 个 GE; the former represents a special case, as it carries an indefinite meaning, and the latter apparently is more grammaticalized(/generalized) than the other classifier, hence losing its association with specificity and its connection to a particular subset of nouns (i.e. it can be associated with any noun in this function; Liu & Shi 2012: 40).

The generalisation according to which the use of classifiers as relativizers implies the use of classifiers as quasi-articles has been put forth by Chen (2007: 524), who proposes that there are no Sinitic languages which use classifiers as markers of adnominal modification but not as quasi-articles, i.e. as bare determiners, as e.g. in the following Shanghai example (adapted from Zhu 2006: 77):

(40) 只鸡一眼也不好吃
tsaq jii iqngae xa veq haochiq
CL chicken a-little yet not tasty
'The chicken is not tasty at all'

Here, 只 *tsaq* has the function of a definite article, imposing a definite reading. Classifiers can also be used as relativizers in Shanghai, just as seen above for Cantonese (ex. from the *Shanghai Spoken Corpus*, SCRIPT010 - S048):¹³

(41) [...] 上趟阿拉亭相只游戏呢, [...]
SHANG TANG A-LA BEIXIANG ZHI YOUXI NE
last time 1-PL play CLF game SFP
'(as to) the game that we played the last time, [...]'

In point of fact, in Yantai CL-RCs based on 些 XIE and 个 GE with a generic reading are acceptable arguably because the same classifiers are used as bare determiners with a generic reading (ex. from Liu & Shi 2012: 43):

¹³ Version 1.0 (<https://www.ualberta.ca/~johnnewm/SC/Shanghai/SSC.html>: last accessed 16/11/2015).

(42) 个打渔的都晒得黢黑的

GE DAYU DE DOU SHAI DE QUHEI DE
CL fish SP all tan SP black SP
'Those who fish are all very dark'

However, as expected, the reverse does not apply: namely, there are languages that use bare classifiers as determiners, but not as relativizers, as e.g. the Edong dialect (not included in our sample; Chen 2007: 524). Among the languages of our sample that allow bare classifiers as determiners, in Chenghai (Min), the SP is said to always be necessary for adnominal modification (Chen & Liu 2003: 71); in the Loudi (Xiang) dialect, a SP is used by preference for relativization (Yan & Liu 1993: 68); in Xinhua (Xiang), the use of classifiers as relativisers without a SP is restricted to specific constructions (Zhou 2006: 187; *contra* Chen 2007: 254).

Elaborating on Chen's (2007) generalization mentioned above, we noticed that what is actually crucial for the development of classifiers into markers of relativization in a given language is that bare classifiers be used to mark definiteness in a *preverbal* NP. According to Wang's (2015) typology of bare classifier phrases, Sinitic languages may be divided into seven types, according to whether they allow preverbal and/or postverbal bare classifier phrases, and according to whether these are definite or indefinite. Looking at the varieties in our sample, we noticed that all those which have CL-RCs also allow preverbal definite bare classifier phrases; on the other hand, none of the varieties which do not allow preverbal definite bare classifier phrases have CL-RCs. In point of fact, the relative infrequency of Sinitic languages with CL-RCs is connected with the scarcity of languages which allow definite bare classifiers in preverbal position (24 out of 120 in Wang's 2015 sample). Hence, we suggest that the implication proposed by Chen (2007) should be reformulated as follows:

(43) bare CLs as relativisers \supset bare definite CLs in preverbal position

Also, it is worth remarking that, while a combination of demonstrative and classifier is usually acceptable as a relativizer in Sinitic, bare DEM-RCs and CL-RCs tend to be mutually exclusive in individual languages, with the latter appearing to be less common, as hinted at above. Thus, Sinitic languages apparently choose either demonstratives or classifiers as the constituent with the ability to mark definiteness and adnominal modification by itself (see Liu 2002). An exception to this general tendency is Taiwanese Southern Min, in which relativization is marked by the demonstrative *hit* 'that' plus a classifier, and apparently the latter cannot be omitted (see Lu 2013, Lin 2015);¹⁴ we believe that this is explained by the fact that this dialect does not allow either bare demonstratives or bare classifiers as determiners.

