

The Relative Position of Demonstratives and Relative Clauses in Mandarin Chinese

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In Mandarin Chinese there are two possibilities with regard to the relative order of relative clauses (RC) and demonstrative expressions (DM). A relative clause may either precede a demonstrative expression (RC+DM) or follow it (DM+RC). Traditionally, it is assumed that the latter is transformationally derived from the former by virtue of the movement of DM across RC. An investigation of a large Chinese corpus, the Lancaster Corpus of Modern Chinese (McEnery et al. 2003) (LCMC), however, reveals that the choice of the two different word orders is governed by semantic, syntactic, and pragmatic factors.

1. Introduction

Chinese relative clauses (RC) have two possible distributions in terms of their relation to a demonstrative expression (DM) and they may either precede or follow demonstrative expressions (DM), as shown in (1a) and (1b) respectively.

- (1) a. [RC dai yanjin] de na ge nianhai **Construction₁**
wear glasses DE that CL boy
'I like the boy who wears glasses.'
- b. na ge [RC dai yanjin] de nianhai **Construction₂**
that CL wear glasses DE boy
'I like the boy who wears glasses.'

For the sake of convenience, in this paper we call the first order, where the RC precedes the DM construction₁, and the second order, where the RC follows the DM, construction₂.

Previous researches on the two constructions mainly concern the nature of the two constructions and the transformational relation between them. Studies on the nature of the two constructions center on the classification of them. Chao (1968), Hashimoto (1971), Huang (1982), for example, treat relative clauses in (1a) and (1b) as restrictive and non-restrictive relative clauses respectively. Huang (1982) explains the difference of the RC (1a) and the RC (1b) in terms of scope. The RC is in the scope of the DM in (1a) and the DM is deictic and used to determine the reference of the head noun. In contrast, the

DM is in the scope of the RC and the RC serves to determine the reference of the head noun. Del Gobbo (2003) holds an opposing view, arguing that non-restrictive relative clauses do not exist in Chinese and that both relative clauses in (1) should be interpreted restrictively.

Linguists, whose attention is on the transformational relation between the two constructions, concentrate efforts on determining the basicness of the two constructions, the syntactic movements to derive one construction from the other, and the motivation underlying the syntactic movements. Simpson (1997, 1998a, 2002) theorizes that, as opposed to the order DM+RC, the order RC+DM where a relative clause precedes a demonstrative expression, is the basic one and further movement of DM renders it to precede RC. Zhang (2006) comes up with an opposing theory, arguing that the word order RC+DM is transformationally derived from the word order DM+RC and that the motivation for such movement is to construct contrastive focus.

It is obvious from the above brief review of literature that previous studies have failed to provide an account of the word order variation in this subset of relative clauses in Chinese. There are at least three reasons for this situation. First, previous studies, without exception, have been based on intuitive and introspective analyses of grammaticality/acceptability judgments alone. This methodology has been shown to be fundamentally flawed (see e.g., Gries 2003; Tao 1996). This has already been made clear by the disagreement on the grammaticality judgments on the word order variation. A second and related reason is that previous studies took a deterministic view of language, and have thus failed to recognize the fundamental nature of language as probabilistic and not as “always this and never that” (Halliday, 1961, p. 259). Each language provides its speakers with a variety of structural options to express the same situation, and various factors contribute to the choice of one structure over the other. As Siewierska (1988: 29) points out, “studies of word order variation reveal that word order is dependent on an array of syntactic, semantic, pragmatic and even phonological factors.” Consequently, some choices are more probable than others, and probabilities of occurrences are highly relevant to the description of a particular form (Tao and McCarthy, 2001). Finally, previous studies have made no attempts to explain why speakers choose one construction over the other in a particular discourse situation. Thus it is not possible to predict which word order a speaker will choose in a natural discourse setting. Recent functional studies of structural alternation have found how different processing requirements lead speakers to choose one word order over the other, and in fact more generally to choose one structure over others, during the evanescent process of online communication (Fox and Thompson, 1990; Gries, 1999).

