Non-intersective Adjectival Modification in Mandarin

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1. Introduction

According to Larson (1998), there are two kinds of reading of the adjectival modifications as shown in (1) and (2).

(1) Peter is an old friend.
   a. Peter is a friend and Peter is old.
   b. The friendship is old.
(2) Olga is a beautiful dancer.
   a. Olga is a dancer and Olga is beautiful.
   b. Olga’s dancing is beautiful.

Furthermore, Larson (1998) and Cinque (2003) show that the Individual/Stage level ambiguity can also be found in the adjectival modifications such as (3) and (4).

(3) The visible stars include Aldebaran and Sirius.

   a. The stars that are generally visible include…
   b. The stars that happen to be visible now…

(4) The stars visible include Aldebaran and Sirius.

   a. #The stars that are generally visible include…
   b. The stars that happen to be visible now…

Cinque (2003) and Larson (2004) argue that the different interpretations that are available for adjectives are associated with two different syntactic patterns for modification. We can see the differences through the following Table 1, which shows the properties of English (and Germanic in general).\(^1\)

In this paper, I’d like to put focus on the non-intersective adjectival modification which, in English, appears only in the prenominal position. Through Mandarin counterexamples of (1) and (2), we can notice that they are different from English.

(5) Peter shi yige lao pengyou.

   a. *Peter is a friend and Peter is old.
   b. The friendship is old.

(6) Olga shi yige piaoliang wudaojia.

   a. Olga is a dancer and Olga is beautiful.
   b. *Olga’s dancing is beautiful.

The examples show that we cannot have the intersective reading (5a) and the non-intersective reading (6b) any longer. Since Kubo & Tei (2013) argue that monosyllabic modifiers like lao ‘old’ should be regarded as direct modifiers and bi-syllabic modifiers act as indirect modifiers, before we give more relative examples and discuss the differences

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Table 1

\(^1\) The terminology ‘intersective’ mentioned in Table 1 is often used to explain the different interpretations of adjectival modification in semantics. Kamp & Partee (1995) provide a hypothesis about the intersectivity as shown in (i).

(i) The intersectivity hypothesis

Given the syntactic configuration [CNP Adj CANP], the semantic interpretation of the whole is |Adj||\cap||CNP| (set intersection, predicate conjunction).
between English and Mandarin counterexamples, let us go through the distinction of two types of adjectival modifications – direct and indirect modification – in Mandarin.

2. Two types of modifiers in Mandarin

Sproat & Shih (1988) suggest that there are 2 types of adjectival modifications: direct modification and indirect modification in Mandarin. And Sproat & Shih (1991) mention the properties of these two types of modifications.

Assuming DE as a linker, Sproat & Shih (1988) and Sproat & Shih (1991) argue that the adjectives with the linker DE will be regarded as the indirect modifiers and have a free order, while bare adjectives without DE will construct direct modifications which must follow the AOR, as shown in (8) and (9).

(7) Adjectival Ordering Restriction (AOR)
Quality > size > shape > color > origin  
(Vendler 1968)

(8) a. size > color
xiao de lv de huaping
small LINK green LINK vase
b. color > size
lv de xiao de huaping
green LINK small LINK vase
(9) a. size > color
xiao lv huaping
small green vase
b. *color > size
lv xiao huaping
green small vase

Another property mentioned in Sproat & Shih (1991) is that direct modifiers are closer to the head noun than indirect modifiers.

(10) indirect modifiers > direct modifiers

a. hei-de xiao shu
black-DE small book
‘small black book’
b. *xiao hei-de shu
small black-DE book

(Sproat & Shin 1991)

However, as discussed in Kubo & Tei (2013), the so-called linker DE cannot resolve the problem about distinguishing the two kinks of modifiers. For example, lv se ‘green color’ and fang xing ‘square shape’ in (11) do not have the linker DE, those bare modifiers should be subject to the AOR. However, they do not follow it.

(11) a. color > size
[lv se] xiao huaping
green color small vase
b. shape > size
[fang xing] xiao huaping
square shape small vase

Furthermore, comparing to (11), the examples in (12) show that lv se ‘green color’ and fang xing ‘square shape’ must be prior to the monosyllabic modifiers xiao ‘small’. As analyzed in Kubo & Tei (2013), monosyllabic modifiers are generally regarded as direct modifiers. If lv se ‘green color’ and fang xing ‘square shape’ are indirect modifiers, then the linear order in (10) makes sense.

(12) a. size > color
*xiao [lv se] huaping
small green color vase
b. size > shape
*xiao [fang xing] huaping
small square shape vase

According to Cinque (2010), indirect modification adjectives should occur in reduced relative clauses. If it is true and the assumption about lv se ‘green color’
and fang xing ‘square shape’ being indirect modifiers is correct, then they may function as predicative modifiers.