Lastly, CL-RCs may be subject to structural and/or semantic restrictions even in languages in which they appear to be, for lack of a better term, well-developed; for instance, in Suzhou, only so-called 'canonical' (典型 *diǎnxíng*) RCs can be relativised by a bare classifier (Liu 2005: 9).¹⁵ In our opinion this constitutes further evidence for the analysis of classifiers, just as demonstratives, as non-fully grammaticalized relativizers. Another restriction which applies to CL-RCs in some varieties involves number. As said in the preceding section, bare SP relatives are usually fairly open to a singular or plural interpretation. Among the languages of our sample, (bare) CL-RCs are restricted to a singular

¹⁴ There is an alternative form *he*, which however is the product of the fusion of demonstrative *hit* and the most general purpose classifier *ê*; hence, a classifier is anyway present in the original construction.

¹⁵ 'Canonical' RCs, per Liu's definition, are RCs which are made of more than a bare verb (e.g. they have also a subject, a temporal adverb, etc).

interpretation at least in Suzhou¹⁶ and Jixi, whereas the corresponding SP-constructions are open both to a plural and to a singular interpretation:

(44) 俚买本书

LI MAI BEN SHU
3SG buy CLF book
'the book he bought' (Chen 2007: 532)

(45) 担来写对联张红纸

DAN LAI XIE DUILIAN ZHANG HONGZHI
take come write antithetical.couplet CLF red-paper
'bring me that sheet of red paper for writing antithetical couplets' (Zhao 2001: 30)

Once again, this shows that classifiers are not all-purpose relativizers as SPs seem to be; moreover, the degree of grammaticalization/generalization of classifiers as markers of relativization is not the same for all dialects. This is true also for DEM-constructions: for instance, as shown above (38), DEM-RCs with a generic reading may be marginally acceptable in Mandarin, and some CL-RCs are always acceptable in this use in Yantai (39), hence showing a higher degree of grammaticalization, but they are invariably specific in Yongshou (Tang 2008: 247) and several other dialects.

3.2.3 Other markers of relativization: locatives, 'one' and 'tā'

Apart from the SP-construction and the DEM/REL-construction, which are commonly found throughout Sinitic, there are other minor strategies of relativization with (apparently) very limited distribution: relativization based on a locative with aspectual functions, found only in Suzhou, Yongshou, and possibly Shanghai and Taiwanese Southern Min in our sample, relativization based on the numeral 'one,' found only in colloquial (Beijing) Mandarin, and the already mentioned construction based on the third person pronoun 他 *tā* (see above, §3.1), also said to be typical of spoken Mandarin.

The use of locatives with aspectual functions as markers of relativization was first noted (to the best of our knowledge) by Liu (2005) for Suzhou. In this Wu dialect, complex locatives (termed 'prepositional compounds' by Liu) as e.g. 勒海 *ləʔ hE²⁵¹* 'be located, PROG, DUR' (Wang 2011) can be used as markers of relativization (Liu 2005: 11):

(46) 我摆勒海饼干啥人吃脱哉

WO BAI-*ləʔ hE²⁵¹* BINGGAN SHAREN CHITUO ZAI
1SG put-DUR/LOC biscuit who eat-PFV Q
'who ate the biscuit I put here?'

Here the locative and durative aspect marker 勒海 *ləʔ hE²⁵¹* 'be located here, DUR' is used as the only marker of relativization, in Liu's analysis. Co-occurrence with the SP 葛 *gəʔ²⁵³* is anyway possible; actually, if the locative/durative marker is separated from the head NP by an object, then the SP is obligatorily present (Liu 2005: 11-12).