In this study, we set out to investigate the differences between the two constructions and the distribution of the two constructions in a bid to provide an explanation for the underlying motivation that determines native speakers’ choices governing the alternation. In what follows, we report the results of a corpus-based analysis investigating the occurrence of different positions of a relative clause in relation to a DM. We will then

provide an explanation of the observed patterns in the preference of one construction over the other.

The organization of this paper is as follows: Section 2 introduces the two corpora used for this article. Section 3 provides a detailed account for the distribution of the two types of relative clauses. Section 4 discusses the syntactic differences underlying the choice of right type of relative clauses. Section 5 aims to examine the pragmatic factors governing the choice of relative clauses. Finally, Section 6 is the conclusion.

2. Data

The data for this paper is extracted from a publicly available Chinese language corpus, the Lancaster Corpus of Modern Chinese (McEnery et al. 2003). The Lancaster Corpus of Modern Chinese (LCMC), a one-million-word balanced corpus of written Mandarin Chinese, consists of five hundred 2,000-word samples of written Chinese texts selected from fifteen text categories published in Mainland China around 1991. LCMC provides web-based concordance search functionality, which greatly facilitates this research. The concordance results from LCMC always come with a complete sentence where the searched word occurs. The complete discourse where a RC occurs is examined when it comes to determine the information status of the head noun and discourse functions of the RC.

3 Types of Relative Clauses Examined in This Research

It is found in the data that Chinese relative clauses have two positions with respect to the position of a demonstrative expression (DM) if the head noun is a direct argument such as subject or object. Sentences in (1), repeated here as (2), are examples showing that two possible orders are allowed if a subject is relativized:

- (2) a. wo xihuan [RC dai yanjin] de na ge nanhai
 I like wear glasses DE that CL boy
 'I like the boy who wears glasses.'
- b. wo xihuan na ge [RC dai yanjin] de nanhai
 I like that CL wear glasses DE boy
 'I like the boy who wears glasses.'

Similarly if an object is relativized, relative clause may also have two distributions: they may either precede demonstratives (3a) or follow them (3b):

- (3) a. wo du guo [RC ni zuotian tidao] de na ben shu.
 I read Asp you yesterday mention DE that CL book
 'I read the book which you mentioned yesterday.'

- b. wo du guo na ben [RC ni zuotian tidao] de shu.
 I read Asp that CL you yesterday mention DE book
 ‘I read the book which you mentioned yesterday.’

In contrast, when an indirect argument, such as manner, time, and space, is relativized, relative clauses seldom, if not all, follow demonstratives. That is, demonstratives co-occurring with manner, time and spatial head nouns can not precede relative clauses. Therefore, relative clauses with manner, temporal and spatial head nouns are excluded from the discussion.

4. Preliminary Findings

With the help of the text analysis software Concordance (Watt, 1999), a total of 198 relevant relative clauses were randomly selected from LCMC, with OMNs and IMNs accounting for 28% and 72% of the total data respectively, as shown in **Error!**

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Table 1 Distribution of the two constructions

Order	Constructions ₁	Constructions ₂
Total	56	142
percentage	28%	72%

Table 1 shows that the distribution of the two word orders is skewed with construction₂ (DM +RC) overwhelmingly outnumbering construction₁ (RC+DM), by a ratio of almost 3 to 1.

The fact that the number of construction₂ (about 72%) far exceeds that of construction₁ (around 28%) indicates that the claim that construction₂ (RC+DM) is the basic word order and construction₁ (DM+RC) is the derived one lacks quantitative support. If we need to establish which word order is the basic one, based on the data from the LCMC, we may conclude that the latter (DM+RC) instead of the former (RC+DM) is the basic one, as far as frequency of occurrence is concerned¹. The reason why the number of DM+RC predominantly exceeds that of RC+DM is shown to be related to the information status of the head noun, which will be discussed later. In the next section, I will proceed to discuss the distinguishing properties of these two word orders.