(13) The vase is green.
   a. *huaping shi [lv se].
      vase be green color
   b. *huaping [lv se].
      vase green color
   c. huaping shi [lv se] DE.
      vase be green color DE
      (Cleft sentence)

(14) The vase is small.
   a. huaping shi xiao.
      vase be small
   b. huaping xiao.
      vase small
   c. huaping shi xiao DE.
      vase be small DE
      (Cleft sentence)

Since Mandarin is a so-called NP language, modifiers may act as predicates without any other verbs. (13) shows that lv se ‘green color’ can be predicate only when there is an obligatory DE. However, (14c), which is usually analyzed as a standard cleft sentence, shows that the monosyllabic modifier xiao ‘small’ is just perfect just like lv se ‘green color’. If we put the cleft style aside, this truth does support Sproat & Shih’s idea – modifiers with DE are indirect ones – and Cinque’s analysis about indirect modification adjectives. However, cleft sentences in Mandarin are usually be analyzed as a series set ‘shi… DE’, inside which is the focus position.

Furthermore, comparing (13b) with (14b), we can see that the monosyllabic modifier xiao ‘small’ is acceptable as a predicate but lv se ‘green color’ doesn’t. And if an obligatory DE appears, as shown in (15), both of them are unacceptable.

(15) a. *huaping lv se DE.
    vase green color DE
   b. *huaping xiao DE.
    vase small DE

Here is a brief conclusion. In Mandarin, the definition of direct/indirect modification cannot be simply associated with or without DE, but the adjectives combined with the obligatory DE must be indirect modifiers. The monosyllabic modifier xiao ‘small’ can function as a predicate, but the bi-syllabic modifier lv se ‘green color’ cannot.3

3. The relationship between non-intersective readings and DE

As shown in (5) and (6), repeated as (16) and (17), there are non-intersective readings in English version, but in Mandarin just one of the two meanings can be captured – non-intersective reading (16b) and intersective reading (17a).

(16) Peter shi yige lao pengyou.
    Peter be one-CL old friend
   a. *Peter is a friend and Peter is old.
   b. The friendship is old.

(17) Olga shi yige piaoliang wudaojia.
    Olga be one-CL beautiful dancer.
   a. Olga is a dancer and Olga is beautiful.
   b. *Olga’s dancing is beautiful.

Following the assumption that the adjectives combined with the obligatory DE must be indirect modifiers, if we put the obligatory DE after the monosyllabic modifier lao ‘old’, we can get a reversed interpretation. However, when we combine DE with piaoliang ‘beautiful’, the readings stay unchanged. See (18) and (19).

(18) Peter shi yige lao DE pengyou.
    Peter be one-CL old DE friend
   a. Peter is a friend and Peter is old.
   b. *The friendship is old.

2 This sentence is acceptable when it shows the meaning ‘the vase is actually small’.
3 In fact, some bi-syllabic modifiers can be predicates as shown in the following example, but they are different from lv se ‘green color’ which is analyzed as denominal adjectives in Watanabe (2012) since they cannot be separated into two independent morphemes with clear respective meanings.
   (i) Zhangsan ying-jun.
      Zhangsan handsome
      ‘Zhangsan is handsome.’
In this expression, C refers to some comparison class (given by context or an explicit for-PP).

(19) Olga shiyi piaoliang DE wudaojia.
Olga be one-CL beautiful DE dancer.

a. Olga is a dancer and Olga is beautiful.
b. 'Olga’s dancing is beautiful.

The fact that the readings are changed implies DE has an important role and changes the status of the monosyllabic modifier lao ‘old’. What makes this happen and what cause the difference between English and Mandarin? Let us look some analyses in the next chapter.

4. Larson’s N-analysis for non-intersective modifications

Based on Davidson’s analysis of adverbial modification, Larson (1998) uses four crucial technical moves to analyze the derivation of non-intersective reading.

(20) • Relativize the semantics of CNs to events
• Analyze As as predicates
• Allow AP to be predicated either of x or e in its associated CN
• Introduce an event quantifier

Larson (1998) argues that an adjective may combine with a noun denoting an event-individual pair, and then the adjective can be predicated of either the x parameter or the e parameter. This idea aims for explaining the intersective/non-intersective ambiguity.