Liu suggests that this construction might be less common in the contemporary Suzhou dialect of young speakers, being ousted by the SP-construction, more consistent with standard Mandarin. He also

¹⁶ More precisely, a plural reading for Suzhou RCs is possible if the indefinite classifier 点 DIAN 'some' is used (Liu 2005: 7).

suggests that this type of RC construction could be attested in other Central and Southern Sinitic languages which have comparable complex locative/aspectual markers, as Wenzhou 是埭 *zɿ⁴da* (Zhengzhang 2008: 242) and Cantonese 喺度 *háidouh* (Liu 2005: 13). However, 喺度 *háidouh* does not seem to be used in this fashion in Cantonese (Matthews & Yip 2004, 2011; Stephen Matthews, p.c.), and we could not find instances of relativization based on 是埭 *zɿ⁴da*, neither in a grammar (Zhengzhang 2008) nor in the *Wenzhou Spoken Corpus*.¹⁷ However, we did find an instance which may be interpreted as a RC construction based on the Shanghai locative/aspect marker 辣海 *laqhae* (Zhu 2006: 82), almost identical to Suzhou 勒海 *ləʔhE²⁵¹* (ex. from the *Shanghai Spoken Corpus*, CONV002 - S003):

- (47) 算老娘耨辰光, 活辣海辰光 [...]
 SUAN LAONIANG GE CHENGHUANG HUO-*laqhae* CHENGUANG [...]
 suppose old-mother this time live-DUR/LOC time
 ‘suppose her mother at this time, at the time she was still alive [...]

This is about the only example of this construction we could find, and it appears in a spoken conversation, so it might just be a hapax. Besides, a similar use of the durative marker is possible even in Mandarin, and is not necessarily to be understood as a relative clause (web example):¹⁸

- (48) 活着时候做贡献比死后捐款更重要
huó-zhe shíhou zuò gòngxiàn bǐ sǐhòu juānkuǎn gèng zhòngyào
 live-DUR time make contribution CP death-after contribute-money more important
 ‘Making donations while one is alive is more important than giving away money after death’

The reason why we interpret (47) as a RC is that similar sentences with the relativiser 个 *xeq* may be found in the same corpus (CONV002 - S003):

- (49) 辣辣活个辰光 [...]
laqlaq HUO xeq CHENGUANG [...]
 at live REL time
 ‘At the time when she was alive [...]

However, as said above, (47) is but a single instance of this construction, so its significance is dubious. If the locative RC construction is a Wu feature, it might be an archaic one, which is not easily found in contemporary dialects.

The other comparable construction which has been reported in the literature is found in the Yongshou dialect, and is based on the directional complement 下 *XIA*, which also marks perfective aspect; in this case, however, the marker is simple, rather than complex (Tang 2008: 249):

- (50) 我爷把孙木匠做下桌子给给人咧
 WO YE BA SUN MUJIANG ZUO-XIA ZHUOZI GEI GEI REN LIE
 1SG father OBJ Sun carpenter make-PFV table give to person PERF
 ‘My father gave away the table which carpenter Sun made’

¹⁷ Version 1.0 (<http://www.artsrn.ualberta.ca/wenzhou/>; last accessed 05/07/2016).

¹⁸ http://www.360doc.com/content/10/1013/15/3079893_60661240.shtml (last accessed 05/07/2016).

According to Tang, this type of RC has generic reference by default, but may have specific reference if demonstratives or other constituents are added (as in 50). We found a very similar construction in Taiwanese Southern Min, based on the phase complement *tioh8* (*Taiwanese Southern Min Spoken Corpus*, S004):¹⁹

- (51) *i1 ti7 chit4 piN1 khoaN3-tioh8 ka1tiong2* [...]
 3SG at this side see-PC parents [...]
 ‘The parents who he meets here [...]