5. Coding of possible factors governing the word order variation

Discourse oriented studies of relative clauses have identified various factors that influence the distribution of syntactic types of relative clauses in both written texts and

¹ I am aware that frequency of occurrence may not be the sole factor in determining the basicness of word orders. Historical linguistic data, for example, may be needed to provide further evidence.

naturally occurring conversation (e.g., Fox 1987; Fox and Thompson 1990; Givón 1993; Pu 2007). These factors concern various aspects of relative clauses and their modifying head nouns, including information flow, information status, grounding, humanness, definiteness, and discourse function of relative clauses. In the following subsections, we will discuss the coding of the two constructions along the following four dimensions:

- (1) Grammatical roles of head nouns
- (2) Information status of head nouns
- (3) Humanness of head nouns
- (4) Discourse functions of relative clauses

5.1 Grammatical Roles of Head Nouns

Grammatical roles of head nouns in relative clauses are shown to be relevant to explain the distribution of relative clauses (Fox 1987; Fox and Thompson 1990; Hou and Kitagawa 1987; Pu 2007). For our purpose, three grammatical roles are distinguished: subject (S), object (O), and others (X). We first discuss the grammatical roles of the head noun within the relative clause. S-relative clause is used to name relative clauses where the relativized head noun is the subject of the relative clause. O-relative clauses are used to name relative clauses in which the head noun functions as the object of the relative clause, and X-relative clause refers to those whose head noun do not serve as the core argument of the relative clause. O-relative clause, S-relative clause, and X-relative clause are exemplified in (4a), (4b), and (4c) respectively.

- (4) a. 1963年焦裕禄亲手栽下的 [[那]]r 棵麻秆粗的幼桐。
 ‘The flax-size *Aleurites cordata* which Jiao Yulu planted.’
- b. [[这]]r 位急于离京出走的男子终于低下了头。
 ‘The man eager to leave the capital city lowered his head.’
- c. 厂长李海生下令将 [[这]]r 批价值4万多元的箱子当众砸毁。
 ‘The director of the factory ordered to destroy the trunks worth of more than forty thousand in public.’

The grammatical role of the head noun in the relative clause is frequently shown to play an important role in the grammar of relative clauses (Fox 1984; Fox and Thompson 1990; Pu 2007). An analysis of the LCMC data reveals that construction₁ (RC+DM) differs from construction₂ (DM+RC) with regard to the grammatical role of the head noun inside the RC. That is, the head noun in construction₁ tends to be the object of the relative clause, whereas the head noun in construction₂ tends to be the subject of the relative clause. Table 5 details the distribution of grammatical roles of the head noun within the relative clause in the two constructions:

Table 2 Distribution of grammatical roles of head nouns within the relative clause in the two constructions

Type	O	S	X
construction ₁	39 (70%)	9 (16%)	8 (14%)
construction ₂	5 (4%)	130 (91%)	7 (5%)

To recap, if the head noun is the subject of the relative clause, the relative clause tends to follow the demonstrative. Conversely, if the head noun is the object of the relative clause, the relative clause tends to precede the demonstrative.

The grammatical roles of the relativized head noun in the main clause are also coded. The relativized head noun which functions as the subject of the main clause is called subject head. In the same vein, head noun which is the object of the main clause is named object head. X head is utilized to name a head noun which is not a core argument in the main clause. Subject head, object head, and X head are illustrated in (5a), (5b), and (5c) respectively.

- (5) a. 焦裕禄用生命绘制的[[那]]r张蓝图，今天已经成为兰考大地的现实。
 ‘The blue print drawn by Jiao Yulu has turned into reality.’
- b. 我不会忘记[[那些]]r令他老人家饮恨千古的人。
 ‘I will not forget those who made him leave with a world of regrets.’
- c. 在国内念大学时，对[[那些]]r当过兵再来念书的男生，总是佩服得要命。
 ‘When I was attending college at my home country, I admired those boys who went to college after military service.’

Besides discussing the grammatical roles of the relativized head noun in the main clause and relative clause, we will also discuss their combination patterns. The combinatory patterns of the grammatical role in main clause and that in relative clause is represented with AB. For example, SS refers to a relative clause in which the relativized head noun is the subject in the main clause and also the subject in the relative clause. Three examples are presented in the following to illustrate some combinatory patterns of grammatical roles.

- (6) SS: subject head modified by a S-relative clause
 [[这]]r位急于离京出走的男子终于低下了头。
 ‘The man eager to leave the capital city lowered his head.’

