Lexical Argument Structure and
Two Types of Denominals in Modern Mandarin

Ruixi Ressy Ai
California State University at Long Beach, Long Beach, USA

This paper accounts for the derivation of two types of denominals in Modern Mandarin under the framework of Lexical Argument Structure that is initiated by Hale and Keyser (1993, 2002, inter alia). The first type is derived with an internal argument such as in ni qiang (“to smear mud on the wall to strengthen it”). The second type, on the other hand, is derived without any internal arguments such as in hen jiaoqu (lit. “very suburb”). It has been observed that the first type of denominals is no longer productive in Modern Mandarin. In contrast, the usage of the second type in Modern Mandarin is on the rise. It is argued that while the first type of denominals is derived in a fashion similar to denominals in English, the second type is derived in a way that is peculiar to Modern Mandarin. The low productivity of the first type of denominals is attributed to the drastic decline of V-PP structure in Modern Mandarin and this hypothesis is supported diachronically by Archaic/Classic Chinese.

Keywords: lexical argument structure, internal argument, denominal

Introduction

There are two types of denominals in Chinese. The first type universally has internal arguments (see Example (1a), henceforth Type I); while the second type does not tolerate any internal arguments (see Example (1b), henceforth Type II). The latter behaves more like property-denoting adjectives.

Example (1) Two types of denominals in Chinese:

(a) Type I: with internal arguments, e.g., ni qiang “to smear mud on the wall (to strengthen it)”
(b) Type II: without internal arguments (= property-denoting adjectives), e.g., Lao Zhang huo le.

Old Zhang fire Asp.

“(Lit.) Lao Zhang fired (got very angry).”

Compare: *1 Lao Zhang huo le Lisi.

Old Zhang fire Asp. Lisi

Intended: “Lao Zhang got very angry at Lisi.”

The productivity of these two types of denominals is different. Type I is very low (see Example (2a));

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1 Following the generative tradition, the asterisk (*) indicates ungrammaticality.
whereas Type II is pretty high (see Example (2b)). The latter ranges from proper names (including both people’s names and country names) to common nouns.

Example (2) The productivity puzzle:

(a) Type I: The productivity is very low.
   (i) juan yang (“to corral sheep”)
   (ii) ? qi jiaju (“to paint furniture”)
       (It is not clear, though, whether juan/qi starts as a verb or as a noun in the lexicon.)
   (iii) ?? che ni dao cheng-shang (“to use cart/vehicle/car to send you to the town”). (XIE, 1995)

(b) Type II: The productivity is pretty high.
   (i) Proper nouns:
   People’s Names: Zhangsan/Zhangfei/Yang Guifei/Wu Sangui/Chen Yuanyuan, etc.
   Ta zhe ren jiushi tai Zhangsan.
      he this man after-all too Zhangsan
      Lit. “He has too much property of being Zhangsan.”
   Country’s Names: Deguo (Germany); Zhongguo(China), etc.
   Zhe ping pijiu hen Deguo.
      this bottle beer very Germany
      Lit. “This bottle of beer tastes really like German beer.”
   (ii) Common nouns: tie (“iron”), mu (“wood”), jiaoqu (“suburb”), weibolu (“micro-wave oven”), jingji (“economy”), and so on.
   Guangwai zhe ge di-fang hen jiaoqu.
   Guangwai this CL place very suburb
   Lit. “The place of Guangwai is very suburban.”

We summarize the empirical facts in Example (3).

Example (3) Sum-up

Denominals in Chinese Productivity
Type I: with internal arguments (very) LOW
Type II: without internal arguments (pretty) HIGH

There are two goals in this paper. One is to account for the different derivations of these two types of denominals in Chinese. The other is to account for the productivity puzzle demonstrated in Example (2) and summarized in Example (3).

Theoretical Background

The framework the author adopts in this paper is within the Lexical Argument Structure (or L-Syntax) that is initiated by Hale and Keyser (1993, 2002, inter alia). The author will, however, not address issues like whether L-syntax is an independent component of the grammar (Hale & Keyser, 1991, 1993), or part of syntax (Chomsky, 1995; Hale & Keyser, 1997, 1999), or part of lexicon (Hale & Keyser, 2002), or it should be parameterized across languages (Lin, 2001). This goes beyond the horizon of this paper, as this whole issue is still much under debate. In this paper, the author will simply follow Hale and Keyser’s (1993) LRSs (Lexical Relational Structures), or
more recently Lexical Argument Structure (Hale & Keyser, 2002), to account for the different processes involved in the derivation of the two types of denominals in Chinese. Regardless of the specific locus of L-syntax in grammar, the author will nonetheless assume that all these derivations are syntactic in nature.

With this direction clearly in mind, let us first look at Hale and Keyser’s (1993) LRS account of English denominals. The examples examined by them (Hale & Keyser, 1991, 1993, inter alia) are much like Chinese Type I denominals in that they universally take internal arguments, e.g., *shelve*. More examples are provided in Example (4):

Example (4) Denominals in English: more examples:

(i) John *buttered* the toast.
(ii) John *boxed* the books.
(iii) John *saddled* the horse.
(iv) John *corralled* the sheep.
(v) John *hosted* the program.
(vi) John *bottled* the wine.
(vii) John *watered* the flower.
(viii) John *flooded* the house.

… and many more.

As we can conclude from Example (4) that the productivity of this type of denominals in English is very high.

Next, let us look at Hale and Keyser’s LRS account of the derivation of this type of denominals in English. This is schematically shown in Example (5). Under this analysis, denominals like *shelve* undergo head to head movement (or head incorporation, as cited in Baker, 1988), first from N to P, then from P to V (in the end, the whole complex gets incorporated with \( V^{\text{max}} \)). The internal argument, e.g., *the book*, is based generated in the intermediate [SPEC, VP].