We found only one more example of this construction in our corpus, so, again, its significance is very limited. What is interesting, in our opinion, is that all the instances we discussed use as an (apparent) relativiser a marker which indicates either attainment of a result or continuation of a result/state;²⁰ also, just as seen above for SP-RCs (§3.2.1), these constructions do not seem to be limited to a specific reading, in their bare form. The (limited) available evidence points towards an origin of these constructions in the omission of a SP, or perhaps another relativizer; this would explain, for instance, the fact that in Suzhou 勒海 *lə? hE²⁵¹*, as said above, can co-occur with the SP, and in some constructions the SP is actually required, as well as the fact that Yongshou 下 XIA has a basic generic reading.

Also, relativization based on the numeral ‘one’ has been reported for colloquial Beijing Mandarin, as mentioned at the beginning of this section (Chen 2012: 46):

- (52) 他是我刚认识一朋友 [...]
tā shì wǒ gāng rènshi yi péngyou [...]
 3SG.M COP 1SG just know one friend
 ‘He is a friend I have just met’ [...]

The numeral 一 *yī* here is toneless and shorter, which is interpreted as a sign of its grammaticalisation (Chen 2012: 46). According to Chen’s analysis, this construction, very colloquial and (possibly) topolectal in nature, only allows a singular interpretation, and hence the semantics of the numeral 一 *yī* is still present; moreover, the *yi*-construction is apparently always possible when a subject is relativized, but not necessarily if an object is relativized. Compare (Chen 2012: 48-49):

- (53)?我认识一朋友
?wǒ rènshi yi péngyou
 1SG know one friend
 ‘A friend I have just met’

- (54) 这位是我刚认识一朋友
zhè wèi shì wǒ gāng rènshi yi péngyou
 this CL COP 1SG just know one friend
 ‘This is a friend I have just met’

¹⁹ Version 1.0 (https://www.ualberta.ca/~johnnewm/TSM/Taiwanese_Southern_Min/TSM.html; last accessed 05/07/2016).

²⁰ In §3.2.2, we mentioned that in the Xinhua dialect CL-RCs is allowed only in specific constructions. Interestingly, it appears that what is needed is the resultative constituent / phase complement 到 DAO, again marking completion.

Although (53) is not unacceptable as a RC construction, it is at the very least dubious, as it is too similar to an ordinary SVO clause ('I met a friend'). (54), on the other hand, is not ambiguous, as the addition of 这位是 *zhè wèi shì* 'this is' makes it clear that the following construction is to be understood as a relative clause. This shows that 一 *yì* is not as grammaticalized as the SP as a relativizer (Chen 2012: 49).

The last marker, again found in colloquial Mandarin, is the 'empty' pronoun 他 *tā* discussed above. Apart from the postnominal position, the most relevant characteristic of the *tā*-construction is that it is apparently always non-restrictive (see ex. 21), which is unusual in Sinitic. Unfortunately, we could not find analogous constructions in other Sinitic languages, and hence we do not know whether this is a stable feature of *tā*-RCs. Interestingly, once again we are dealing with a construction with strong semantic constraints, which lacks the generality of the SP-construction.

3.2.4 Zero-marked relativization

In some varieties, patterns of zero-marked relativization with different degrees of productivity and generality are attested. Among the languages of our sample, arguably the one in which zero-marked RCs seem to be more common is Lianshui (Hu 2011: 255):

(55) 没学过字就去查字典

MEI XUE-GUO ZI JIU QU CHA ZIDIAN
 NEG.PFV study-EXP character then go look.up dictionary
 'Look up in a dictionary the characters you haven't learned'

According both to Wang & Gu's (2006) and Hu's (2011) analyses, in this construction the SP 的 DE is omitted; the main piece of evidence for the omission hypothesis is that there is an audible pause between the modifier and the head NP (Wang & Gu 2006: 237). The omission of the SP seems to be the origin of the CL-construction in this variety (Wang & Gu 2006: 237; but cf. Chen 2007):

(56) 撂得双鞋对红的

LIAO-DE SHUANG XIE DUI HONG DE
 throw.away-PC? CL shoes COP red SP
 'The shoes I threw away are red'

Needless to say, the precondition for this construction to develop is allowing bare classifier NPs (here, 双鞋 SHUANG XIE 'CL-shoes', 'pair of shoes'); the referential properties of the RC-construction (specificity, definiteness, etc.) seem to derive from determiners, just as in about any 'ordinary' SP-construction (see §3.2.1).