SO: object head modified by a O-relative clause

焦裕禄用生命绘制的[[那]]r张蓝图，今天已经成为兰考大地的现实。

‘The blue print drawn by Jiao Yulu has turned into reality.’

XS: X head modified by a S-relative clause

在国内念大学时，对[[那些]]r当过兵再来念书的男生，总是佩服得要命。

‘When I was attending college at my home country, I admired those boys who went to college after military service.’

It has been observed that combinatory patterns of grammatical roles of the relativized head noun in the relative clause and main clause can be attributed to the information flow and the information status of the head noun (Fox 1984; Fox and Thompson 1990; Pu 2007). A close study on the combinatory patterns of grammatical roles reveals that the two constructions also differentiate from each other in terms of dominant combinatory patterns of grammatical roles. Table 3 presents the detailed information of the observed patterns.

Table 3 Combinatory patterns of grammatical roles

	SS	SO	OS	OO	SX	XS	OX	XO	XX
Construction ₁	5	26	2	6	3	2	2	5	5
%	8.9%	46.4%	3.5%	23.2%	5.3%	3.5%	3.5%	8.9%	5.3%
Construction ₂	78	2	30	2	2	22	3	1	2
%	54.9%	1.4%	21.1%	1.4%	1.4%	15.4%	2.1%	0.7%	1.4%

Like previous studies (Fox 1984; Fox and Thompson 1990; Pu 2007), in this study we only focus on the combination patterns between core arguments, that is, between subject and object. Of the combination patterns between subject and object, for construction₁, the most dominant pattern is SO; for construction₂, the most dominant pattern is SS. In conclusion, the two constructions also contrast with each other in terms of combination patterns of grammatical roles. Later in this paper we will show that the grammatical patterns are determined by the discourse functions of relative clauses and the information status of the head nouns.

5.2 Humanness

Humanness of a referent has been shown to play a significant role in various studies. For example, Fox and Thompson (1990) observe that the humanness of the head noun plays an important role in explaining the distribution of syntactic types of relative clauses

in their conversation data in English. We are interested in whether humanness is relevant in the word order variation in the subset of Chinese relative clauses in the present study. Thus, the animacy of the head NP is also coded. Two categories have been identified:

a. Human

Human beings and animals are included in this category.

b. Nonhuman

Concrete tangible objects and abstract intangible entities such as abstract concepts are subsumed under this category.

Table 4 shows the distribution of the two word orders for human and nonhuman head NPs. It shows a close correlation between the word order and the animacy of head NPs. Table 4 suggests that construction₂ is favored over construction₁ in relative clauses with human head NPs and the overwhelming majority of relative clauses with human head NPs occur in construction₂. In contrast, the word order in construction₁ is favored over construction₂ if the head NP is nonhuman.

Table 4 the Distribution of the Two Word Orders
for Non/Human head NPs

	Human	Nonhuman
Construction ₁	13 (23%)	43 (77%)
Construction ₂	92 (65%)	50 (35%)

The data in Table 4 shows another interesting difference between the two constructions. That is, the head noun of the relative clause in construction₁ tends to be human whereas the head noun of the relative clause in construction₂ tends to be nonhuman.

5.3 Information Status of Head Nouns

Chafe (1987, 1994) identifies three different information statuses of a referent: given, new, and identifiable. However, in this study we will use a simpler dichotomy of *given* and *new*. A new referent refers to a referent which is introduced into the discourse for the first time and is not anaphorically related to any previous referent or established frame. A given referent refers to a referent which is not introduced into the discourse for the first time and anaphorically linked to its previous mention or a referent which is introduced into the discourse for the first time but identifiable through our generic knowledge or through a frame established in previous discourse (Givon 1993). The head noun 蓝图 'blueprint' in example (7) carries new information because examination of previous discourse shows that there is no previous mention for the head referent although it is preceded by a demonstrative which in general signals given information². The head noun

² The mismatch between given information and demonstratives is well described in Tao (1999).

大学生营业员 ‘college student salespeople’ in example (8) codes given information because the people coded by the head noun are introduced and discussed in previous discourse.

(7) 焦裕禄用生命绘制的 [[那]]r 张蓝图, 今天已经成为兰考大地的现实。

‘The blue print drawn by Jiao Yulu has turned into reality.’

