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A Corpus-Based Investigation of Manner/State Complement Constructions in Mandarin Chinese

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Abstract This study is an investigation of the complement constructions of manner and state (CM/S, e.g. 他的字写得好 *tā de zì xiě de hǎo* 'he writes characters well') based on a corpus of written Chinese. We find that CM/S have preferred forms and functions. Formally speaking, a monosyllabic verb, preferably 变 *biàn* 'change, become', basic action verbs, or psychological state verbs tend to co-occur with complements of adjectival, clausal, or idiomatic expressions. CM/S are argued to be an assessment device indexing speaker evaluative stances. The loaded affective meanings, we contend, account for the larger and more complex forms than their standard assessment counterparts. The implications of these findings on Chinese syntactic research and on L2 learning are explored.

Keywords Chinese Complement Construction. Complement of Manner. Complement of State. Assessment. Evaluative Stance. Construction Grammar. Iconicity.

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1 Introduction

Mandarin Chinese is known to have a variety of complement constructions (CC) that are highly productive, constituting some of the most unique features of its syntactic system (Shen 2003). These complement constructions exhibit a diverse range of syntactic, semantic, and pragmatic functions, indicating, e.g. result, degree, manner, possibility, direction, among others, and have been the subject of intense research from diverse linguistic theoretical persuasions (Chao 1968; Lü 1979; Li, Thompson 1981; Chu 1983; Cheung et al. 1994; Shen 2003, *inter alia*).

The current study restricts itself to just one type of CC, which we call complements of manner or state (CM/S, 情态 *qíngtài*/状态 *zhuàngtài*/方式 *fāngshì*). CM/S constructions typically consist of three components: the verb predicate (VP), the complementiser *de* (得), and complements of different syntactic structures. CM/S indicate either the manner in which the action named by the verbal predicate is executed or evaluated or a state toward which the action is carried out. Two quick examples illustrating these patterns can be found in (1) and (2).[1]

1. 父亲的围棋下得很好。(G48)
   fùqīn *de* *wéiqí* *xià* *de* *hěn* *hǎo*
   father ATT go play DE very well
   'Father plays *go* very well'.

2. 让摇滚乐变得更主流。(A33)
   ràng *yáogǔnyuè* *biàn* *de* *gèng* *zhǔliú*
   make rock.roll.music become DE even.more mainstream
   'Make Rock N Roll music even more mainstream'.

In (1) the complement 很好 *hěn hǎo* 'very well' can be seen as an evaluation ('how well') of the verbal predicate 下 *xià* 'play'. In (2), on the other hand, the complement 更主流 *gèng zhǔliú* 'even more mainstream' can be understood to be the state toward which the action of 变 *biàn* 'change, become' is to be carried out.[2]

A review of the literature shows that structural approaches to CM/S, and CC in general, which are dominant, have tended to focus on a few areas. First, syntactic configurations, especially the struc-

1 The glosses follow the general guidelines of the Leipzig Glossing Rules. Additional glosses include: ATT = 'attributive'; BA = 'disposal marker *bǎ*'; BEI = 'passive marker *bèi*'; BI = 'comparative marker *bǐ*'; DE = 'complementizer *de*'; JIANG = 'disposal marker *jiāng*'; MOD = 'modifier'; NONG = 'delexical verb *nòng*'; PRT = 'utterance final particle'.

2 More discussion on the identification of CC subtypes can be found in § 2.

ture of the complement, have been described as ranging from simple adjectival phrases (e.g. 快 *kuài* 'fast'; 非常好 *fēicháng hǎo* 'very good'; 十分客气 *shífēn kèqì* 'quite courteous'), to larger phrasal (and often idiomatic) units, such as 哭得像个泪人 *kū de xiàng gè lèi rén* 'cry with tears welled up', and all the way to complex clausal units, e.g. 弄得人人皆以绅士为流氓 *nòng de rénrén jiē yǐ shēnshì wéi liúmáng* 'make everyone treat gentlemen as hooligans' (Li 1963; Nie 1992, *inter alia*).

A great deal of work has concentrated on the second area: semantic features. Here, three types of meaning-related issues have been explored: the verb predicate, the complement, and the semantic focus of the structure. Verb predicates that are commonly brought into discussion include single or disyllabic action verbs indicating completed or ongoing actions. Complement types are reportedly to vary, and sometimes the same surface structure is shown to indicate different meanings (e.g. state *vs* result with the same adjective). Complements are also said to exhibit two types of semantic focus (Lü 1979; Lu 1993; Fan 1992; Wu 2002; Jiang 2005). The first type is said to be focusing on the action itself, where the complement describes and evaluates how the action itself is carried out, as illustrated in extract (1). In this regard, most researchers agree that action-focused CM/S are the most prototypical type with a high frequency of usage (Fan 1992; Zhang 2002; Wu 2002). The second type of semantic focus is said to be on the non-action elements of the construction: either the agent, the patient, the overall causality expressed in a CM/S, or some combinations thereof. Causality is also said to be achieved in conjunction with a disposal 把 *bǎ* construction, a 被 *bèi* passive construction, or a causative 让 *ràng*, 使 *shǐ*, or 将 *jiāng* construction. Thus, in extract (2) discussed earlier, a 让 *ràng* 'cause/causal' construction is observed and the focus can be said to be on the argument 'Rock N Roll music', which exhibits features of a pivotal entity – being both the causee of the causative verb 让 *ràng* and the agent of the following predicate of change of state ('becoming more mainstream'). The frequency of this type is believed to be lower than the action-focused type (Fan 1992; Zhang 2002; Wu 2002).

Finally, with regard to the pragmatics of CC, it has been claimed that CC are fundamentally a topic-comment structure (Chao 1968; Lu 1992; Liu 2005; Lu, Ying, Zhang 2015). Under this view, the subject and predicate of CC together function as the topic, signalling the old or known information, while the complement represents the comment, carrying the new or primary information. Because of its pragmatic nature, Li (1963, 1980) and researchers following him (e.g. Lu, Ying, Zhang 2015) claim that the complement of CC, at least with some of them, is the natural focus and the most salient part of the construction. Recent studies, however, have disputed this claim with a host of syntactic diagnostics, and a wide variety of proposals have been made (see Shen 2003 for a comprehensive review). Our data will

show that while this is an interesting angle from which to approach CC, there are actually more critical issues to be explored, which have received scant attention thus far.