(21) a. Val(<x,e>, dancer) iff dancing(e,x)
   b. Val(x, beautiful) iff beautiful(x, C) ("x is beautiful for a C")
   c. Val(<x,e>, [NP AP NP ]) iff Val(<x,e>, NP) ... Val(x, AP)
   Val(<x,e>, [NP AP NP ]) iff Val(<x,e>, NP) ... Val(e, AP)

(22) Olga is a beautiful dancer.
   a. Qe[dancing(e, olga) ... beautiful(olga,C)] ("Olga is beautiful")
   b. Qe[dancing(e, olga) ... beautiful(e,C)] ("Dancing is beautiful")

(23) Peter is an old friend.
   a. Qe[friendship(e, p) ... old(pete,C)] ("Peter is old")

b. Qe[friendship(e, p) ... old(e,C)] ("The friendship is old")

Following Larson (1998)’s idea, the counterexamples in Mandarin should simultaneously show both intersective and non-intersective readings. However, as shown in (6), piaoliang ‘beautiful’ does not have the non-intersective reading. On the other hand, the monosyllabic modifier lao ‘old’ in (5) does not have the intersective reading which is regarded as the fundamental reading of adjectives. I argue that Larson’s analysis towards non-intersective reading is a quiet acceptable solution, but piaoliang ‘beautiful’ and lao ‘old’ must be different in syntactic structures. Considering those differences between the two kinds of modifiers in Mandarin, I will make my proposal in the next chapter.

5. Proposal

Since monosyllabic adjectives in Mandarin are generally direct modifiers, and we have found in chapter 2 that bi-syllabic adjectives show some properties of indirect modifiers, I propose that direct modifiers such as the monosyllabic adjective lao ‘old’ derivate in a deeper position than indirect modifiers do (for example, bi-syllabic adjective piaoliang ‘beautiful’).

(25) X/XP or XP

X Y XP YP
(word level) (phrase level)
I think that there may be some other parameters to make compounds obtain idiomatic readings, but I have no idea about the mechanism yet. So I leave this puzzle to my future research.

Furthermore, considering idiomatic readings can only be found in direct modifications, I assume that direct modifiers (monosyllabic modifiers) merge with N and construct a compound (word level) as shown in (27). With different levels, modifiers may access to different arguments. Within the word level, the e parameter is easy to be reached, which is reversed in the phrase level.

(27) ‘A-N’ compounds:
- xiao-fei ‘small-cost’ = ‘tip’
- da-yi ‘big-coat’ = ‘overcoat’
- hong-hua ‘red-flower’ = ‘safflower’ (plant used in traditional Chinese medicine)

(Sproat & Shih 1988, 1991)

Let us rethink the examples (16)–(19), repeated as below. As I assume in (26), the monosyllabic modifier lao ‘old’ merges with pengyou ‘friend’ and chooses the e parameter to express the non-intersective reading as shown in (16). However, the bi-syllabic modifier piaoliang ‘beautiful’ merges with wudaojia ‘dancer’ in (17), which can only occur in the phrase level since the bi-syllabic modifier piaoliang ‘beautiful’ cannot act as a direct modifier as we discussed in Chapter 2, resulting in choosing the x parameter and express the intersective reading only. Once direct modifiers are attached with obligatory DE, the status changes and direct modifiers will become to indirect modifiers. Thus, as shown in (18), lao DE ‘old’ is not a direct modifier any longer and just performs like other indirect modifiers.

(16) Peter shi yige lao pengyou.
Peter be one-CL old friend
a. *Peter is a friend and Peter is old.

(17) Olga shi yige piaoliang wudaojia.
Olga be one-CL beautiful dancer.
a. Olga is a dancer and Olga is beautiful.
b. *Olga’s dancing is beautiful.

(18) Peter shi yige lao DE pengyou.
Peter be one-CL old DE friend
a. Peter is a friend and Peter is old.
b. *The friendship is old.

(19) Olga shi yige piaoliang DE wudaojia.
Olga be one-CL beautiful DE dancer.
a. Olga is a dancer and Olga is beautiful.
b. *Olga’s dancing is beautiful.

As to the reason why DE can change the status of modifiers, I think Simpson (2001) gives us a hint, in which DE needs to be realized as D. Because of the length of the content, I will not discuss this topic in this paper.

6. Conclusion

In this paper, I discussed the difference between typical direct modifiers (monosyllabic) and indirect modifiers (by-syllabic) and analyzed the counterexamples of Mandarin which show different properties about the intersective/non-intersective readings towards English. Then I pointed out that the distinctions mentioned above are related to direct/indirect modifications. With the assumption (26), I tried explaining the differences among (16)–(19).

References:
Kubo, Yoshihiro & Tei, Rai. 2013. A note on direct and indirect modification. The Bulletin of Central

5 I think that there may be some other parameters to make compounds obtain idiomatic readings, but I have no idea about the mechanism yet. So I leave this puzzle to my future research.