(8) 记者发现 [[这些]]r 在柜台里异常活跃的大学生营业员有 3 个突出特点。

‘The reporter found that sales people who are college students have three characteristics.’

Given information in this study also refers to those referents which can be identified through our generic world knowledge or a frame evoked in previous discourse.

(9) 连中国人自己也惊异：那些从前羞羞答答地缝制新衣的人们，如今大大方方地亮出了自己独具特色的新款式；那些一向以坚固耐久、不招风惹眼为守则的人们也有滋有味地打扮起来；

‘Even Chinese people themselves are amazed. Those people who shyly sewed their own clothes in the past now proudly present their clothes which have original styles. The people who always uphold the principle that clothing be sturdy and obscure also begin to dress up.’

In example (9) the head noun 人// (people) in the two relative clauses is introduced into the discourse for the first time. However, it does not code brand new information. The previous discourse discusses the fashion styles and changes in Chinese people’s perception of proper dressing. In other words, a frame which centers on dressing is established in previous discourse and the introduction of the two different kinds of people who have changed their perception of dressing can be identified through this established frame.

Investigation of the information status of the head noun in a relative clause co-occurring with a demonstrative expression shows that the overwhelming majority of head nouns of the relative clause in construction₁ carry new information. In contrast, the head nouns of the relative clause in construction₂ tend to carry given information. Table 5 presents the information status of head nouns in the data.

	Given	New
construction ₁	16 (29%)	40 (71%)
construction ₂	103 (73%)	39 (27%)

The finding in Table 5 is compatible with the finding in Ming (2006) where it is reported that the main discourse function of relative clause in construction₁ is to introduce a new referent into a discourse whereas the main discourse function of the relative clause in construction₂ is to track a given referent.

5.4 Discourse Functions of RC

Discourse functions of RCs have been shown to be closely related to different grounding mechanisms. For this reason, we will discuss the grounding mechanisms before presenting the discourse functions of RCs. To achieve effective communication, a speaker/writer presents a new referent into the discourse in such a way as to make them relevant for the listener/reader at the point where they are introduced; and grounding is the primary way of making relevant NPs “whose relevance is not clear from prior mention or situation” (Fox and Thompson 1990, P 300). Fox and Thompson (1990, p. 301) identify two major types of relative clauses according to their functional roles: characterization and identification. In the first type, the relative clause provides a characterizing assertion or description of a new head NP referent in a particular discourse situation to supply additional descriptive information regarding the head noun. In the second type the relative clause makes the referent of a head NP relevant at a point in a particular discourse situation when it is first introduced. They use the contrast in (10) to illustrate the two discourse functions.

- (10) a. *This man* [who I have for linguistics] is really too much.
 b. There's *a woman* in my class [who's a nurse].

While the relative clause in (10a) is used to ground the referent by virtue of providing a given referent *I* to anchor the new head referent *this man* and the relative clause in (10b) does not ground the referent; rather, it makes a characterizing assertion because the relative clause does not provide any *anchoring* given referent to identify the new referent *a woman*. A Chinese relative clause which serves the discourse function of identification is illustrated in (11). The head noun 种子 ‘seed’ is introduced into the discourse for the first time and its relevance to the current discourse can not be justified if it is not grounded by a given referent introduced into the prior discourse. The given referent 我 ‘I’ in the relative clause serves to ground the new head referent. In other words, the relative clause identifies the new head referent by providing a grounding given referent.

(11)虽然这是六十多年前的事情，是非恩怨，都已经淡薄了，但是作为当年她的校长和老师，丈夫和保护人，我事后所得到的痛苦的代价使我深悟到，我最初播下的[[那]]r颗种子并不理想，并且没有着意耕耘，尤其不注意锄草，爱情的果实能茁壮吗？

Have seen examples of relative clauses in Chinese serving as identifying devices, we provide example (12) as a relative clause that serves to provide characterization rather than grounding.