In short, existing studies have approached CC from multiple structural perspectives, highlighting the fact that this is an important and unique feature of the syntax of Chinese. However, a number of shortcomings can be identified for most structural studies. First, most of these studies are based on intuition, as exemplified by the data samples used in the analysis, which are for the most part constructed sentences; and if actual usage samples are used, they typically involve a small quantity from individual collections. To be sure, there have been several corpus-based studies of CC in recent years; however, these studies tend to use either mixed genres (Li 1994; Wang 2011; Ma, Chen 2014) or single genres such as fiction (Wang 2001; Chen 2013) or school texts (Wu 2018), limiting to various degrees the validity of such studies. Second, most studies deal with resultative (动结式 *dòng jié shì*) and motion (动趋式 *dòng qū shì*) complements, as they are believed to be the most prolific types of all CC. While this may be a reasonable choice, we would like to show that other CC types may have their own characteristics and communicative utility and are thus equally worthy of our attention. Finally, most studies have tended to focus on individual components or isolated classes of elements (e.g. verbs, adjectives etc.) in the CC, and not from the perspective of meaning-form pairing (Fillmore, Kay, O'Connor 1988; Goldberg 1995, 2003) or co-occurrence/contingency patterns (Gries, Ellis 2015). One consequence of such an approach is that while it may enable us to see some of the admissible elements in a CC when individual features are focused, we know surprisingly little about the functional motivations of these constructions as opposed to others and how specific components/forms and meanings pair up and why.

In this study, we intend to address the shortcomings of the existing studies by using a modest sized corpus, the million-word UCLA Corpus of Written Chinese (more on this in § 2) and analyse CM/S constructions exhaustively. We also intend to pursue CM/S from the perspective of usage-based linguistics, paying particular attention to (type/token) frequency information (Bybee, Thompson 2000) and the notions of construction grammar (CxG; Fillmore, Kay, O'Connor 1988; Goldberg 1995, 2003). According to CxG, syntactic structures can be viewed as constructed on specific building blocks that are unique in their own ways, resulting in specific form-meaning mappings and conventionalised configurations whose meanings may not be readily deducted from the meanings of individual components. These pairings can be regarded as entrenched language knowledge for production and comprehension. Thus, in the case of CC, and CM/S in particular, we would expect that different types of CC or CM/S attract different types of component elements, resulting in different syntac-

tic configurations and unique meanings and functions. We will also attempt to apply functional linguistic principles such as the iconicity principle (Haiman 1983) and the prototypicality principle (Rosch 1973; Rosch, Mervis 1975; Hopper, Thompson 1984) to account for patterns revealed from corpora. These patterns, we hope, will not only deepen our knowledge about CC and CM/S, but also raise questions about a number of important theoretical issues, including L1 and L2 knowledge and how best to approach Chinese syntax in general.

In what follows, we will first describe the corpus and key concepts used for this study. We will then report the corpus-based findings before discussing the results from the point of view of usage-based functional linguistics and CxG. In the conclusion section, some generalisations about methodology and implications for other fields, such as L1 and L2 studies, will be provided.

2 Data and Methodology

2.1 The Corpus

The UCLA Corpus of Written Chinese (Tao, Xiao 2007-20) used for this study is designed as a Chinese counterpart for the FLOB and Frown corpora of British and American English for contrastive research, as well as an update of the Lancaster Corpus of Modern Chinese (LCMC; McEnery, Xiao 2004). The samples in the corpus are all collected from written modern Chinese available from the internet, during the periods of 2000-05 and 2005-12, with fifteen genres such as news, fiction, academic prose, and essays.[3] The data were word-segmented and tagged for parts-of-speech (POS) information by the software program ICTALCS (Zhang et al. 2002; Xiao, Rayson, McEnery 2009, 3-4), which uses algorithms based on statistical models. There are over one million tokens and near 60,000 types in the corpus.

3 Text genres and file numbers from the UCLA Corpus are indicated at the end of each extract (e.g. A05 for genre A, file no. 05). The 15 genres in the corpus are labelled as follows. A: Press reportage; B: Press editorials; C: Press reviews; D: Religion; E: Skills, trades and hobbies; F: Popular lore; G: Essays and biographies; H: Misc. (reports and official documents); J: Academic prose; K: General fiction; L: Mystery and detective stories; M: Science fiction; N: Adventure stories; P: Romantic fiction; R: Humor.

2.2 Inclusion of CM/S

While CM/S structures discussed here indicate manners or states,[4] as a whole they can appear as either the main clause (as in (1) and (2)) or part of a larger structure. For example, in (3), a CM/S is part of a copula 是 *shì* clause, specifically, being at the end of an equative structure and embedded in a 把 *bǎ* construction.

3. 交流感情, 起码的要求是把字写得规范、整洁、清楚 […](F32)
jiāoliú gǎnqíng qǐmǎ de yāoqiú shì bǎ
exchange affection minimal ATT requirement COP BA
zì xiě de guīfàn zhěngjié qīngchu
character write DE standard neat legible
'To communicate your affection effectively, one needs minimally to write standard scripts, and write neatly and legibly […]'

In the next example, the CM/S is part of a relative clause modifying the head noun 现在 *xiànzài* 'nowadays':

4. 对食物的成分已了解得较为透彻的现在 […] (J98)
duì shíwù de chéngfèn yǐ liǎojiě
about food ATT composition already understand
de jiàowéi tòuchè de xiànzài
DE relatively thorough REL nowadays
'In this day and age when we know a great deal about the ingredients of food […]'

In this study, both independent and embedded CM/S structures are included.

2.3 Corpus Approaches

In corpus linguistics, a broad distinction is made between a corpus-based and corpus-driven approach. In general, corpus-based research relies on established linguistic forms and theory to conduct investigations, while a corpus-driven approach relies more on corpus data itself in delineating features and the scope of a linguistic investigation (Biber 2009). Thus in our case, while we employ constructs such as CC and CM/S as they have been subject to intense previous research, making this project more of a corpus-based type, the spe-

4 As is well known, complement types may not always be clear-cut and borderline cases do exist. The selection of the tokens in this paper represents the best judgement of the three authors. We thank an anonymous reviewer for emphasising this point.

cific types of constructs – including their components and subcategories – will emerge mainly from the corpus itself. In this sense our study uses mixed methods of corpus-based and corpus-driven.

Looking at the key components in the CM/S structure, we will start our investigation with the following: 1) verb classes in the main predicate (here, instead of looking at individual verbs alone, we will examine classes of verbs and their frequency distribution in the corpus); 2) complement types (although complement types have been subject to intense study in the literature, in this study we will rely on frequency information of the corpus data to define the types of complements to focus on); 3) co-occurrence patterns of the verb classes and complement types. Once verb classes and complements types are identified, we will look into their correlation, via Correspondence Analysis (Glynn 2014) and other methods, as a window into the overall constructions they form and special meanings they may convey.

2.4 Macro and Micro Analyses

Finally, we will combine the macro level analysis with case studies, especially the high frequency items and the constructions that they help form. Case studies will be provided in § 5 after report of general corpus findings and discussions in §§ 3 and 4 respectively.

