

Category Shifts and Word-Formation Redundancy Rules in Chinese

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Abstract

Major patterns of shifts among grammatical categories in Chinese are identified and formulated as word-formation redundancy rules in lexicon. The paucity of denominal verbs is observed and its theoretical implications are discussed. The asymmetry between nominalization and verbalization is treated as one kind of conceptual constraint, reflecting the iconic tendency of Chinese grammar.

0. Introduction.

The lexicon holds a central place in both traditional grammar and

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contemporary syntactic theories. In generative grammar, for example, it is essential to provide lexical items with information about the grammatical category (or categories) to which they belong, in addition to information about subcategorization and thematic relations. The lexicon in generative grammar also contains information on "lexical redundancy", including category shifts and word-formation processes. Thus, a Chinese lexicon, like an English lexicon, must provide information about grammatical categories and category shifts.

The general purpose of this paper is to identify a set of word-formation redundancy rules in the Chinese lexicon. It will focus on the category shifts between nouns and verbs. Thus, verbs that can be derived from nouns, i.e., denominal verbs, and nouns that can be derived from verbs, i.e., deverbal nouns, will be our main concern. The concept of zero derivation will be applied to nominalization and verbalization as well as other types of category shifts in the Chinese lexicon.

A more specific purpose of this paper is to examine the productivity of denominal verbs in Chinese, which has hitherto been largely neglected. Although denominal verbs are abundant in English and many European and non-European languages, they are quite limited in Chinese. It is shown in this paper that denominal verbs are in fact very rare in Chinese; a small group of what seems to be denominal verbs will be shown to have verbal rather than nominal root. Thus, in Chinese, with the exception of *hua*-suffixation, a Europeanized construction analogous to English '-ize', noun verbalization is virtually non-existent, although verb nominalization is productive. Hence, there is an asymmetry in Chinese grammar in that names for concrete objects are rarely used as verbs, whereas the names of activities can often be used as nouns. It will be argued that the asymmetry is another reflection of iconicity of the Chinese language, along-side temporal sequence and other iconic motivations (e.g., Tai 1985, 1993).

In section 1, some theoretical background is provided for the discussion of category shifts. Section 2 presents the major category shift from verbs to nouns, with evidence provided to demonstrate the asymmetry

between nominalization and verbalization in Chinese. Section 3 discusses other minor types of category shifts, including causative verb formation, adverb formation, and *hua*-suffixation as the exceptional case of verbalization. In section 4, the asymmetry between nominalization and verbalization observed in other languages is discussed within the context of universal grammar, where it is argued that the lack of verbalization in Chinese is not due to the paucity of derivational morphology in the Chinese language. The paper concludes with section 5, suggesting that the asymmetry is one kind of conceptual constraint and can be considered as a reflection of the iconic tendency in Chinese grammar.

1. Theoretical Preliminaries.

1.1. Formal Properties of Nouns and Verbs in Chinese.

Despite the paucity of morphology in Chinese, grammatical categories such as nouns and verbs can be defined in terms of their syntactic functions and distribution (cf. Chao 1968; Li and Thompson 1981; Tang 1979, 1989; Tsao 1990; McCawley 1992). Thus, the syntactic and morphological characteristics of nouns in Chinese can be given as in (1) and (2) respectively.

Correspondingly, the syntactic and morphological characteristics of verbs in Chinese can be presented as in (3) and (4).

(1) Syntactic Characteristics of Nouns:

- a. Can be modified by 'number+classifier'
(e.g., *yi-ben shu* 'a book')
- b. Can be modified by subordinative '-de'
(e.g., *ta-de shu* 'his book'; *gui-de shu* 'expensive book',
ta gei wo-de shu 'the book he gave me')
- c. Cannot be modified by negative 'bu'
(e.g., **bu shu* 'not book')
- d. Cannot be the A-component in an A-not-A question
(e.g., **shu-bu-shu* 'book-not-book')

- e. Cannot be modified by 'dou' (e.g., *dou shu 'all book')
- f. Cannot be modified by other VP modifiers (e.g., *hen shu 'very book', *ye shu 'also book', *manman shu 'slowly book')

(2) Morphological Characteristics of Nouns:

- a. Can be prefixed by 'a-' and 'lao-' (e.g., a-yi 'aunt', a-Zhang 'Zhang (surname)'; lao-ban 'boss', lao-Zhang 'old Zhang')
- b. Can be suffixed by '-zi', '-tou', and '-er' (e.g., zhuo-zi 'table', yi-zi 'chair'; shi-tou 'stone', zhen-tou 'pillow'; xiao hair 'small child', huar 'flower')

(3) Syntactic Characteristics of Verbs:

- a. Can be modified by negative 'bu' (e.g., bu lai 'not come')
- b. Can be modified by 'dou' (e.g., dou lai 'all come')
- c. Can be modified by other VP modifiers' (e.g., hen/ye xihuan 'very/also like', manman zou 'slowly walk')
- d. Can be modified by verb measures (e.g., lai yi-ci 'come once', ti yi-jiao 'give a kick')
- e. Can occur as the A-component in an A-not-A question (e.g., lai-bu-lai 'come-not-come')
- f. Cannot be modified by classifiers (e.g., *yi-ge ti 'one kick', *yi-ge da 'one hit')

1. However, the verb *da* cannot be modified by *hen* 'very', which is a degree adverb that typically modifies stative verbs.

(4) Morphological Characteristics of Verbs:

- a. Can be suffixed by the aspect markers '-zhe', '-le', and '-guo' (e.g., chi-zhe 'eating', chi-le 'ate', chi-guo 'have eaten (before)')
- b. Can form a resultative verb compound, and can be infixed by -bu- and -de- (e.g. da-si 'hit-die', da-de-si 'hit-able-die', da-bu-si 'hit-not-die')

It should be noted here that nouns and verbs are not simple, discrete categories; rather, they are cluster concepts like the prototypes of Rosch and her associates (Rosch and Mervis 1975, Rosch 1978). Thus, each of the above sets of characteristics serve as clusters of properties for nouns and verbs in Chinese. Each property is a sufficient condition and not a necessary condition. These sufficient conditions jointly define prototypical nouns and prototypical verbs. Prototypical nouns exhibit all, or most, of the properties listed above in (1) and (2), while prototypical verbs exhibit all, or most, of the properties listed above in (3) and (4). A noun which exhibits all the properties in (1) and (2), for example, is *zhuo-zi* 'table', and a noun which exhibit only the properties in (1) would be *shu* 'book'. A less prototypical noun than 'book' would be *ai* 'love': *ta-de ai* 'his love' is grammatical, *yi-ge ai*, as in *zuo yi-ge ai* 'to make a love (act)' is less grammatical. Moreover, *ai* does not possess all the negative properties listed in (1). In the same vein, a prototypical verb is *da*, 'hit', exhibiting all the properties listed in (3) and (4). Common a-prototypical verbs are *you* 'have, exist', *zai* 'be at', and *shi* 'be'.

From the morphological and syntactic properties listed in (1) through (4) above, one can see that there is a class of words, such as *zhuo-zi* 'table' and *yi-zi* 'chair', which can clearly be identified as nouns. Similarly, there is a class of words, such as *tiao* 'to jump', *jiao* 'to call out', which can clearly be identified as verbs. They can be re-

ferred to respectively as noun class and verb class. Further illustrations are given in (5) and (6) below.

(5) Noun Class:

shu	'book'	pi	'skin'
huar	'flower'	shui	'water'

(6) Verb Class:

da	'to hit'	lai	'to come'
gei	'to give'	mai	'to buy'

The problem arises in the case of words which function both as verbs and as nouns; that is, with respect to the properties given here. This class can be referred to as a 'verb/noun class'. It includes both monosyllabic and disyllabic words as illustrated in (7a) and (7b).²

(7) a. Monosyllabic Verb/Noun Words:

suo	'to lock/lock'	bao	'to wrap/package'
hua	'to paint/painting'	chui	'to hammer/hammer'
bing	'to be sick/sickness'	dian	'to point/point'

b. Disyllabic Verb/Noun Words:

jianyi	'to propose/proposal'	xiwang	'to hope/hope'
baogao	'to report/report'	lingdao	'to lead/leader'
fanyi	'to translate/translation'		
mingling	'to order/order'		

In section 2, I will argue that for the majority of the verb/noun words in this verb/noun class, nominal use is derived from verbal use through nominalization via zero derivation. Only a small minority in this class can

2. It is obvious that there are many more disyllabic verb/noun words than monosyllabic ones. Although the list of monosyllabic verb/noun words in (7a) is not exhaustive, total membership of (7a) is undoubtedly much smaller than that of (7b).

be putatively construed as having the reverse direction of derivation; viz., from nominal use to verbal use. In any case, I propose that each lexical item in the Chinese lexicon will be marked either as a noun or as a verb, and not multiply marked.

1.2. Zero Derivation and the Overt Analogue Criterion.

In English, there are many simple lexical forms which can function as both verbs and nouns. Examples include 'walk', 'talk', 'question', 'answer', 'nail', and 'skin'. In traditional as well generative grammars, linguists have tended to treat one of the functions as more basic than the other, and then using the basic form to derive the other. This kind of morphological process, which uses zero (ϕ) as an identity-element, has been referred to as 'conversion' or 'zero derivation' (cf. Lyons 1977:522ff).