(12)楚女发现，利群书社是一个组织严密、有着崇高理想的社团，它的核心就是恽代英早两年建立的互助社。利群书社的成员们自己经营、管理，操持杂务，他们住在一起，自炊伙食。这些肩不能担手不能提，从来没有干过体力劳动、料理过家务的白面书生，尽管经常煮出些夹生饭、糊饭，闹了不少笑话，他们的“共同生活”却十分融洽，愉快和认真。

In example (12) the relative clause does not provide grounding information because the head noun 白面书生 “fair skin scholar” has been introduced into the previous discourse, actually the whole previous discourse talks about their activities and the organization they have organized. At the time it is mentioned again, there is no need to ground it because its relevance to the current discourse is well-established in prior discourse. As a result, the relative clause characterizes the referent by providing additional descriptive information. It is worth pointing out that there is no given referent in the relative clause in (12) and the relative clause is used to describe some properties associated with the head referent.

Table 6 summarizes the discourse functions of relative clauses with regard to the two constructions.

Table 6 Discourse Functions of Relative Clauses

	Characterization	Identification
Construction ₁	11 (20%)	45 (80%)
Construction ₂	127(89%)	15 (11%)

Table 6 suggests that the relative clause in construction₁ mainly serves the discourse function of identification by providing an anchoring given referent to ground the head. As opposed to the relative clauses in construction₁, relative clauses in construction₂ mainly serve the discourse function of characterization to provide additional descriptive information.

6. Interim Summary

Investigation of the two constructions shows that they differ from each other semantically, syntactically, and pragmatically. Syntactically, the grammatical role of the head noun inside the relative clauses in construction₁ tends to be the subject whereas that in construction₂ tends to be the object. The two constructions also contrast with each other in terms of combination patterns between the grammatical roles of the head noun in the main clause and that in the relative clause. Construction₁ favors SO while construction₂ prefers SS. Semantically, in terms of information status of the head referent; those in construction₁ mainly carry new information. By contrast, those in construction₂ mainly code given information. They also stand in contrast to each other in terms of humanness of the head noun. Head nouns in construction₁ are mainly human whereas those in construction₂ are predominantly nonhuman. Pragmatically, relative clauses in the two constructions serve different discourse purposes. The relative clause in construction₁ mainly serves the discourse function of identifying the head referent by providing a given referent while the relative clause in construction₂ tends to be employed to characterize the head referent to provide additional descriptive information. In the following section, we will try to provide a unified account for the four differentiating factors which serve to distinguish between the two constructions and to provide an explanation why the two constructions co-exist side by side.

7. Discussion

In this section we will discuss the four factors which serve to differentiate the two constructions in a unified way. The first question we need to answer is why the head noun of the relative clause in construction₁ mainly assumes the object role whereas that in construction₂ takes the subject role and why the main combination pattern of grammatical roles for construction₁ is SS and that for construction₂ is SO. The answer to these questions, we believe, can be attributed to the information status of the head noun, humanness of the head referent, and the discourse functions of the relative clause in the two constructions. Let's first discuss the grammatical roles of the head noun and its dominant combination in construction₁. In construction₁, the head referent tends to carry new information, new referents should be grounded the moment they are introduced into the discourse for the first time to make it relevant to the current discourse because new referents cannot be grounded by "previous mention or situation" (Fox and Thompson 1990). The most natural way to ground a new nonhuman referent with a modifying relative clause is for its modifying relative clause to provide a given human referent which owns it, use it, or manipulate it, which dictates that the head noun should occur in the object position of the relative clause. Example (11) repeated as (13), serves to demonstrate how a new nonhuman referent is typically grounded.

(13)虽然这是六十多年前的事情，是非恩怨，都已经淡薄了，但是作为当年她的校长和老师，丈夫和保护人，我事后所得到的痛苦的代价使我深悟到，我最初播下的[[那]]r颗种子并不理想，并且没有着意耕耘，尤其不注意锄草，爱情的果实能茁壮吗？