Zero-marked RCs are sporadically attested also in Yongshou, and are semantically equivalent to SP-RCs (see above, ex. 30), i.e. they have generic reference. In Tang's (2008) corpus, there are only two instances of zero-marked RCs, both having 人 REN 'person' as the head (Tang 2008: 249):

(57) 没念下书人可怜得松!

MEI NIAN-XIA SHU REN KELIAN DE SONG
 NEG.PFV read-PFV book person pitiable SP very
 'People who didn't study are pitiable, indeed!'

Here, again, the fact that this construction has the same referential properties of the SP-construction suggests that it originates from the (occasional) omission of the SP. Such omissions are not unheard of even in Standard Mandarin (Tang 2008: 249).²¹

In fact, a zero-marking analysis could apply also to the constructions based on locative/aspectual particles discussed in the preceding section. As to the Yongshou 下 XIA-construction, Tang (2008: 249) points out that its referential properties are, in essence, the same as the SP-construction, i.e. it has generic reference *par défaut* (although the perfective marker triggers an eventive reading, which has an apparent bias towards a specific/definite interpretation; see above, fn. 11). As to the Shanghai and Taiwanese Southern Min constructions (exx. 47 and 51), the fact that they are almost *hapax legomena* in the corpora we consulted is indicative of their occasional nature, in our opinion, not unlike those rare occurrences in Yongshou, which may be expected if they are the product of casual reduction of an already weak element in fast speech; moreover, they also seem to share the same referential properties of SP-RCs. The reason we tentatively suggested that they might be grouped with the locative/aspectual-constructions is just that they share with them the use of a perfective(/completive) marker before the head; this may be an artifact of the limited data in Shanghai and Taiwanese Southern Min, but appears to be systematic in Xinhua (see fn. 19).

Lastly, zero-marked relatives are said to be attested in Wenzhou (Hu, Cecchetto & Guasti 2015):

(58) *ŋ34 sɿ42ɕy33 hio21 ŋa33-bo21 na42-ŋ44*
 1SG like draw grandma child
 ‘I like the child who draws the grandma’

This pattern is possible only for subject relatives; if the relativized constituent is an object, then either an SP or (DEM-)CL must be present. The difference between subject and object RCs could be motivated by processing reasons: whereas in (58) the order of constituents is peculiar to RCs and cannot be mistaken for another construction, unmarked object RCs are ambiguous between a RC construction and an ordinary SVO sentence.

4. Genetic and areal distribution of relativization patterns

As to the parameter of headedness, whereas head-final relatives are found anywhere in Sinitic and clearly represent the default type, left-headed RCs seem to be extremely rare, and found only in the extreme South of the country (in our sample, Hui’an and Kaiping) and in some registers of Mandarin. As to the Southern dialects, we could not single out any property which might explain the N-REL order; the residual hypothesis would be influence from some non-Sinitic language(s) of Southern China, as is the case for several features of Southern Sinitic (see e.g. Chappell, Li & Peyraube 2007); for instance, both Cantonese and Chaozhou do have residual left-headed structures, e.g. in compounding (Xu 2007, Matthews & Yip 2011). Most languages of Southeast Asia (including Thai, Lao, Vietnamese, etc.) have N-REL order (Natchanan & Amara 2008); this is generally also the case, for instance, in Tai languages of Southern China, as can be seen from the following Zhuang example (Wei 1985: 35; my glosses and translation):

(59) *gouh (haiz) gai*

²¹ Following LaPolla’s analysis of Chinese RCs as compounds (LaPolla forthcoming; see above, §2), and given that this Yongshou construction is apparently possible only if 人 REN ‘person’ is the head, we might also interpret this as a pattern of phrasal compounding.

