Noun-modifying clause constructions in Sino-Tibetan languages

Randy J. LaPolla
Nanyang Technological University

Abstract

After a short background introduction on Sino-Tibetan noun modifying clause constructions generally, this paper demonstrates, using naturally occurring data, that the Mandarin pre-head noun-modifying clausal construction is grammatically unlike a relative clause construction, as normally conceived, even though it can be used to restrict the identification of the referent of the head noun, but is grammatically a noun-noun compound, and, like noun compounds, exhibits grammatically unrestricted association between the head and the modifier. The pragmatics of how the relation between the modifier and the head is understood is also briefly discussed.

Keywords: Sino-Tibetan, Chinese, relative clause typology, noun modification, noun compounds, linguistic typology

1. Introduction

Work by Matsumoto (1988a, 1988b, 1997) on Japanese has shown that the traditionally assumed characteristics of relative clauses do not hold in Japanese, that the distinction between relative clause and noun complement does not explain all of the uses of the relevant forms found in Japanese, and that a single morphosyntactic construction (a finite clause modifying a head noun) in Japanese is generally used to convey meanings in English expressed not only by relative clauses and noun complements, but also by infinitival, gerundive, adjectival, and participial forms, often involving prepositions, e.g. steps to follow, the smell of frying rice, the year after applying, beautiful sky, and the change from buying groceries.

In English the distinction between relative clause and noun complement is that in the relative clause construction an argument of the relative clause (whether overt or assumed) is coreferential with the head noun, whereas in the noun complement construction this is not the case. Semantically a relative clause either helps the hearer identify the referent of the head noun (restrictive—e.g. the boy who walked in) or adds pertinent information about the referent of the head noun (non-restrictive—e.g. my brother, who just got back from Chicago), whereas the head of a noun complement simply is a characterization of the modifying clause, e.g. the fact that he is president characterizes that he is president as a fact. In English these two seem structurally similar, but manifest different morphosyntactic behaviour: the head of a noun complement can be dropped, but the head of a relative clause cannot, and only the relative clause can take a relative pronoun.
In contrast to the traditional definitions, Matsumoto (1988a, 1988b, 1997) found many cases in Japanese where the semantic function of a clausal noun modifying construction is that of a restrictive relative clause, yet the head noun is not an argument of the modifying clause, as in (1) (Matsumoto 1997: 20):

(1) \[[[hutor-anai]_{RC}\text{ okasi}]_{NP} \text{ wa nai kasira}.
\]
\begin{align*}
\text{gain.weight-not} & \text{ sweets} \quad \text{TOP NEG wonder} \\
\text{‘(I) wonder if there aren’t any sweets (even though ( ) eats which) ( ) doesn’t gain weight.’}
\end{align*}

It has been suggested (Matsumoto 1989, Comrie 1996, 1998a, 1988b) that the Japanese type is found more generally in Asian languages and elsewhere. The present paper will present naturally occurring clausal noun modifying constructions found in Mandarin Chinese, as a representative of the Sino-Tibetan family,¹ to show that Chinese also manifests many of the same phenomena found in Japanese, adding further evidence to efforts to expand the typology of clausal noun modifying constructions.

Chinese is often taken as a prime example of an isolating language. Most relational marking takes the form of particles rather than affixes or inflections. Possibly relevant to the facts that are presented below, Chinese has been argued to not have grammaticalized the sort of pivot constructions normally associated with grammatical relations. That is, it has been argued to not have any particular alignment, as there are no grammatical relations, and the clause pattern is simply topic-comment (Chao 1968, Lü 1979, LaPolla 1993, 1995, 2009; LaPolla & Poa 2005, 2006). We will first talk more generally about structures found in Sino-Tibetan languages, and then focus on Modern Mandarin Chinese.