3 Corpus Findings

Our corpus investigation produced the following results, which will be reported in terms of verb classes, complement types, and co-occurrence patterns.

3.1 Verb Classes

In the UCLA Corpus, 769 tokens and 251 types of verb predicates in CM/S structures are found. Among them, 173 types (665 tokens) are monosyllabic, while 78 types (104 tokens) are disyllabic, showing a preference for monosyllabic verbs. The top 31 types, appearing at least five times and being all monosyllabic, are listed below (more items can be found in the Appendix B).

Table 1 Frequency of occurrences of top predicate verbs in the corpus

Ranking	Freq	Token	Ranking	Freq	Token	Ranking	Freq	Token
1	132	变	11	11	哭	21	6	卖
2	23	弄	12	11	活	22	6	急
3	22	过	13	10	做	23	6	放
4	20	笑	14	10	听	24	6	玩
5	18	说	15	9	忙	25	6	睡
6	17	吓	16	9	长	26	6	聊
7	16	写	17	8	穿	27	5	想
8	16	打	18	8	跑	28	5	搞
9	15	吃	19	7	看	29	5	来
10	14	走	20	6	冻	30	5	羞
						31	5	羞

This list of top verbs shows some interesting tendencies.

First, 变 ***biàn*** 'change, become'[5] stands out as the most frequent token, with an overwhelmingly high frequency of 132, accounting for 17% of all CM/S tokens found in the data.

Second, some of the top verbs are of the empty/**delexical** type. These verbs include 弄 *nòng*, 打 *dǎ*, 做 *zuò*, 搞 *gǎo*, 干 *gàn*, 进行 *jìnxíng*, and 办 *bàn*, akin to the English delexical verbs such as *do*, *make*, *take*, *get* etc. (Sinclair 1990, 147).[6]

Third, another group of verbs can also be identified as lexically less concrete, i.e. **general**, yet their referential meaning is somewhere between delexical verbs and common action verbs (to be described below). Examples of this kind include 过 *guò* 'live', 活 *huó* 'live', 放 *fàng* 'arrange', 玩 *wán* 'play', and 想 *xiǎng* 'think, desire'.

The next prominent group of verbs depicts various everyday **basic actions** (看 *kàn* 'look'; 卖 *mài* 'sell'; 睡 *shuì* 'sleep'), sometimes with opposite meanings: 笑 *xiào* 'laugh' / 哭 *kū* 'cry', 说 *shuō* 'speak'| 讲 *jiǎng* 'talk' | 聊 *liáo* 'chat'; 听 *tīng* 'listen', 写 *xiě* 'write', 走 *zǒu* 'walk' / 跑 *pǎo* 'run' / 来 *lái* 'come', 吃 *chī* 'eat', 穿 *chuān* 'wear'.

Finally, the last group consists of verbs that can be either transitive or intransitive, with some of them indicating a **psychological** state as the result of some impactful actions. Top examples in this category include 吓 *xià* 'scare/frightened', 急 *jí* 'anxious', 羞 *xiū* 'shy'.[7]

By applying the classification of high frequency verbs in this way, and having **others** as a separate category for all those that do not belong to any of the above semantic categories, we found the distribution of verb types and tokens in the corpus as follows.

5 Biber et al. call verbs such as *change, become* etc. "occurrence verbs" (1999, 364).

6 Of course *do* in English is also a widely used auxiliary verb.

7 We note that these verbs can be used with complement of degree. However, for this study, all degree complements are excluded.

Table 2 Frequency of occurrences of predicate verb types in the CM/S

Verb Types and Sample Tokens	Type	Token	%
A. * 变 *biàn* 'change, become'	1	132	17
B. * Delexical verbs: 弄 *nòng* 'do'; 打 *dǎ* 'hit'; 做 *zuò* 'make'; 搞 *gǎo* 'do'; 干 *gàn* 'do'; 进行 *jìnxíng* 'engage'; 办 *bàn* 'process'	8	65	8
C. General: 过 *guò* 'pass'; 活 *huó* 'live'; 放 *fàng* 'arrange'; 玩 *wán* 'play'; 想 *xiǎng* 'plan'	36	111	14
D. Basic actions: 睡 *shuì* 'sleep'; 写 *xiě* 'write'; 吃 *chī* 'eat'; 哭 *kū* 'cry'; 笑 *xiào* 'laugh'; 洗 *xǐ* 'wash'; 看 *kàn* 'look'; 卖 *mài* 'sell'	81	254	33
E. Psychological states: 急 *jí* 'be anxious/worried'; 爱 *ài* 'love'; 疼 *téng* 'ache'; 病 *bìng* 'sick'; 累 *lèi* 'be tired'; 羞 *xiū* 'be shamed'; 感动 *gǎndòng* 'be moved'	35	89	12
F. Others: 升 *shēng* 'lift'; 围 *wéi* 'surround'; 定 *dìng* 'determine'; 掩饰 *yǎnshì* 'cover up'; 提 *tí* 'lift'; 销售 *xiāoshòu* 'sell'; 折磨 *zhémó* 'torment'	90	118	15
Total	**251**	**769**	**100**

*Exhaustive listing.

A frequency-based ranking list is given in (5):

5. Basic action > *Biàn* > Others > General > Psychological > Delexical

Overall the tendency seems to be from concrete everyday actions to more abstract (including mental) activities.

3.2 Complement Types

For complements, four general patterns emerge from the data. They are: 1) adjectival units of various kind. For example, a simple adjective such as 好 *hǎo* 'well' in 自己过得好 *zìjǐ guò de hǎo* '(doing) well', or an adjective with a modifier, as 这么漂亮 *zhème piàoliang* 'so pretty' in 谁让你长得这么漂亮 *shéi ràng nǐ zhǎng de zhème piàoliang* 'it doesn't help that you look so pretty'; 2) clausal units, where a complement contains a verbal predicate with or without a subject, e.g.:

6. 高烧未退，烧得她昏迷不醒。(G41)
gāoshāo wèi tuì shāo de tā hūnmí bù xǐng
high.fever NEG recede heat DE 3SG in.coma NEG wake
'High fever persists, keeping her in a state of deep coma'.

7. 我听得入了神。(P32)
   wǒ *tīng* *de* *rùleshén*
   1SG listen DE captivated
   'I was captivated by listening to it'.

In (6) there is a subject and a verb predicate in the complement, whereas in (7) the subject in the complement is implicit as it shares with the subject of the main clause 我 *wǒ* 'I'.

3) Formulaic expressions. By this we mean expressions that have paired, parallel, or contrastive elements, which are often similar in form, to highlight some quality in the expressed meanings. Typical examples may include the following.

