

On the formation of adjective-noun combinations in Mandarin Chinese

Abstract

It is well-known that lexical gaps exist in the formation of Adjective (A)-Noun (N) combinations ([A N] hereafter) in Mandarin Chinese (see Zhu 1980, Dai 1992, Duanmu 2000, among others). Examples (1) and (2) are from Zhu (1980) and Dai (1992).

- (1) a. *shen shui* b. *fada guojia* (2) a. # *shen shu* b. # *fada gongye*
 deep water developed country deep book developed industry
 ‘deep water’ ‘developed country’ ‘deep book’ ‘developed industry’

The examples in (1) are acceptable to Mandarin speakers, but the examples in (2) are not, although one group structurally corresponds to the other. (# shows that the combinations in (2) denote odd meanings.) This fact remains a puzzle.

Duanmu (2000) attempts to account for lexical gaps in [A N]. First, he argues that [A N] in Mandarin is a compound, i.e. a word instead of a phrase (see also Dai 1992). Second, he observes that monosyllabic adjectives are productive in forming [A N], but bisyllabic adjectives are not (Mandarin adjectives are basically monosyllabic and bisyllabic). Based on that observation, he proposes *[A N], a constraint which forbids any adjective to combine with a noun in Mandarin, and Foot Shelter, which allows foot internal structure not to be affected by *[A N]. The combination of *[A N] and Foot Shelter predicts that monosyllabic adjective-noun combinations like (1a) are semantically natural while bisyllabic adjective-noun combinations like (2b) are not.

However, there are several problems with Duanmu’s analyses. For example, labelling both *shen shui* ‘deep water’ and *hei ban* ‘blackboard’ as compounds is an oversimplification. The former is semantically compositional in that its whole meaning is composed of the meanings of its parts, i.e. $\text{Val}(x, \textit{shen shui}, \sigma)$ iff $\text{deep}(x) \ \& \ \text{water}(x)$. In contrast, the latter is semantically noncompositional in that its whole meaning is not composed of the meanings of its parts, i.e. $\text{Val}(x, \textit{hei ban}, \sigma)$ iff $\text{blackboard}(x)$.

Additionally, Duanmu’s account is both over-restrictive and under-restrictive: it rules out forms that are fine and allows forms that are unacceptable. *[A N] and Foot Shelter allow examples like (2a). Although (2a) violates *[A N], it is protected by Foot Shelter, for the adjective *shen* ‘deep’ is inside a foot. In addition, examples like (1b) should be unacceptable to Mandarin speakers. (1b) violates *[A N]. Besides, it cannot be protected by Foot Shelter, for the adjective *fada* ‘developed’ is not inside a foot in that the adjective itself forms a foot. However, (2a) and (1b) contradict the prediction made by *[A N] and Foot Shelter, for (2a) is very odd to Mandarin speakers while (1b) is quite natural.

In this paper, I argue that lexical gaps in Mandarin [A N] exist because of restrictions including *[A_(σσ) N], SELECTION RULES, the BLOCKING PRINCIPLE, the PROPER INCLUSION PRINCIPLE, and DISJUNCTIVITY. I focus on words like *shen shui* ‘deep water’ and call them phrasal words. There is not much to say about real compounds like *hei ban* ‘blackboard’, which simply enter the lexicon (see Di Sciullo & Williams 1987).

*[A_(σσ) N] forbids a bisyllabic adjective to form [A N] and thus rules out examples like (2b). The reason why it does not rule out examples like (1b) is that this small number of lawless cases are in the lexicon and there cannot be any negative constraint on the lexicon because the lexicon consists of exceptions (Mark Aronoff p.c. & see also Müller 2002). *[A_(σσ) N] explains why *fuze ren* ‘person who takes responsibility (for something)’

in Mandarin does not denote a property reading ‘person who acts responsibly’, cf. in English, *a responsible person* denotes a natural property reading.

In addition, I argue that Selection Rules (see Aronoff 1976), which require that adjectives attach to certain classes of nouns, play a very important role in ruling out arbitrary A-N combinations in Mandarin, e.g. *hong wenti* ‘red problem’ is bad because *hong* ‘red’ only attaches to concrete nouns in Mandarin.

Moreover, I show that the Blocking Principle (see Aronoff 1976) accounts for cases like # *mei fengjing* ‘beautiful scenery’, while allowing cases like *mei nanzi* ‘handsome man’. This cannot be explained within Duanmu’s metrical phonology framework.

Furthermore, I argue that the Proper Inclusion Principle (for similar versions, see e.g., Kiparsky 1973, Fanselow 1989, Halle & Marantz 1993) explains why cases like *shen shui* ‘deep water’ are good while cases like *shen shu* ‘deep book’ are bad and why *gao ren* can only mean ‘remarkable person’ but not ‘tall person’, although *gao* can mean both ‘remarkable’ and ‘tall’ and *ren* means ‘person’.

Finally, I show that Disjunctivity (see Downing 1977), which requires that an adjective appears in a productive structure iff its corresponding antonym appears in the same structure, explains why monosyllabic adjectives like *nan* ‘difficult’, and *gui* ‘expensive’ are not productive in forming [A N].

When these restrictions interact, I argue that $*[A_{(\sigma\sigma)} N]$, the Blocking Principle, and the Proper Inclusion Principle dominate Selection Rules and Disjunctivity, e.g. *shen* ‘deep’ can select both *shui* ‘water’ and *shu* ‘book’ in Mandarin, but the Proper Inclusion Principle rules out *shen shu* ‘deep book’.

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