2. Sino-Tibetan

Historically, as argued in LaPolla (2008b), the earliest Sino-Tibetan clausal noun modifying constructions simply had a modifying clause directly modifying a noun, as in (2) from the Shang Shu, the earliest Chinese history:

(2) \text{fu} \quad [[[\text{qianren shou}]_{MOD} \text{ ming}]_{NP} \\
\text{transmit} \quad \text{forbearer} \quad \text{receive} \quad \text{order} \\
\text{‘Transmit the order received by Zhou Gong’}

In this structure there is no marking of nominalization, so the modifying clause has the same form as a main clause. This sort of structure, with a main-clause form and no

¹ In my work on Tibeto-Burman languages, such as Rawang and Qiang, I have not found any language that patterns the way English does in this regard. The languages I am familiar with pattern more like Chinese.
marking of nominalization, is still used in many modern Sino-Tibetan languages, as in the Rawang example in (3):\(^2\)

\[(3) \text{"Vňng" wā bōng dēnǐ déyaq gǒ wēdōnî lâ:ngiē.} \quad \text{(LaPolla & Poa 2001:41)}
\]

In (3), we have a very similar structure to that in (4), again using the verb ‘called’: Wǎngcè wā wē ‘that called Wangce’ and again modifying the head noun bōng ‘name’, although in this case the distal demonstrative pronoun wē appears at the end of the modifying clause. The demonstrative pronoun wē in (5) clearly has a nominalizing function, as when it is added to a clause as in this example, the clause with wē can be used alone as a referring expression. Because of this, it is glossed "Nom" here. The use of the distal demonstrative pronoun zhi in Old Chinese in (4) is not clearly that of a nominalizer (although it is very clearly a nominalizer in other contexts), so zhi has not been glossed here as a nominalizer.

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\(^2\) Rawang is a Tibeto-Burman language spoken in Kachin State, Myanmar. All data is from natural texts.

\(^3\) Another construction that developed in many Sino-Tibetan languages is where one or more general nouns, such as ‘person’, used frequently as the head noun of a relative clause, bleached into a nominalizer, and then that nominalized clause used to modify a noun. See LaPolla (2008a, 2008b) for discussion and examples. In such cases the type of nominalizer that develops can constrain the interpretation of the head noun, such as in Qiang (LaPolla with Huang 2003), where the word for ‘person’ grammaticalized into a nominalizer, and when such nominalized clauses are used to modify another nominal, the referent of that nominal must be animate; or it can constrain the relationship between the modifying clause and the head noun, such as in Rawang (LaPolla 2008a), where for example the nominalizer -ra (< shvra ‘place’) constrains the interpretation to the head being the place of the action of the nominalized clause.
3. Modern Mandarin

In Mandarin there is only one general noun-modifying clause construction, as in (6) below. All of the different possibilities listed in Appendix 1 of this volume are possible in Mandarin, all expressed with this single construction.

Although it is often considered that the modern Mandarin form *de* which appears in this construction simply replaced the older form *zhi* (e.g. Liu 2008), the constructions are different, as with *de* the modifying clause is much more clearly nominalized, and can be used as a referring expression on its own, as in (7). As the modifying clause is a nominal, the structure is then [nominal/modifier-nominal/modifier]. This makes it actually a noun compound, and this may be part of the explanation for the facts we will present below.

A clause with *de* can often be used alone and still be a complete referring expression with the same meaning as when it modifies a noun (compare (6) and (7)), whereas this was not the case with *zhi*.

(6) 坐在我後面的人
http://tw.knowledge.yahoo.com/question/question?qid=1612031307463
[[zuo zai wo houmian de]MOD ren]NP
sit be.at 1SG back NOM person
‘the person sitting behind me’

(7) 站在我後面的是台灣人民 http://www.youtube.com/watch?v=iB2gZ5Zt4o0
[zhuan zai wo houmian de]NP shi Taiwan renmin
stand be.at 1SG back NOM COPULA Taiwan people
‘The (ones) who are standing behind me are the Taiwan people’

Example (6) is parallel to Example (iv) in section A of the Appendix. In these examples it might be argued that the modified noun corefers with a “gapped” actor argument of the modifying clause, but as there are no obligatory arguments in Chinese, it would be hard to argue for a “gap” in the modifying clause. Also, much as in Japanese, the same structure in Chinese also can be used when the head of the structure clearly does not corefer with an argument of the modifying clause, as in (8)-(12). In (8) the head noun refers to a particular time period identified by the modifying clause (what is talked about in the Appendix as a “spatial or temporal relational head noun”), but which is not