As noted by Sanders (1988:156), "the primary basis for the recognition of zero derivation relations has been the existence of appropriate analogues involving overt morphological marking of the same derivational function". Thus, the verb, 'to answer' in English, is used to derive the noun 'answer'. This derivational process is based on the analogy of deriving nouns from verbs, as in the derivation of the noun 'proposal' from the verb 'to propose', the noun 'creation' from the verb 'to create', etc. This condition for postulating zero derivation on the basis of overt analogues is referred to by Sanders as the 'overt analogue criterion'.³ In English grammar, zero derivation has also been adopted to derive verbs such as 'to water' and 'to skin' from the nouns 'water' and 'skin'.⁴

3. Sanders further argues that zero derivation cannot be justified merely on the basis of the overt analogue criterion. Being based strictly on form, the criterion needs to be supplemented by semantic and pragmatic considerations in determining the postulation of zero derivation and the direction of category shift.

4. Since they are derived from nouns, these verbs are referred to as 'denominal verbs'. While English linguists seem to have a general agreement as to the members of English denominal verbs, Sanders argues that in a number of instances,

It will be argued in section 2 that the overt analogue exists for justifying the use of zero derivation in Chinese, both for deriving nouns from verbs and for deriving verbs from nouns. Zero derivation is further adopted in section 3 for deriving causative verbs and adverbs from adjectives.

1.3. Denominal Verbs.

In English and many other languages including French, German, Spanish, and Indonesian, words naming concrete objects, such as 'nail', 'bottle', 'skin', and 'water', can also be used as verbs. These verbs, 'to nail', 'to bottle', 'to skin', and 'to water', are used to name events associated with the corresponding concrete objects. In the literature on English grammar, these verbs have been referred to as 'denominal verbs' and are derived from the corresponding nouns. This grammatical relation in English has been treated by Jespersen (1942) as a shift in morphological category from noun to verb, and by McCawley (1971) and Green (1974) as derived from a conflation of underlying universal semantic constants, such as 'to cause a nail to hold' and 'to cause something to be in the bottle'.

However, Clark and Clark (1979) have given a different analysis. They argue that denominal verbs should be treated as contextual expressions rather than denotational or indexical expressions. Particularly with respect to innovative denominal verbs, such as 'to porch the newspaper' (meaning 'to put the newspaper on the porch' (as by the newspaper carrier), they propose that such contextual expressions shifted sense and denotation according to different contexts. These are distinguished from de-

the direction of the derivation cannot be determined conclusively. Different scholars have, in fact, made mutually incompatible claims with respect to their derivational analyses. For example, Quirk and Greenbaum (1973) claim that the English noun 'cover' is derived by zero derivation from the verb 'to cover', while Clark and Clark (1979) claim that the same verb is derived by zero derivation from the noun. Similarly, whereas Clark and Clark consider the verb 'to shampoo' to be derived from the noun 'shampoo', Marchand (1969) considers that same noun to be derived from the verb.

notational expressions, such as 'man' and 'bachelor', which have fixed sense and denotation, and from indexical expressions, such as 'he' and 'the bachelor'.

Based on Lewis' (1969) idea of language use as a convention, Clark and Clark propose a denominal verb convention to treat innovative denominal verbs in English. This convention, the Innovative Denominal Verb Convention (IDVC), patterned after Grice's (1975) cooperative principle, is stated as below:

(8) The Innovative Denominal Verb Convention (IDVC)

In using an innovative denominal verb sincerely, the speaker means to denote

- (a) the kind of situation
- (b) that he has good reason to believe
- (c) that on this occasion the listener can readily compute
- (d) uniquely
- (e) on the basis of their mutual knowledge
- (f) in such a way that the parent noun denotes one role in the situation, and the remaining surface arguments of the denominal verb denote other roles in the situation.

The leading idea in Clark and Clark's theory is that, in using an innovative denominal verb, the speaker intends the listener to come to a unique interpretation of what he has said, not only from the meanings of the words alone, but also from the context as well on the basis of what they mutual know. Thus, as contextual expressions, innovative denominal verbs can have, in theory, an indefinitely larger number of senses.⁵

Clark and Clark's theory appears to account for established denominal

5. Aronoff (1980) accepts the fact of contextuality associated with denominal verbs but argues against the necessity of introducing a denominal verb convention and the semantic category 'contextual'. His solution is to generate denominal verbs from their corresponding nouns by a word formation rule and to use what he has referred to as 'sparse semantics' in conjunction with general pragmatic principles to provide a range of interpretations for denominal verbs.