**Deriving Chinese Denominals**

Based on Hale and Keyser’s LRS analysis of English denominals Example (5), the author proposes that Chinese Type I denominals are derived exactly in the same manner as English denominals (as cited in GAO, 1998; Ai, 2001). This is schematized in Example (6).

Example (5) Hale and Keyser’s account in terms of LRSs:
Example (6) The derivation of Chinese Type I denominals: exactly like English denominals:

In Example (6), *ni* also starts from N. It then gets incorporated with P, subsequently with V before the whole complex gets incorporated with $V^{\text{max}}$.

For the peculiar Chinese Type II denominals, the author proposes that they involve a direct N to $V^{\text{max}}$ incorporation Example (7).

Example (7) The derivation of Chinese Type II denominals: Chinese peculiar:

As shown in Example (7), *De-guo* starts from N. To become a denominal, it directly gets incorporated with $V^{\text{max}}$. This one swoop derivation deprives the possibility of having any intermediate [SPEC, VP] positions. Without any intermediate syntactic positions to occupy, internal arguments, which are assumed to be based-generated in the intermediate syntactic position under Hale and Keyser’s LRS, e.g., the intermediate [SPEC, VP], are now out of the question. This explains why Type II denominals in Chinese cannot take any internal arguments.

In a sense, the more productive Type II denominals are doing a very “brutal” derivation in Chinese. They have basically canceled all intermediate steps: P and intermediate V (hence, intermediate [SPEC, VP]), incorporating “violently” and directly into $V^{\text{max}}$. The question is then: Why is it so? The key factor lies in V-PP structure (postposition). Take English for example. It allows for V-PP structure, e.g., “John is walking along the Charles River”. This creates intermediate syntactic means to derive “more complicated” denominals, e.g., denominals with internal arguments. In Hale and Keyser (2002), the internal argument (I-A below) is based generated in the [SPEC, PP]. The role played by this V-PP structure is therefore greatly emphasized Example (8):
Example (8) Hale and Keyser’s Lexical Argument Structure in 2002:

Now consider the case of Chinese. As many linguists have argued, V-PP structure in Modern Mandarin has been greatly reduced, almost to the extent of extinction (as cited in ZHU, 1982/1997; SUN, 1996; SUN & Givon, 1985; Huang, 1984, 1989; inter alia). Due to some not so clear reasons, V-PP has been shifted to PP-V in Modern Mandarin Example (9):

Example (9) The shift from V-PP to PP-V in Modern Mandarin:
(a) ?? Zhangsan zuo zai he-bian.
Zhangsan walk along rive-bank  Compare:
(b) Zhangsan zai he-bian zuo.
Zhangsan along rive-bank walk
“Zhangsan is walking along the river.”

The author deems that it is exactly this greatly reduced use of V-PP structure in Modern Mandarin that has deprived the “rich productivity” of Type I denominals in Chinese, which otherwise would be very productive in Chinese (see Archaic/Classic Chinese below for a comparison). The rich productivity of Type II denominals, on the other hand, is a forced-to-be case. This also explains why there have been always “heated” arguments about their acceptability in Modern Mandarin.

To sum up, we have the following generalization about denominalization Example (10):

Example (10) Denominalization generalization:
A language generates “complex” denominals (e.g., denominals with internal arguments) if and only if that language allows for V-PP syntactic structure, schematically:

V-PP ↔ “Complex” Denominals.

Diachronic Evidence

To support our generalization in Example (10), let us take some diachronic evidence from Chinese. It is well-known that Archaic/Classic Chinese allows for V-PP structure, see Example (11):

Example (11) Archaic/Classic Chinese: V-PP
(a) Chen-mian yu jiu. (Shi Ji (91B.C.))
Indulge at alcohol
“to be indulged in alcohol”
(b) Ri ru yu gu er tian xia ming. (Shi Ji (91B.C.))
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Sun go-into to valley and the-world rest
“The sun goes down and the world rests.”

c) Ri yue guang-hua, hong yu yi ren. (Wen Xin Diao Long (502))
Sun moon spirit expand at one person
“The spirit of the sun and the moon is blessed to (only) one person.”

According to Example (10), Type I denominals should be pervasive in Archaic/Classic Chinese. This is borne out as shown in Example (12):

Example (12) Type I denominals in Archaic/Classic Chinese: very productive, e.g.,

(a) Lao wu lao yi ji ren zhi lao, yiu wu yiu yi ji ren zhi yiu. (Lun Yu (475))
   The elderly my parents so-extend-to others’ parents, the young my children so-extend-to others’ children
   “To respect my parents so as to extend that respect to the parents of others’; to love my children so as to extend that love to the children of others’.”

(b) Ren qi liang duan. (Lao Zi (n.d.))
   Knife/Sword blade its two ends
   “to use knife/sword to cut its two ends.”

(c) You zhe, xia zhi ye. (Meng Zi (n.d.))
   have person box it Part
   “Those who have (it) use box to hold it.”

Conclusions

In this paper, the author has accounted for the derivation of two types of denominals in Chinese: Examples (6) and (7). The productivity puzzle is also accounted for by exploring the productivity of V-PP structure, a syntactic means that the author deems to allow for the derivation of more “complex” denominals, e.g., denominals with internal arguments. Based on this, the author has further generalized the cross-linguistic derivation pattern for denominalization Example (10), which is supported diachronically by Archaic/Classic Chinese. In order to firmly establish the denominalization generalization in Example (10), more synchronic evidence should be explored and the author leaves this to his future research.

References