8. 不管我把母亲写得多形象多生动多具体 […] (K36)
   bùguǎn *wǒ* *bǎ* *mǔqīn* *xiě* *de* *duō* *xíngxiàng*
   regardless 1SG BA mother depict DE how life-like
   duō *shēngdòng* *duō* *jùtǐ*
   how vivid how detailed
   'No matter how life-like, vivid, and detailed I depict mother […]'

9. 杀得越来越起劲。(L06)
   shā *de* *yuèláiyuè* *qǐjìn*
   kill DE more.more strong
   'Kill with increasing intensity'.

10. 吃得香美而不奢靡。(F34)
    chī *de* *xiāngměi* *ér* *bù* *shēmí*
    eat DE splendidly but NEG extravagant
    'Eat splendidly yet not extravagantly'.

In (8) three adjectives with modifiers are placed in tandem. In (9) the formula 越来越 *yuèláiyuè* is used; and finally, in (10) a positive adjective (with two coordinated morphemes) is used in contrast with a negative one, constituting a contrastive structure. Although these instances may be seen as subcategories of adjectival expressions, their special structural formations make them stand out as a unique feature to make a case for a separate category.

Finally, 4) idiomatic expressions. Typically in the form of 成语 *chéngyǔ* 'fixed (four-character) expressions', a large number of idioms appears as the main component of the complement. Some, as 前仰后翻 *qiányǎng-hòufān* 'rolling back and forth' in (11), can be seen as more fixed, while others, e.g. 稀稀拉拉 *xīxi-lālā* 'scattered around' in (12), may not be as fixed.

11. 直把我们笑得前仰后翻的。 (N37)
zhí *bǎ* *wǒmen* *xiào* *de* *qiányǎng-hòufān* *de*
finally BA 1PL laugh DE rolling.back.forth PRT
'Made us laugh so hard, almost rolling back and forth'.

12. 能坐下上百人的会议室里听众坐得稀稀拉拉。 (A42)
néng *zuòxià* *shàngbǎi* *rén* *de*
capable.of sit hundread.plus person REL
huìyìshì-lǐ *tīngzhòng* *zuò* *de* *xīxi-lālā*
meeting.room-in audience sit DE scattered
'In a room capable of seating over a hundred people, only a few people scattered around'.

The distribution of the four complement types can be found in table 3.

Table 3 Distribution of CM/S complements in the corpus

Complement Type	N	%
Adjectival	397	51.6
Clausal	157	20.4
Idiomatic	150	19.5
Formulaic	65	8.5
Total	**769**	**100**

Notable results from the data include the following. First, at just over 50%, adjectival expressions are the dominant single category for the complements. This gives a more accurate picture of the makeup of complements, as most earlier studies simply rely on intuition and estimate that adjectives are the majority, at least for some of the complements (e.g. resultatives, Shen 2003, 21).

Second, CM/S with an idiomatic expression are as frequent as clausal units. Idiomatic expressions, especially those of the four-character type, typically indicate a strong affective stance on the part of the speaker/writer. This, along with the proliferation of adjectival expressions in general, suggests that CM/S constructions are affect-laden and highly subjective (more discussion on this in § 4).

Third, while formulaic expressions may not be as fixed as the idiomatic expressions, they are also a notable type, and their function is very close to the idiomatic ones, with the only difference perhaps lying in the degree of fixedness: looser in formulaic expressions and more conventionalised in the idiomatic ones. If we combine these two together, however, this would be a very notable phenomenon to be accounted for. Again we will divulge this more in § 4.

3.3 Verbal Predicate and Complement Co-Occurrence Patterns

Having culled data about the two key individual components, let us now examine how verb predicates and complements co-occur with each other. Our goal for this exercise is to find out the attested preferred configurations that these key components may form. Table 4 provides an overview of the data in this respect.

Table 4 Co-occurrence patterns of verbal predicates and complements in CM/S constructions[8]

X^2=113.46, df=15, p < .0001

VType/Comp	Adjectival	Clausal	Formulaic	Idiomatic	Total
A. *Biàn*	73	13	16	30	132
B. Delexical	27	17	5	16	65
C. General	77	8	9	17	111
D. Action	146	34	23	51	254
E. Psych	25	49	3	12	89
F. Other	49	36	9	24	118
Total	**397**	**157**	**65**	**150**	**769**

There are a number of ways to look at the data. We can examine the percentages of complements across verbal categories, and the result is shown in both table 5 and figure 1.

Table 5 Complements across verbal types in percentages

	Biàn		Delexical		General		Action		Psych		Other	
	N	**%**	**N**	**&**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Adjectival	73	55.3	27	41.5	77	69.4	146	57.5	25	28.1	49	41.5
Clausal	13	9.8	17	26.2	8	7.2	34	13.4	49	55.1	36	30.5
Formulaic	16	12.1	5	7.7	9	8.1	23	9.1	3	3.4	9	7.6
Idiomatic	30	22.7	16	24.6	17	15.3	51	20.1	12	13.5	24	20.3
Total	**132**	**100**	**65**	**58.6**	**111**	**100**	**254**	**100**	**89**	**100**	**118**	**100**

A number of properties can be noted here. First, while adjectival complements can co-occur with most of the verbal categories (see also 3.2), psychological state verbs correlate most often with clausal complements. Some examples of the latter can be found in (13) and (14).

8 Specific configuration patterns can be found in Appendix C.

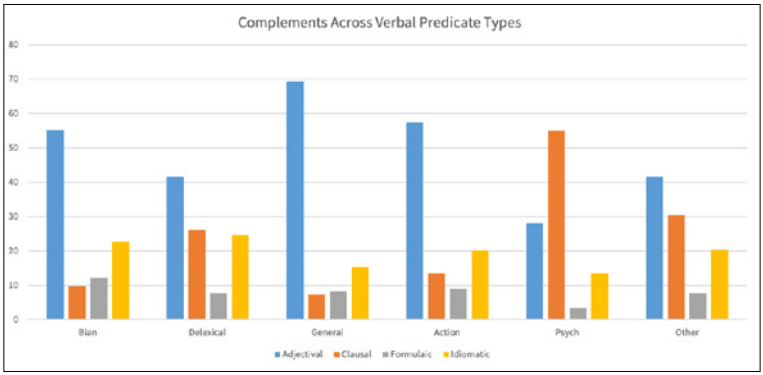

Figure 1 Complements across verbal types in percentages

13. 吓得倒抽一口冷气 […] (L31)
xià *de* *dàochōu* *yī* *kǒu* *lěngqì*
frightened DE inhale one mouth cold.air
'So frightened that they inhaled a mouthful of cold air […]'

14. 急得我天天上物价局打听去 […] (R15)
jí *de* *wǒ* *tiāntiān* *shàng* *wùjiàjú*
worried DE 1SG everyday go.to price.bureau
dǎtīng *qù*
inquire go
'I was so worried that I went to the consumer price bureau everyday to find out more information […]'

Second, although adjectival complements are generally common, they are even more dominant in three types of verbal predicates: 变 *biàn* (55.3%), general verbs (69.4%), and basic action verbs (57.5%), and this is especially the case of general verb constructions, where they make up the largest proportion.