pair shoe sell
'this pair (of shoes) I sold'

Interestingly, in Iu Mien (a.k.a. Yao), a Hmong-Mien language spoken also in Southern China, both N-REL (60-61) and REL-N (62-63) orders are available, just as in Hui'an and Kaiping (Court 1986: 73-74; glosses adapted):

(60) *naiv nawgc daix*
this bird fly
'this is a bird that is flying'

(61) *uav nawn mong yia tawh mingh laanh tsawc uav meih nye mong*
that CLF clock 1SG take go shop repair that you SP clock
'That clock that I took to the shop to be repaired is yours'

(62) *yia nabua kenv taaih nye mienh*
1SG 3PL choose ASP²² SP person
'I am the person they chose'

(63) *naic tongh nyiac-hnoi tshaa yia uav taugh mienh*
that be other-day catch 1SG that CLF person
'that's the person who caught me the other day'

What about the Mandarin patterns? As said above (§2.3.1), at least for the 'basic' post-NP construction (exx. 15-18), a topicalization account seems likely; the functional motivation for having postnominal RCs is to avoid the parsing burden of a heavy (and complex) modifier before the head (Liu 2008: 7; see Hawkins's 1994 'Early Immediate Constituents' principle). Indeed, a different, albeit related, phenomenon in Cantonese, namely topicalization of heavy NPs modified by a relative clause, has been shown to increase processing efficiency (Matthews & Yeung 2001). Note that the 'Southern' left-headed RC constructions are slightly different from the Mandarin pattern at issue here, since the former require the addition of a nominalizer after the head, whereas in the latter only the ordinary SP-relativizer is present; hence, the idea a different origin for these two left-headed constructions does not appear as far-fetched as it may seem at first glance. As to the *tā*-construction, basing on the available data it appears to be a Mandarin singularity; however, more data is needed to assess whether analogous patterns are attested in other Sinitic varieties.

Another pattern whose uniqueness may well be an artifact of the limited data is the internal-headed Wenzhou RC-construction. It is unclear whether this is actually attested only in Wenzhou (and Wenzhou Mandarin), or if it is found also elsewhere. However, as pointed out above (§3.2.2), a head-internal analysis is tenable also for Cantonese and, in principle, for any variety with a DEM/CI-construction. We may remark that, given that such an analysis has been disproved already for (Jieyang) Chaozhou and Hui'an (see fn. 6), its generality appears challenged. Note, also, that head-internal relatives appear to be very rare throughout the whole Sino-Tibetan family; outside Sinitic, they are attested e.g. in Kiranti (Belhare, see Bickel 1998), Mongsen Ao (Coupe 2007), and Gyalrongic (Japhug, Jacques 2016).²³

²² Here the author glosses as 'ASP' the particle *taaih*, which indicates a change of state presented as "desirable" for the speaker (Court 1986: 248).

²³ I would like to thank Guillaume Jacques for pointing this out to me.

As to the distribution of different strategies of relativization, while the SP-construction is easily found in any Sinitic language, we found attestations of the DEM/RC-construction in only a minority of the languages of our sample (16 out of 44). Given that this strategy seems to belong to the colloquial register, it is very likely that it is much more widespread in Sinitic, but has been overlooked in descriptions because of its nature (as is the case even for Mandarin: see e.g. Li & Thompson 1981); as hinted at above (§3.2.2), Lu (2013: 138) went as far as to suggest that this strategy is actually pan-Chinese, although he never makes explicit the basis for his claim.

Also, we showed that, with some exceptions, Sinitic languages tend to choose either the DEM- or the CL-RC construction; this is said to be related to the possibility of having either demonstratives or classifiers as bare (preverbal) determiners. This dichotomy has been connected with the North/South divide within Sinitic (see Liu 2002, *inter alios*), as demonstratives tend to be used as quasi-articles in Northern China, whereas classifiers tend to acquire this function in Southern China. In Figure 1, taken from Cao *et al.* (2008, map 14), we can see the distribution of Sinitic languages that use classifiers as definite determiners (定指 *dìngzhǐ*):²⁴



Legend: ○ = no classifiers used as definite determiners ● = classifiers used as definite determiners

Figure 1. Classifiers as definite determiners

²⁴ The survey sentence for this map is 只鸡死了 *zhī jī sǐ le* ‘the chicken died.’