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4 My approach is that there is only the one construction, and the construction does not necessarily relate clearly to other forms, such as main clauses. Therefore I prefer to avoid terminology such as “relativization on the subject” or “relativization on the object”. There are two other constructions where the clause appears after the head: one where the nominalized clause appears after the head in apposition to it for clarification, and another where the clause is not nominalized and follows the head, as it is asserting the property rather than assuming it as is usually the case with restrictive relative clauses (see LaPolla 1995: 314-15).
an argument of the clause (not even the time of the application but the year following it, so the temporal expression could not be part of the modifying clause):

(8) 在每年地價稅開徵四十日前(即 9 月 22 日前),逾期申請者，自申請的次年期開始適用。

In (9a) the head noun is also in no way conceivable as an argument of 'buy vegetables', but is the money left over from that act (parallel to ex. (28) in the Appendix), while in (b) exactly the same structure refers to money that is to be used for buying vegetables (possibly the Instrument type mentioned in the Appendix):

(9) a. 有人以前買菜的零錢，都會分給孩子，現在投竹筒，可以讓孩子一起來付出。

b. 她会将买菜的零钱都放在一个小钱包里，需要买菜时，全部由陈万华取钱买菜。

In (10) we have an example similar to (3b) in the Appendix, 'the smell of fish grilling', but rather than smell we have the sound of the cooking:

(10) 很快，室内响起了炒饭的声音。

5 In a different context, such as (9b), this could mean 'the change to buy groceries with', but that is not what it was used to mean in the context in which (9a) appeared. This is from a Buddhist web site where they are trying to get people to donate more money. The full translation is 'Some people, before, they would take the money left over from buying groceries and give it to the children, now they put it into the collection box, this way they can have the children donate together'. The context for (9b) is 'She put her money for vegetables in a small wallet, and when vegetables needed to be bought, Chen Wanhua would take money to buy the vegetables.'
In (11) we have the Chinese parallel of the Japanese example ‘[I don’t get fat] candy’ (called Reverse condition type in the Appendix), and in (12) we have an example that might be said to be the Purpose type:

(11) 好吃又不会胖的甜点
[[haochi you bu hui pang de]MOD tiandian]NP
tasty also not can fat NOM sweets
‘sweets that are tasty and (when you eat them they) won’t make (you) fat’

(12) 不用洗手的自动马桶
http://nimb.blogbus.com/logs/52825568.html
[[bu yong xi shou de]MOD zidong matong]NP
NEG use wash hand NOM automatic toilet
‘a toilet which (after having used it) one doesn’t need to wash (one’s) hands’

In (13) we have a Chinese parallel for example (viii-a) in the Appendix.

(13) 自願中毒的尊重一下一起吃的人
http://disp.cc/m/253-4Gfy
ziyuan zhongdu de zunzhong yixia [[yiqi chi de]MOD ren]NP
willing be.poisoned NOM respect a.bit together eat NOM person
‘The one who is willing to be poisoned should respect the people (he) eats together (with)’

Example (14) is of the “Simultaneous or sequential event” type mentioned in the Appendix as not easily expressed even in Japanese.

(14) 我最近跑步的音乐都是GOT7的歌
http://instaliga.com/jacksonwang852g7
[[wo zuijin paobu de]MOD yinyue]NP shi GOT7 de ge
1SG recently run NOM music COPULA (name) NOM song
‘The music that I (have) recently (been listening to while I) run is GOT7’s songs.’

Example (15) is the type mentioned in the Appendix as the “Source” type of circumstantial adjunct.

(15) 梦到我来的那个地方
http://www.xxyqz.com/ziwen/23223/
meng dao [[wo lai de]MOD na-ge difang]NP
dream ASP 1SG come NOM that-CLF place
‘(I) dreamed of the place that I came (from).’

In (16) we have what might be called a noun complement clause. It does not differ in any way structurally from the construction we have been talking about, though. What causes it to be understood as a noun complement rather than the type we have been talking about above is the semantics of the head noun, which leads us to interpret it as something that characterizes the nature of the modifying clause rather than being
the topic of the modifying clause. In this case the head noun is necessary for this sort of interpretation.