A Correspondence Analysis,[9] which transforms the two dimensions from numerical information into a spatial display (Glynn 2014, Zhang 2017), shows similar patterns. Specifically, on the left sphere of the biplot graph, adjectival complements cluster with general verbs, basic action verbs, and 变 *biàn*, while clausal complements and psychological state verbs cluster on the extreme right.

9 Correspondence Analysis was performed through XLSTAT (Addinsoft 2020), a statistical and data analysis add-in for Excel.

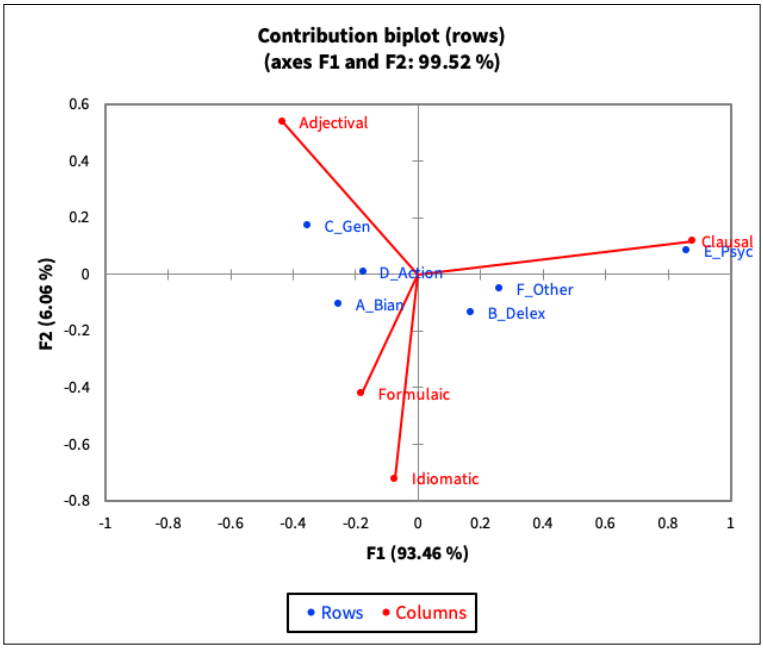

Figure 2 Correspondence analysis of the contingency data

Finally, we can also examine specific configuration patterns, making use of the ranked list of the observed combinations based on the frequency of the subtypes of each of the two major component categories. The result is shown in table 6.

Table 6 Construction patterns based on subtypes of the verbal predicates and the complements in CM/S constructions

	V	Comp	N	%
1	B. Action	Adjectival	146	19
2	General	Adjectival	77	10
3	*Biàn*	Adjectival	73	9.5
4	B. Action	Idiomatic	51	6.6
5	Psych	Clausal	49	6.4
6	Other	Adjectival	49	6.4
7	Other	Clausal	36	4.7
8	B. Action	Clausal	34	4.4
9	*Biàn*	Idiomatic	30	3.9
10	Delexical	Adjectival	27	3.5

11	Psych	Adjectival	25	3.3
12	Other	Idiomatic	24	3.1
13	B. Action	Formulaic	23	3
14	Delexical	Clausal	17	2.2
15	General	Idiomatic	17	2.2
16	*Biàn*	Formulaic	16	2.1
17	Delexical	Idiomatic	16	2.1
18	*Biàn*	Clausal	13	1.7
19	Psych	Idiomatic	12	1.6
20	General	Formulaic	9	1.2
21	Other	Formulaic	9	1.2
22	General	Clausal	8	1
23	Delexical	Formulaic	5	0.7
24	Psych	Formulaic	3	0.4
	Total		**769**	**100**

Not surprisingly, among the top six (all with a percentage of ≥ 6) syntactic configurations, the combinations of basic action verbs and an adjectival complement are dominant: two with action verb categories and four involving adjectival complements. The exceptional cases include one of the distinct patterns we have previously discussed: the mutual attraction of psychological state verbs and clausal complements, plus the other type of verbs with adjectival complements.

4 Summary and Discussion

4.1 Major Patterns

So far, our data extrapolation has yielded several notable patterns, which come from verbal predicates, complements, and their co-occurrences.

In terms of verbal predicates, 1) monosyllabic verbs dominate; 2) 变 *biàn* 'change, become' is the single most frequent verb among all verb tokens; and 3) overall verb frequency has the following hierarchical relations: Basic action > *Biàn* > Others > General > Psychological > Delexical, seemingly reflecting a larger hierarchy of concrete everyday actions over mental and abstract activities. These patterns, as will be elaborated in the next section, help us understand some of the important constructional features associated with these CM/S.

In terms of complements, the frequency hierarchy is: Adjectival > Clausal > Idiomatic > Formulaic.

Finally, in terms of verb predicate and complement co-occurrences, there are three notable patterns: 1) the top configurations are [Basic Action + Adjectival] > [General Verb + Adjectival] > [*Biàn* + Ad-

jectival] > [Basic Action + Idiomatic] > [Psychological State Verbs + Clausal / Other + Adjectival]; 2) psychological state verbs and clausal complements are mutually attractive. Finally, 3) verbal predicates with 变 *biàn* are robust in three of the four complement types (formulaic, idiomatic, and adjectival), except for clausal.

4.2 Some Generalisations

Given all these patterns, what underlying principles might there be that hold them all together? We would like to think of these underlying principles as construction functions. In this respect, the following generalisations may be proposed.

a. CM/S may be formed with any combinations of verb predicates and complements, yet they exhibit preferred syntactic structures, which involve a monosyllabic verb, as typified by 变 *biàn* 'change, become', or others denoting basic actions or psychological states, plus a complement of the adjectival, clausal, or idiomatic types.
b. CM/S constructions are an assessment device indexing speaker evaluative stances.
c. CM/S differ from other assessment devices with additional features, including assessing the process of the state of affairs and with strong affective qualities. These additional features result in, iconically, longer and more complex constructions than many simple assessment forms.

We now explicate these generalisations in turn.