As shown in the map, the use of classifiers as bare definite determiners does not fit perfectly with the North/South division; rather, this feature seems to be concentrated in Northern Zhejiang, Southern Jiangsu, (coastal) Guangdong and Guangxi provinces, with some sporadic attestations elsewhere, whereas it seems to be completely absent in Northern and Western China. If we look at our data and at Wang's (2015) survey quoted above (§3.2.2), it appears that the diffusion of definite bare classifier phrases is broader, and includes, for instance, Jiaoliao Mandarin dialects of Shandong, as the above mentioned Yantai, and Jianghuai Mandarin dialects of Jiangsu, as Lianshui; moreover, the CL-RC construction is (limitedly) attested also in Yongshou, a Central Plains Mandarin dialect of Shaanxi. As to the former, in the literature it has been remarked that Shandong dialects, despite their Mandarin affiliation, do possess some typically Southern Sinitic features (Yue 2003: 111) as e.g. the order 'adjective-marker-standard' in the comparative construction. Liu & Shi (2012: 48, en. 14) remark that military personnel from Wu areas moved in great numbers to the Shandong peninsula during the Ming dynasty, which might have created the conditions for Wu influence on Shandong dialects; however, they dismiss this as unlikely, at least for bare classifiers, given the differences in usage with Wu dialects. We suggest that the contact hypothesis should not be ruled out on the basis of the difference in usage between the *modern* varieties of Shandong and Wu dialects, given that immigration dates back to the Ming period; on the other hand, an origin of bare classifier phrases in language contact is difficult to prove in the absence of historical data. Another possibility is interpreting bare classifiers phrases as a conservative feature (Chen 2007: 526), in line with the characterization of the Shandong peninsula as a relic zone (Chappell 2015: 47). It is unclear, however, whether classifiers could be used as bare definite preverbal determiners in Middle Chinese; Peyraube (1991: 120) only provides examples of indefinite post-verbal bare CL phrases for the Late Medieval period (VII-XIII cent. CE).

Thus, going back to our issue, Sinitic languages making use of bare classifiers *and* of classifiers as relativizers seem to be concentrated in Zhejiang, Jiangsu, Guangdong, Guangxi, and (part of) Hunan provinces, with the highest concentration in the (Northern) Wu and Yue groups, and a significant presence also in Xiang and Jianghuai Mandarin dialects. However, CL-constructions may be found also in other areas and sub-groups, notably the Shandong peninsula, where we found sporadic attestations in virtually every group (except Jin), although in some cases the construction was not developed (/generalised). Interestingly, whereas many Min dialects tend to reject bare classifier phrases in all syntactic positions (Wang 2015: 121), Chenghai and (Jieyang) Chaozhou, both spoken in Guangdong, do allow definite bare classifiers in preverbal position; Chaozhou also has productive CL-RCs. On the other hand, Hui'an, a Min dialect spoken in Fujian, does not allow bare classifiers and makes use of the DEM-construction, disrupting again the North/South division; unsurprisingly, this dialect does allow bare demonstratives as determiners, just as Mandarin (see ex. 48 in Chen 2011: 98; on the typological distinctiveness of Min dialects of coastal Fujian from the rest of Southern Sinitic, see Chappell 2015: 49-50). The 'third group,' so to say, is that of languages which require both a demonstrative and a classifier in the (SP-less) RC construction; among the languages of our sample, the best example is that of Taiwanese Southern Min. As may be expected from the generalizations we proposed, Taiwanese Southern Min does not make use either of demonstratives or of classifiers as bare determiners (see above, §3.2.2); whereas there seems to be a fairly strong areal connection for the DEM- vs. CL-construction types, the type exemplified by Taiwanese Southern Min seems to be independent of regional correlates.