In example (13), the new referent 种子 (seed) is introduced into the discourse for the first time and it functions as the subject of the main clause. By the time it is introduced into the discourse, there is no given referent in previous discourse to ground it. As a result, the relative clause serves to ground it by providing a given referent *I*. Careful examination of the data shows that a majority of head nouns (34 out of 56) appear in the subject position of the main clause. By the time it is introduced into the discourse, the new nonhuman head noun cannot be grounded by the main clause because of its clause initial position (Fox and Thompson 1990). As a result, it is the relative clause that fulfills the function of grounding the new head referent by providing a given referent which in general is human. The second reason why the head referent of the relative clause in construction₁ mainly functions as an object of the relative clause is related to humanness of the head noun. It is reported in previous discussion that the head referent of the relative clause in construction₁ is mainly nonhuman and new. Non-humanness, newness are prototypical features associated with object position (DuBois 1987; Pu 2007), which predicts that the head referent in the relative clause in construction₁ mainly occur in object position of the relative clause. The question arises why the new and nonhuman head referents do not occur in the subject position of the main clause. We believe that the answer is related to the salience of the head referent. The salience of the head referent of the relative clause in (13) is apparent because after its first mention, the three subsequent clauses are used to elaborate on it. According to Givon (1993, P. 350), the function of the relative clause which modifies a new head noun is to make the new referent “salient and grounded” in discourse and cataphorically link a new referent to the subsequent discourse. A salient referent is more topical than prototypical referent in object position which is transient and tends to fade from the discourse after its initial mention. In other words, it is not surprising for new nonhuman head referent to occur in the subject position of the main clause. That’s the reason why the combination pattern SO wins out in construction₁. The finding that for nonhuman objects the combination pattern SO is the dominant one is compatible with the findings in several studies (Fox and Thompson; Chen 1997; Pu 2007).

Having discussed how the interaction between the four factors contributes to explain the observed patterns in construction₁, we now move to explore the inter-relation between the four factors in construction₂. As opposed to the head referent in construction₁, the head referent of the relative clause in construction₂ tends to occur in subject position of the relative clause and the dominant combination pattern of grammatical roles is SS. Why

does construction₁ differ from construction₂ in terms of the deployment of grammatical roles of head referents? We believe that the reason can be attributed to three factors: the information status of the head referent, humanness of the head referent, and the discourse function of the relative clauses. It is reported in previous discussion that the head referent in construction₂ tend to carry old information and are mainly human. Humanness and givenness are prototypical features of subject position (Keenan 1976; DuBois 1980, 1987; Fox and Thompson 1990; Pu 2007). In conclusion, it is expected that the head referent of the main clause in construction₂ functions as the subject of the relative clause owing to the humanness and given information status of the head referent. We now answer why the head referent of the relative clause in construction₂ tends to assume the subject role of the relative clause. The answer, we believe, can be attributed to the interaction of the information status of the head noun and the discourse function of its modifying relative clause. Previous investigation of the information of the head noun in construction₂ shows that the head noun in construction₂ mainly codes given information. Functional linguists such as Fox and Thompson (1990) and Givon (1993) propose that all referents should be grounded to warrant their relevance to the current discourse. Givon (1993) further argues that a new referent differs from a given referent in terms of the way how they are grounded. For a new referent, it is grounded by the **current text location** because of the fact that it cannot be grounded by a previous mention or situation. If a new referent is modified by a relative clause, the modifying relative clause tends to provide the grounding information because the relative clause occurs in the current text location of its modifying head owing to its proximity with it. By contrast, for a given referent, it is mainly grounded by **other text location** in previous discourse by virtue of its previous mention or a frame established in prior discourse and the relative clause in general does not serve to ground the new head referent because it occurs in the current text location of the new head referent. The observation that a given referent does not tend to be grounded at its current text location can be translated into the fact that relative clauses modifying a given head referent are not deployed to provide grounding information.

The discussion in section 5.4 concludes that the main discourse function of relative clauses in construction₂ is to characterize a given referent by providing additional descriptive information. According to Fox and Thompson, characterization is mainly done by S-relative clauses. The reasoning is that characterization is mainly done by a predicate which describes properties of its subject on which it predicates. The following example from Fox and Thompson (1990:307) serves to illustrate this point.