(16) 散布中国政府花 2 亿元天价赔偿外籍旅客的谣言 http://bbs.c114.net/blog-375015-1631.html
sanbu [[zhongguo zhengfu hua 2yi yuan
spread China government spend 2.hundred.million RMB
tianji peichang waiji luke de]MOD yaoyan]NP
high.price compensate foreign tourist NOM rumour
‘spread the rumour that the Chinese government spent two hundred million RMB to compensate foreign tourists’

In these examples, the modifying clause could be used alone, but could have many different referents depending on the context. For example, in (8) shenqing de could refer to the person who applied or the papers used for applying, and many other things. Here the element modified is ‘(the) next year’, and so that constrains the interpretation of the modifying clause to the act of the application. The same is true of the other examples. The modifier constrains the interpretation of the modified element, but at the same time the modified element also constrains the interpretation of the modifying clause.

To show how varied the relationships can be, compare the following examples, all with the same expression, 能寫的 neng xie de [able write NOM], in terms of the interpretation of the referent of the modifying clause, the interpretation of the referent of the modified element (when there is one), and that of the combined form.

In (17) the modifying clause, without the head, could mean several things, but the whole construction with the head refers to the place where one can write (Place type):

(17) 後面能寫的紙都不浪費 http://www.youtube.com/watch?v=V5DHRvnv_7M
[[houmian neng xie de]MOD zhi]NP dou bu langfei
back able write NOM paper all NEG waste
‘paper on which you can write on the back’

In (18) the interpretation could either be that of an instrument (something I can write with) or that of the possessor of an attribute (something that can write):

(18) 想找枝能寫的筆http://www.managertoday.com.tw/?p=2483
xiang zhao [zhi [neng xie de]MOD bi]NP
think look.for CLF able write NOM pen
‘(I) want to find a pen (which) can write’ (or ‘(which one) can write (with)’)

In (19) and (20) the interpretation is of the actor, the one who can write, though the latter shows the use of the modifying clause without the head noun:
(19) 能寫的人，有福了！
[[neng xie de]MOD ren]NP, you fu le
able write NOM person have blessing CSM
‘People who can write, (you) are in luck!’

(20) 學習英文，可以說是全民運動，可是真正學的好英文，能說又能寫的，實在少之又少。
http://save-coco.blogspot.com/2012/01/blog-post_05.html
[neng shuo you neng xie de]NP
able speak also able write NOM
‘(Learning English can be said to be a national movement, but those who can learn it well,) who can speak and write (English well actually are very few)’

In (21) the construction refers to the one that cannot be written about, not any direct argument of the modifying clause.

(21) 不能寫的人
http://tw.knowledge.yahoo.com/question/question?qid=1510092303862
[[bu neng xie de]MOD ren]NP
NEG able write NOM person
‘people that (you) cannot write about’

In (22) the interpretation of this structure is what in other languages would probably be called a noun complement or what is in the Appendix called “content-taking noun as head”:

[[neng shuo you neng xie de]MOD nengli]NP
able speak also able write NOM ability
‘ability to speak and to write (well)’

In (23) the interpretation is the source materials you refer to in writing something, so this might also be classified under the Instrument type in the Appendix, but the sense is quite different from the paper or pen one writes with:

[neng xie de]NP jiu xie ba
able write NOM then write SUGGESTION
‘(Take the materials you have in hand now,) just write the (materials) that (you) can write’

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6 This was from a discussion about a teacher asking the students to write about someone they wanted to thank, but then saying they couldn’t write about their parents or teacher or the usual people one would think of. The author then said ‘Think of all the people you meet during the day, then subtract (the people) you can’t write about and that is the people you should thank’.
The same structure in different contexts can be interpreted differently, as can be seen in comparing (19) with (21) and (20) with (23), as well as (9a-b). When there is a head sometimes the real world nature of the referent of the head is a clue as to its relationship to the modifying clause, so if we compare, for example (17) and (18), it is only our understanding of the nature of ‘paper’ vs. ‘pen’ that tells us whether the referent of the modifying clause is what is written on or what is used to write. But even this is not fully deterministic, as the head is also open to many sorts of interpretations, as we can see from comparing (19) and (21).