5. Summary and concluding remarks

In this paper, we attempted to show, firstly, that RCs in Sinitic are a family of constructions which, despite substantial overlap with other NP modifying constructions and with noun complement clauses, also have properties which set them apart, and should thus be treated as a separate phenomenon. Also, we argued that the range of variation of RC constructions within Sinitic has been underestimated, and that investigating RCs can help us improve our understanding of the typology of this family.

We have shown that, although the typologically highly unusual correlation between REL-N and VO order is almost universal in Sinitic, exceptions can be found. Interestingly, those exceptions involve languages to the extreme South of China, and could be argued to be a residual feature that Southern Sinitic shares with Mainland Southeast Asian languages; as to Mandarin postnominal RCs, we showed that they actually include different construction types with different properties, and that their non-canonical position may be explained by functional (related to processing) and semantic/pragmatic principles. Also, a head-internal analysis for a type of (object) RCs, namely DEM/CL-RCs, bears consideration.

Besides the more studied SP-construction, we also discussed the DEM/CL-construction, and we hypothesised that this type of RCs is probably found in many more (if not most, or even all) Sinitic languages than can be gleaned from descriptions. DEM/CL-RCs have been shown to have a strong tendency to be restricted to a specific reading, which derives from the use of either demonstratives or classifiers as definite determiners. The prerequisite for having a DEM- or a CL-construction appears to be allowing either bare demonstratives or bare (preverbal) classifiers; languages that allow neither of those, if they have a DEM/CL-construction, do require both the demonstrative and the classifier to be present. Also, we discussed ‘minor’ relativization strategies, including constructions based on a (locative/) aspectual marker, the Mandarin *tā*-construction and *yi*-construction, as well as zero-marked relatives. What emerges from our survey is that SPs seem to be the only fully grammaticalized relativizers, whereas ‘alternative’ constructions all have restrictions in terms of referential properties, number, and relativized constituent. Moreover, even analogous constructions may be grammaticalized to a different degree in different dialects: for instance, DEM-RCs seem to be marginally acceptable also with generic referents in colloquial Mandarin, whereas they tend to be strongly associated with specificity in most other dialects.

As to the areal distribution of different patterns of relativization, we showed that the CL-construction is occasionally found in most areas and branches of Sinitic, but it is clearly concentrated in the Jiangsu/Zhejiang and Guangxi/Guangzhou regions. The presence of this construction also in Northern dialects could be analyzed as an instance of a feature of Southern typology in Northern China, especially in Shandong; this has been already noticed for other typological traits. Similarly, the use of demonstratives as bare definite determiners and as relativizers, despite being a Northern feature, is found also in the extreme South of China. This shows that the typological correlations discussed here are partly independent of areal influence.

A residual issue not tackled in this paper is the relationship between the CL-construction and classifier-derived SPs (see above, §3.2.1). An intuitive correlation could be that if a language has a classifier-derived relativizer, it also has ‘ordinary’ classifiers used as relativizers. This would entail a scenario in which classifiers are used as relativizers, and then one of them grammaticalises as a ‘true’ marker of relativization, available for a broader range of RCs (including non-specific/generic ones). However, looking at the data from our sample, this does not appear to be a solid correlation: languages as Qianshan and Taiwanese Southern Min do have classifier-derived relativizers, but no classifier RC construction as found e.g. in Cantonese or Chaozhou. Hence, it might be the case that, in a given variety, only one classifier, typically a generic one, undergoes grammaticalization into a relativizer,

while others remain unaffected, or only partly affected, by this process; Yantai, for instance, seems to conform to the latter scenario (see above, §3.2.2).

Lastly, work on a larger database of naturally occurring dialect data might show that peculiar colloquial Mandarin constructions, as the *tā*-construction and the one-construction, do occur also in other varieties. We leave this for further research.

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