- (14) She teaches at the University of Colorado,
 is a linguist,
 works on Indonesian,
 goes to LSA meetings,
 is an Austronesians,
 sleeps late on weekend,
 likes to dance,
 etc

If we need to characterize a female, we need to describe what she does, who she is, what she likes etc. As a result, characterization relative clauses are S-relative clauses. In other words, the observation that the dominant combination pattern of grammatical roles in construction₂ is SS is expected. The reasons are twofold: 1) the given information status and humanness of the head noun makes head nouns in construction₂ fit nicely with the subject role of the main clause. 2) The main discourse function of relative clauses in construction₂ is to characterize the given head referent and characterizing relative clauses, according to (Fox and Thompson 1990), mainly fulfilled by S-relative clauses. The following Chinese example is to illustrate this point.

- (15) 母亲则于心灵深处对幼子怀着羞怯而不可明言的指望，相信这个不說話而貪食的**孩子**终究会大有前途。所以晚间从地里回来，腰在痛着，臂在麻着，匆匆忙忙藉着灶火的余光而备饭的时候，仍然忘不了偷看孩子几眼即那捧着碗，合着眼，半睡半醒地躺在地上，只要一喊吃饭，便会精神起来的**孩子**。

‘The mother had a humble and vague hope on her little son in the depth of heart, believing that the eager-for food-kid who cannot speak would score a success sooner or later. She cast several glimpses at the kid who was cupping a bowl, half awake and half asleep. He would become attentive as long as you ask him to eat. The mother returned from the field when it was dark. Her arms were numb, her back ached. She prepared the meal against the dim light from the stove.’

There are two relative clauses in this excerpt. The head noun *孩子* ‘kid’ codes old information because it is introduced into the previous discourse as *幼子* ‘second son’. What is more, its previous mention *幼子* ‘second son’ is immediately adjacent to the head noun *孩子* ‘kid’ of the first relative clause. Four clauses later, the same referent is mentioned again. It is apparent that there is no discourse need to ground the given head referent at the moment it is reintroduced into the discourse (Given 1993). Therefore, the

relative clause serves the discourse function of characterization to provide additional descriptive information.

In conclusion, the observed properties differentiating the two constructions can be explained by examining the interaction of the four factors identified in this study.

8. Residual Issues

We hope that we have succeeded in our efforts toward providing a discourse explanation to the co-existence of the two word orders and their differentiating properties. However, does the finding in our research share any similarity with that in any previous researches on the two constructions? The answer is positive. According to Chao (1968), Hashimoto (1971), and Huang (1982), relative clauses in construction₁ and construction₂ are of different nature. Relative clauses in the former are considered as restrictive relative clauses used to pick out the referent of the head noun. Our study on the discourse function of the relative clause in construction₁ shows that relative clauses in construction₁ mainly serve the discourse function of grounding the head noun. A grounding relative clause is mainly used to establish the identity of the introduced referent which is analogous to the function of a restrictive relative clause because both of them serve to identify the referent of the head noun. In contrast, relative clauses in construction₂, according to Chao (1968), Hashimoto (1971), and Huang (1982), are considered as descriptive/non-restrictive relative clauses. They do not serve to pick out the referent of the head noun but to provide descriptive information regarding the head noun, which is fully compatible with the finding in our study where it is reported that the main discourse function of the relative clause in construction₂ is to characterize the head noun by providing additional descriptive information. In other words, a discourse approach to the two constructions advocated in this study cannot only provide the observation offered by previous researches but also explains why the co-existence of the two constructions is justified in discourse.

Another related question raised at the very beginning is why construction₂ predominantly outnumbered construction₁. We believe that the answer to this question might be related to the general tendency of information flow in discourse. According to Givon (1993), in a discourse, given information in general exceeds new information, which is dictated by the information flow. New information in a discourse needs to be grounded by given information in prior discourse to justify its relevance to the current discourse. The opposite is not true. The general tendency of larger amount of given information in discourse might be translated into the preponderance of construction₂ over construction₁ because construction₁ is in association with new information while construction₂ with given information. Needless to say, a quantitative study needs to be conducted to test this hypothesis.

9. Concluding remarks

To conclude, we have attempted to show that the two constructions differ from each other semantically, syntactically, and pragmatically. We hope that we have offered a convincing explanation of the differentiating properties between the two constructions and a persuasive account for the justification of the co-existence of the two constructions. The different behaviors of the two constructions suggest that, besides investigating clause-level grammar, examination of discourse is indispensable in order to understand the variant forms of grammatical constructions.

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