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The Presentation of a Lexical Entry in a Chinese Dictionary of Co-Occurrence (*CDiCo*)

Cheng Ngai-Lai

INTRODUCTION

This paper presents a new approach to Chinese lexicography based on the writing of a special type of dictionary which we call the Chinese Dictionary of Co-occurrence (*CDiCo*). The *CDiCo* approach is derived from the lexicographic principles stated within the theoretical framework of Meaning-Text Linguistics (Steele 1990; Mel'cuk 1988). A *CDiCo* entry is, from the Meaning-Text's point of view, a draft of the full-fledged dictionary entry. Nevertheless, it contains useful information pertinent to the description of lexical units.

CDiCo MODELLING OF RESTRICTED LEXICAL CO-OCCURRENCE

There are essentially two main types of restricted lexical co-occurrence:

- **Restricted syntactic co-occurrence** of lexemes, often called sub-categorisation;
- **Collocations**, or restricted lexical co-occurrence proper.

RESTRICTED SYNTACTIC CO-OCCURRENCE

Restricted syntactic co-occurrence of lexemes is a well-known phenomenon. It is widely studied, both in lexicography and theoretical linguistics. This concept corresponds to the arbitrary way lexical items realise, at the syntactic level, their semantic actants; for instance,

- (1) a. 我 生气 了。
I angry PARTICLE
"I am angry."
- b. * 他 生气 我。
he angry me

- (2) a. 我 气 了。
I angry PARTICLE
"I am angry."
- b. 我 气 他。
I angry him
"I am angry at him."

There is no way to predict how a given lexeme will realise at the syntactic level, its semantic actants. The two verbs, 生气 "be angry" in (1) and 气 "be angry" in (2), which are synonymous in their meanings, display different syntactic patterns of complementation.

Restricted syntactic co-occurrence of lexemes is encoded in *CDiCo* by means of GOVERNMENT PATTERN. Figure 1 gives the two possible modifications for the government pattern of 气 "be angry":

Modification 1

X = I
1. N

Modification 2

X = I	Y = II
1. N	1. N

Figure 1 Government Pattern of 气 "be angry"

RESTRICTED LEXICAL CO-OCCURRENCE PROPER

While restricted syntactic co-occurrence has long been the focus of many lexicographers, linguists and language teachers, restricted lexical co-occurrence proper, or **collocations**, has become the subject of careful studies only recently, despite the fact that they are crucial elements of lexical behaviour in the language.

By collocation, we mean the irregular or arbitrary way in which a lexeme combines with other(s) to express a given meaning. Contrast the following examples, which feature some of the typical intensifiers for the two synonyms 支持 “to support” and 拥护 “to support” : we say,

- | | | | | | | |
|--------|-------------------------|----|----|-------------------------------|----|----|
| (3) a. | 极力 | 支持 | b. | 尽力 | 支持 | |
| | “to strongly support” | | | “to do one’s best to support” | | |
| | c. | 大力 | 支持 | d. | 鼎力 | 支持 |
| | “to vigorously support” | | | “to try hard to support” | | |

we do not say,

- (4) * 热烈 支持
“to ardently support”

However, we say,

- (5) 热烈 拥护
“to ardently support”

we do not say,

- | | | | | | | |
|--------|-------------------------|------|----|-------------------------------|------|----|
| (6) a. | * 极力 | 拥护 | b. | * 尽力 | 拥护 | |
| | “to strongly support” | | | “to do one’s best to support” | | |
| | c. | * 大力 | 拥护 | d. | * 鼎力 | 拥护 |
| | “to vigorously support” | | | “to try hard to support” | | |

Collocations are described in *CDiCo* by means of **syntagmatic lexical functions**. For instance, we are using the syntagmatic lexical function Magn (from Latin magnus “big”) to encode typical intensifiers:

- (7) **Magn** (支持 “to support”) = 极力 “strongly”
尽力 “to do one’s best”
大力 “vigorously”
鼎力 “to try hard to”

- (8) **Magn** (拥护 “to support”) = 热烈 “ardently”

There is another type of lexical functions, called **paradigmatic lexical functions**. They do not, strictly speaking, account for restricted lexical

co-occurrence, but rather, characterize semantic relations between lexemes which do not occur together in the same sentence. For instance, the lexical functions Syn, Anti and Conv describe the well-known relations of synonymy, antonymy and conversitivity, respectively:

- (9) **Syn** (帮忙 “to help”) = 帮助 “to help”
Anti (大 “big”) = 小 “small”
Conv (给 “to give”) = 拿 “to take”

A total of 62 syntagmatic and paradigmatic lexical functions has been identified in Meaning-Text linguistics (郑雅丽 1996). They correspond to the kind of language universal relationships found among lexical units in all natural languages.