4.2.1 Formal Preferences

Most syntactic studies have assumed that CM/S may be formed by any combination of verb predicates and complements, a claim that our data can be said to support if one just looks at the admissible items found in the corpus, which are highly varied. Others have speculated about frequency differences between action-focused and non-action focused CC, as we have seen in the Introduction section earlier. Yet our corpus results point to notable preferred syntactic structures – and new angles – for contemplation, involving some combinations of the key elements: a monosyllabic verb, preferably 变 *biàn* 'change, become', basic action verbs, or psychological state verbs, while the complement tends to be an adjectival, idiomatic, or clausal expression. These combinations can be schematised in figure 3.

{	*Biàn* 'change, become'		Adjectival complement
	Basic action verb	+	Idiomatic complement
	Psychological verb		Clausal complement
			}

Figure 3 Preferred syntactic constructions in CM/S

Although the schematisation allows the free combination of any of the items on the left and right columns, we reiterate a couple of strong tendencies: 1) 变 *biàn* 'change, become', by virtue of its sheer token frequency, should be recognised as a prototypical CM/S construction by itself; 2) there is a divide between action verbs and psychological state verbs: while the former can be combined with many complement types, the latter strongly attracts clausal complements.

4.2.2 CM/S as an Assessment Device

As stated earlier, CM/S constructions as a whole can be taken to be an assessment device through which speakers index their evaluative stance. In a natural conversation-based study, Thompson and Tao (2010) find that although adjectives in Mandarin Chinese can function either attributively (as a modifier) or predicatively (as a predicate), 80% of the adjectives in their conversational data are found to be of the predicative type, a result similar to what have been reported for both English (Thompson 1988; Englebretson 1997) and Japanese (Ono, Thompson 2009). In explaining this discourse preference, Thompson and Tao assert that predicate adjectives in conversation are deployed by speakers to "assess the world around them, and that assessments, including reactive tokens, are a primary way for people to negotiate stance, alignment, and perspective" (2010, 22). The fact that adjectives are pervasively used in the complements suggests that they are a primary device to reflect the speaker's subjectivity and in negotiating identity through assessing activities (Du Bois 2007; Englebretson 2007).

4.2.3 CM/S Differ from Other Assessment Devices and Iconicity

As one of the basic human conversational activities, assessment has been shown to be accomplished through a variety of syntactic configurations (Pomerantz 1984; Goodwin, Goodwin 1987, 1992; Thompson, Fox, Couper-Kuhlen 2015). It is widely believed that the most basic form of assessment involves "an assessable item + a copula + an assessment term", as illustrated by the English utterance 'It was so good' (Goodwin, Goodwin 1987). In Chinese, research has also shown that assessments can be done in a variety of ways, including structures similar to

the English copula construction (Fang 2018). Given this, how can CM/S be seen as different from basic assessment forms and what more can such a longer and more complicated form accomplish in language use?

We believe that CM/S have more expansive uses over other assessment devices due to their built-in features, which can be explained with the functional principle of iconicity as proposed in Haiman (1983). To be specific, we contend that CM/S differ from basic assessment forms in the following ways.

First, CM/S not only provide a simple assessment, they also assess the process of the state of affairs. This is best represented in 变 *biàn*-centred CM/S (e.g. (15)) but also in many other CM/S constructions. For example,

15. (政策)使巴以和平前景变得更加黯淡。 (A05)
(*zhèngcè*) *shǐ* *Bā* *Yǐ* *hépíng* *qiánjǐng*
(policy) cause Palestine Israel peace outlook
biàn *de* *gèngjiā* *àndàn*
become DE even.more bleak
'Implementation of such policies made the Palestine and Israel peace outlook even more glum'.

16. 小女孩托着下巴, 听得入了迷。(M21)
xiǎo *nǚhái* *tuō-zhe* *xiàbā* *tīng* *de* *rùlemí*
little girl hold-DUR chin listen DE mesmerise
'The little girl holds her chin, mesmerised by listening to it'.

17. 成绩不但没受影响, 而且比以前学得还好, 学得还主动。(C19)
chéngjī *bùdàn* *méi* *shòu* *yǐngxiǎng* *érqiě* *bǐ*
grade not.only NEG receive impact but BI
yǐqián *xué* *de* *hái* *hǎo* *xué* *de*
past study DE even better study DE
hái *zhǔdòng*
even.more motivate
'The grade is not only not negatively impacted, it's getting even better, and (the student) has even stronger learning motivations'.

In (15), the verb 变 *biàn* 'change, become' indicates that the glum outlook is the state that has been reached after the implementation of certain policy, which by definition involves a process. In (16), the verb 听 *tīng* 'listen', which implies a process, together with other elements in the utterance, such as 托着下巴 *tuōzhe xiàbā* 'holds (her) chin', which indicate a duration, reinforce the notion of a process. In (17), the notion of process is expressed with the comparative structure 比以前 *bǐ yǐqián* 'compared to before'.

Second, CM/S convey strong affective qualities. Although we cannot say categorically that simple assessment statements such as cop-

ular structures always carry a weak force, CM/S accomplish strong assessment power through a variety of linguistic features, such as idioms and multiple items of various formation in formulaic structures. The pervasive use of idioms and to some extent of formulaic structures, both of which cluster on the biplot graph in figure 2, are particularly noteworthy. Many discourse linguists have shown that idioms, broadly defined, serve evaluative functions in narratives and other discourse contexts (McCarthy 1998). As such, idioms are also said to carry high emotional or affective loads, such that in conversational discourse it is claimed that "a high degree of intimacy and in-group membership is projected by such idiomatic usage" (O'Keeffe, McCarthy, Carter 2007, 91). Our data corroborate these claims. Thus in the following set of expressions involving the delexical verb 弄 *nòng* 'do, get, make' (Tao, Hu 2019), different forms can be argued to display varying degrees of affective load: (18), which has no complements, is for information seeking and can be said to carry the least amount of affective load; (19), by contrast, has a simple (negative) complement, 不清 *bù qīng* 'NEG figure-out', which carries a slightly higher affective load than (18); and finally, (20) has a pair of idioms with strong judgmental and emotional slants, carrying arguably the highest degree of negative affective load, as it expresses the author's strong dislike of the protagonist Mo Huairen, a negative character portrayed in the story.

18. 你说他弄凉粉儿, 他弄两瓶酱油? (R15) (No complement)
nǐ *shuō* *tā* *nòng* *liángfěnr* *tā* *nòng* *liǎng*
2SG say 3SG get jelly 3SG get two
píng *jiàngyóu*
bottle soy.sauce
'Did you say that he got some jelly, and he got two bottles of soy sauce?'

19. 也弄不清它背后到底在搞些什么。 (D26) (Simple complement)
yě *nòng* *bù* *qīng* *tā* *bèihòu* *dàodǐ*
anyway figure.out NEG clear 3SG behind after.all
zài *gǎo* *xiē* *shénme*
PROG do some what
'Can't figure out exactly what is going on behind all this'.