4. Discussion

These modifying clauses are structurally compound constructions, the same structure as, for example, in mu zhuo ‘wood(en) table’, where the first element restricts the sense of the second element, but because the first element in the construction under discussion here is a clause, it has often been talked about as a relative clause, or in the case of (16), a noun complement.

Once we start looking at the uses of this construction, we find that there are many possibilities in terms of the understanding of the referent of the clause and the relationship between the clause and the head. The structure does not constrain the interpretation of the relationship between the modifying clause and the head. So in the framework of LaPolla (2003, 2015), we would say that languages with this sort of construction have not grammaticalized constraints on the identification of the relationship between the modifying clause and the head noun. Another way to say this is that the construction does not constrain the role of the referent of the modified noun relative to the situation expressed in the modifying clause.

As Matsumoto (2010) shows for Japanese, the sense of the modifying clause also helps the addressee infer the correct interpretation of the head noun. Because of this, Matsumoto (2007), working in Frame Semantics, argues that the construction involves the integration of two semantic frames, that of the head noun and that of the modifying clause. The intersection of elements of these two frames gives the overall construction its meaning. From the point of view of LaPolla (2003, 2015), I would say simply that the modifying clause helps constrain the interpretation of the referent of the head noun, and at the same time the head noun (if there is one) helps constrain the interpretation of the use of the modifying clause.

Given the many possible uses of this construction, rather than trying to artificially divide the possibilities into one or the other choice in the traditional dichotomy of relative clause and noun complement, and also trying to determine strict subcategorization frames or argument structures and relations, in Chinese we can

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7 Example (17) has houmian ‘back’ as part of the modifying clause, but used alone it would not necessarily refer to the back of paper. For example, the back end of a pen can also be called the houmian, and the phrase houmian neng xie de is often used to mean ‘(things that) can be written later’.
simply follow a constructionist approach⁸ and recognize a single pre-head noun modifying construction, which posits only a relationship between the modifying clause and the head. In Mandarin these two parts can both be used as referring expressions, and so can be used alone or together. One of the core insights of Construction Grammar is that the overall construction has meaning beyond the sum of the parts. It is the two elements (the modifying clause and the head) being together in the construction and in a particular context that allows the particular interpretation of the relation between the two and the interpretation of the referent. (As in Gestalt psychology, perception of the features of some experience is heavily influenced by perception of the whole.)

In modern Mandarin Chinese the nature of the modifying clause plus head construction is actually a nominal-nominal compound, and this might explain the lack of constraints on the interpretation, like in noun-noun compounds in English (see Downing 1977, Kay and Zimmer 1978, Levi 1978, Finin 1980). This is not the case in Japanese, though, so it cannot be the explanation in that language, and possibly is not the explanation in Chinese as well. In looking for correlations elsewhere in the grammar, we might say that this is another aspect of the fact that Chinese does not constrain the interpretation of the identification of the roles of referents in discourse as much or in the same way as, for example, English. So for example, as argued in LaPolla (1993, 2009), LaPolla & Poa (2006), Mandarin Chinese does not have pivot constructions of the type associated with “subject”, that is, where there is a restricted neutralization of roles for the purpose of referent tracking (see LaPolla 2006). That fact seems to be operative in the case of these modifying clauses as well, as they also don’t restrict the role of the referent of the head noun relative to the modifying clause.

**Abbreviations**

- **ADV** adverb
- **ASP** aspect
- **CLF** classifier
- **CSM** change of state marker
- **DEM** demonstrative
- **MOD** modifier
- **NEG** negative
- **NOM** nominalizer
- **NPAST** non-past
- **PL** plural
- **PRO** pronoun
- **SG** singular
- **TOP** topic

⁸ See Croft (2001, 2013) on a useful constructionist approach, and LaPolla (2011) and LaPolla, Kratochvīl & Coupe (2011) for other applications.
References


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