STRUCTURE AND FORMAT OF A CDICO ENTRY

The general structure of a vocable¹ description in the *CDiCo* is constituted by the following:

- part of speech
- identification of lexeme
- lexemic description

PART OF SPEECH

Parts of speech have to be specified as all lexemes of the vocable normally belong to the same word class.

IDENTIFICATION OF LEXEME

All lexemes of the vocable are numbered: major grouping of lexemes are indicated by means of Roman numerals; closely related lexemes are distinguished by means of Arabic numerals; and more closely related lexemes are distinguished by the use of letters in lower case.

LEXEMIC DESCRIPTION

Each lexemic description contains six sub-fields: grammatical characteristics, semantic specification, *nota bene*, government pattern, lexical functions, and illustrative examples.

GRAMMATICAL CHARACTERISTICS

This sub-field contains information on the idiosyncratic behaviour of the lexeme. For instance, the dictionary writer will introduce the following specification in the dictionary entry for the verb 开心 “to make fun of”, to indicate that it does not accept a direction negation — only its complement can be negated. This accounts for the following facts:

(10) * 我 拿他 不 开心
I of him not make-fun-of

(11) 我 没 拿他 开心
I not of him make-fun-of
“It’s not him that I make fun of.”

SEMANTIC LABELLING: ACTANTIAL STRUCTURE

The *CDiCo* does not contain definitions for lexemes. Instead, it gives a (rough) semantic specification of the meaning as well as the actantial structure of the lexeme. For instance, the following formula is proposed for the Chinese lexeme 开心 “be happy”:

(12) 心理状态 “mental state”: X人物 “person” 为 “for” Y事情 “matter”

The meaning of 开心 “be happy” is identified by the label 心理状态 which roughly means “mental state”; its first actant X is labelled as 人物 “person” and its second actant Y as 事情 “matter”.

NOTA BENE

This sub-field is used to store up any informal linguistic information about the lexeme such as, restriction on the type of context in which it can appear, possible connotation, etc.

GOVERNMENT PATTERN

This is a representation of the standard Meaning-Text Model government pattern which is translated into a simplified linear formula in the *CDiCo*. For example, the government patterns of 气 “be angry” given above in Figure 1 would be encoded as follows:

- (13) X = I = N
Y = II = N (optional)

LEXICAL FUNCTIONS

In the *CDiCo*, each lexical function is enclosed in a pair of curly brackets, followed by the values obtained for the given keyword; for instance, the lexeme 开心 “be happy” possesses the following lexical functions sub-field — this is just a partial description:

- (14) {Syn} 高兴 “be happy”, 欢喜 “be happy”
{Anti} 难过 “to feel bad”, 忧愁 “be sad”

EXAMPLES

To help the users of the *CDiCo*, and the lexicographer himself, each entry is ended with a number of examples. The examples should preferably be taken from actual texts or corpora.

A SAMPLE ENTRY

The following is the sample entry 骂 “to scold”:

骂

词类：动词

义项：LI

- 语法特征与用法：

重叠式	不可以
时动态	过，着，了
存在句	不可以
交接句	不可以
- 动元结构：

责备：	X人物~T
-----	-------
- 备注：

在正反问句中，多与能愿动词一起出如：应该不应该~。

在一般主谓句中，常与趋向性动词“起来”连用固定词组，包括：~（大）街，破口大骂；等等。
- 支持模式：

X = I =	名词
Y = II =	名词，动词，从句（随意）

- 词汇函数：

{Syn}	责骂，斥骂，叱骂，叫骂，忿詈
{Anti}	夸奖，夸赞，赞许，赞美
{Sing}	一顿，一场，一番，次
{Able1}	生气
{Magn}	臭，大，（恶狠狠）
{Ver}	得到（很）凶
{S1Sympt}	拍桌子，瞪眼，指着脸
{S2Sympt}	抬不起头来
{SymptResult}	哑子嗓子

- 例子：

那个人不知为什么，突然~起来了。

女孩子~出来的话也那么难听。

他生气的时候，老是把下属~得抬不起头来。

他没教养，动不动口里就~人。

孩子全给他~跑了。

他把太太~哭了。

他常我~做人糊涂。

他老~我做事情笨手笨脚。

CONCLUSION

In this paper, I have presented a new approach to the writing of the *CDiCo* based on the Meaning-Text lexicographic principles. In a pilot study, 50 lexical entries have been written. The linguistic properties of both syntactic and lexical co-occurrence of the lexemes are specified in the *CDiCo*. Meanwhile, a computer-aided instruction system, called The Chinese Lexical Instruction System (CLIS), that taps on the *CDiCo*'s rich description of the lexical entries is being developed (Cheng & Gan 1996). CLIS runs on Chinese Windows95 with Delphi 2.0. The *CDiCo* together with the CLIS will provide an integrated environment to enhance language learning in a multimedia environment.

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ENDNOTE

¹ A vocable may consist of more than one lexeme. Each lexeme has its own meaning.

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