20. (莫怀仁对歌), 又被刘三姐等弄得丑态百出, 大败而归。
(F16) (Double idiom-formed CM/S)
(*Mò Huáirén* *duì* *gē*) *yòu* *bèi* *Liúsānjiě* *děng*
Mo Huairen compete song again bei Liusanjie others
nòng *de* *chǒutài-bǎichū* *dàbài-érguī*
make DE display.all.ugliness end.in.total.defeat
'In a singing competition, Mo Huairen was once again defeated badly by Liusanjie and her friends and withdraw in total disgrace'.

Given the complexity of the meanings of CM/S, it is not surprising to see that CM/S structures are in general larger and more complex – being extensible as they often are to multiple clausal units in the complements – than the standard assessment forms such as copula constructions or simple statements such as 我喜欢 *wǒ xǐhuān* 'I like (it)' (Fang 2018). Here we find Haiman's (1983) iconicity principle highly relevant in explaining the differences. According to this functional principle, longer and more complicated forms tend to correspond to higher degrees of conceptual complication, such as longer processes, and more intense social meanings. In this case, the iconicity principle seems able to explain well both the *process* connotation and the more *loaded affective meanings* encoded in CM/S constructions that we have tried to elucidate, and these key ingredients may not necessarily be found in simple, standard assessment forms.

5 Cases Studies

Having provided an overall account of the major tendencies of CM/S constructions, we now turn to a few selected patterns and examine them in some more detail.

5.1 *Biàn* 'Change, Become'

The distribution of 变 *biàn* across complement types is given in table 7.

Table 7 *Biàn* and its complement types in the corpus

Adjectival	Clausal	Formulaic	Idiomatic	Total
73	13	1316	30	132

As shown above, 变 *biàn* has two prototypical use patterns: adjectival and idiomatic complements. In the case of adjectival complements, many constructions indicate a state that has been reached (perfective), as in (21), or one that starts to change (inchoative), as in (22).

21. 就要注册结婚了,远却变得陌生了。(G34)
jiùyào zhùcè jiéhūn le Yuǎn què biàn de
nearly register marry PRT Yuan however become DE
mòshēng le
strange PRT
'While they are about to register and get married, Yuan somehow becomes detached'.

22. 上升到政治高度, 马上就变得严肃起来。 (B04)
shàngshēng dào zhèngzhì gāodù mǎshàng jiù
elevate reach politics elevation soon then
biàn de yánsù qǐlái
become DE serious upward
'As soon as one politicises it, (things) suddenly become serious'.

Since idioms have been argued to play a special role in language, carrying particularly high emotional or affective loads as well as serving to index the evaluative stance of the speaker/writer, we now examine some specific instances of '变 *biàn* + idiom' combinations to demonstrate this property.

Many of the '变 *biàn* + idiom' combinations are used for the speaker/writer to depict an object or event in the outside world through an affective, hence subjective, lens. For example, in (23) the reporter uses a highly metaphorical idiom, 扑朔迷离 *pūshuò-mílí* (lit. 'hard to tell who is who between a jumping bunny couple'), to characterise the uncertainties surrounding a major political event.

23. 备受拖累, 两会行情的预期也由此变得扑朔迷离。 (A27)
bèi shòu tuōlèi liǎng-huì hángqíng de
severely get drag.down two-assembly prospect ATT
yùqí yě yóucǐ biàn de pūshuò-mílí
forecast also thus become DE bunny.couple.jumping
'This dragged down everything, making the prediction of the outcome of the two congressional sessions anyone's guess'.

Such a characterisation dramatises the political environment of the reported event and makes the report more emotional in comparison with a case like (15) that we saw earlier, repeated below. (15), as can be recalled, comes from another political event report; however, in this case, a relatively plain adjective form 黯淡 *àndàn* 'dark, glum' is used. In comparison with (23), considerably less emotional quality is expressed here, although the expression can still be argued to be metaphorical (using a dark colour describing a political prospect).

15. (政策)使巴以和平前景变得更加黯淡 。 (A05)
(*zhèngcè*) *shǐ Bā Yǐ hépíng qiánjǐng*
(policy) cause Palestine Israel peace outlook
biàn de gèngjiā àndàn
become DE even.more bleak
'Implementation of such policies made the Palestine and Israel peace outlook even more glum'.

Another comparison that we can make is to contrast the different types of idiom used to describe similar discourse objects. In (24) and

(25), for example, a common discourse entity, women, can be seen to be involved. In (24), soccer cheer-leader squads, typically consisting of young females, are associated with the sport event being described in the complement with the idiom 活色生香 *huósè-shēngxiāng* (lit. 'raising colours and spreading fragrance'). This metaphor, aided with the choice of 宝贝 *bǎobèi* 'babes' for the cheerleaders, of colour and scent applied to the female sex has a strong sexual connotation and indexes the way the writer projects their stance toward the role of the female cheerleader squads in the reported event (World Cup).

16. 有了足球宝贝, 世界杯变得更加活色生香。 (B29)
yǒu *le* *zúqiú* *bǎobèi* *Shìjiè* *Bēi* *biàn* *de*
have PFV soccer babe World Cup become DE
gèngjiā *huósè-shēngxiāng*
even.more raise.color.spread.fragrance
'With the soccer babes' presence, the World Cup becomes even more glitzy and attractive'.

By contrast, in (25), the author chooses to describe, with the idiomatic expression 风和日丽 *fēnghé-rìlì* (lit. 'calm wind and bright sunshine'), the environment (i.e. weather) where the female character is embedded. Here the overall imagery depicted is no less pleasant and uplifting than that of (24), yet it is free of any conceivable sexual biases.

17. (云)又突然全散了s天气又变得风和日丽, 织女也回到了家中 […] (F16)
(*yún*) *yòu* *túrán* *quán* *sàn* *le* *tiānqì*
(cloud) again suddenly totally dissipate PRT weather
yòu *biàn* *de* *fēnghé-rìlì* *Zhīnǚ*
again become DE caml.wind.pretty.sunshine Zhīnǚ
yě *huí* *dào* *le* *jiā-zhōng*
also return reach PVF home-in
'Once again all of a sudden the cloud dissipates completely. The weather then becomes sunny and bright with calming wind. Goddess Zhinü returns home as well […]'

These examples demonstrate clearly that choice of idiomatic complements over others is very much determined by the degree to which the speaker/writer projects their affective stance, and the different types of idioms chosen index divergent biases from which a stance is projected.

5.2 Delexical Verbs

Turning now to delexical verbs, the frequency distribution information for all eight of the identified verbs can be found in table 8.

Table 8 Delexical verbs and their complement types in the corpus

	Adjectival	Clausal	Formulaic	Idiomatic	Total
弄	3	10	2	8	23
打	8	4	2	2	16
做	9	0	0	1	10
搞	0	2	0	3	5
进行	4	0	0	0	4
办	0	0	1	2	3
干	2	1	0	0	3
作	1	0	0	0	1
Total	**27**	**17**	**5**	**16**	**65**

The most frequent token in this group is obviously 弄 *nòng* 'do, get, make', a prototypical delexical verb in Chinese (Tao, Hu 2019). Earlier through extracts (18)-(20), we have contrasted three utterances involving 弄 *nòng*, showing that with or without a complement and with different types of complement, the affective load can vary, again with idiomatic complements carrying the strongest load.

5.3 Psychological State Verb + Clausal Complement

Finally, let's take a look at some of the examples of verbs of psychological states and clausal complement constructions. The top five such tokens are given in table 9.

Table 9 Psychological state verbs and their complement types in the corpus

	Adjectival	Clausal	Formulaic	Idiomatic	Total
吓	3	13	0	1	17
忙	2	4	0	3	9
冻	1	1	0	4	6
急	1	5	0	0	6
羞	1	4	0	0	5

The most representative one is 吓 *xià* 'scare, frightened'. The patterns with 吓 *xià* constructions are of two types: in the first, the main agent and the agent of the complement clause are identical, as shown in (26) and (27).

18. 那么近, 那么近。菁晓已吓得说不出话来。(L12)

nàme	*jìn*	*nàme*	*jìn*	*Jīngxiǎo*	*yǐ*	*xià*
that	close	that	close	Jingxiao	already	frightened

de *shuō* *bu* *chū* *huà* *lái*
DE speak NEG out word come
'It's so so close. Jingxiao is already too frightened to say anything'.

19. 一下便飞到了半空中。我吓得赶紧闭上了眼睛。 (L31)
yīxià *biàn* *fēi-dào* *le* *bànkōng-zhōng* *wǒ* *xià*
shortly already fly-reach PFV midair-in 1SG frighten
de *gǎnjǐn* *bì-shàng* *le* *yǎnjīng*
DE hurry close-up PFV eye
'It reached midair in no time. I was so frightened that I hurriedly closed my eyes'.

The second pattern involves an external agent causes a psychological state change of the subject in the complement clause. Thus in (28)-(30), the external forces of some naked person, the damaged poles and trees, and a sudden kiss cause 我 *wǒ* 'I', bike riders and passers-by, and Jianwen, respectively, to perform actions described in the complement clause in a panic manner.

20. 一位男人光着身体正站在我身旁买面包，吓得我差点把两瓶果酱打翻在地。(N08)
yī *wèi* *nánrén* *guāng-zhe* *shēntǐ* *zhèng* *zhàn* *zài*
one CLF man naked-DUR body PROG stand by
wǒ *shēn* *páng* *mǎi* *miànbāo* *xià* *de* *wǒ*
1SG body next buy bread scare DE 1SG
chàdiǎn *bǎ* *liǎng* *píng* *guǒjiàng* *dǎfān* *zài* *dì*
nearly BA two jar jam throw.out to ground
'A naked man stood next to me checking out some bread, and this frightened me so much that I almost threw two jars of jam to the ground'.

21. 当场将电线杆和行道树砸断，吓得骑车者、过路人惊慌奔逃 […] (A16)
dāngchǎng *jiāng* *diànxiàngān* *he* *xíngdàoshù* *zá*
on.spot JIANG utility.pole and street.tree crash
duàn *xià* *de* *qíchēzhě* *guòlùrén* *jīnghuāng* *bēntáo*
down frighten DE bike.rider passer.by panic run.away
'It crashed a utility pole and a street tree on the spot, scaring away bike riders and passers-by […]'

22. 这突如其来的一吻，吓得健文一跳。(K40)
zhè *tūrúqílái* *de* *yī* *wěn* *xià* *de* *Jiànwén*
this unexpected ATT one kiss startle DE Jianwen
yī *tiào*
one jump
'The unexpected kiss startled Jianwen so much that he almost jumped'.

Given that these constructions tend to focus on a traumatising psychological effect and its ensuing consequences, a clausal complement serves the need nicely in being deployed to express the consequence component.

6 Conclusions

This study finds that CM/S constructions in a written Chinese corpus have preferred forms and functions. Formally speaking, a monosyllabic verb, preferably 变 *biàn* 'change, become', basic action verbs, or psychological state verbs tend to co-occur with complements of adjectival, clausal, or idiomatic expressions. CM/S are argued to be an assessment device indexing speaker evaluative and affective stances. The loaded affective meanings, we contend, account for the larger and more complex forms than their standard assessment counterparts.

We believe that these findings have important implications for a number of theoretical concerns. First, a corpus-based and corpus-driven mixed approach proves to be fruitful for investigating Chinese syntactic constructions. For example, while we began our study on the assumption of standard grammatical studies on CM/S forms, we let the corpus data drive us to the conclusion that key components (e.g. 变 *biàn* alone as a verbal predicate category or idiomatic expression as a complement category) and co-occurrence patterns (e.g. the mutual attraction of psychological state verbs and clausal complements) as stand-out attested categories must be recognised.

Second, with a usage-based approach and the view of construction grammar, investigation of syntactic structures can lead to new directions. While standard approaches to CC in Chinese have focused on issues such as semantic focus and what is called pragmatic meanings in topic-comment structure and information status, such views turn out to be rather limiting since constructional form-meaning pairing has shown that 1) different key components may display different tendencies in their co-occurrence with other constituents, and that 2) constructional meanings may differ from that of individual components (e.g. assessments of states and processes and affective loading may not be deducted from the complement or verbal predicate alone). In this regard, we believe that traditional concerns such as admissible elements and different kinds of focus in Chinse CC (action-centred *vs* other-than-action-centred) may be inadequate and need to be supplemented with the usage-based approach advocated here, which emphasises constructional meanings and functions of CM/S as an assessment device for affective stance marking, which in return explains their more complex forms and structural preferences.

Finally, given our own interest in comparing L1 and L2 language knowledge and acquisition processes, we believe that a realistic un-

derstanding of how CC, and CM/S in particular, work in the first language population provides a solid foundation as baseline data from which to evaluate L2 learning patterns and pedagogical practices: for example, how to prioritise teaching foci to reflect L1 constructional frequency information, including contingency information; how to focus the pedagogy on affective stance marking, and how to explain L2 developmental stages with CC and CM/S. We intend to explore those issues in a separate study (Jin, Zhang, Tao forthcoming).

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Appendix A: Verb Frequency Ranking List

Rank	V	Freq	Rank	V	Freq	Rank	V	Freq
1	变	132	42	唱	3	83	闷	2
2	弄	23	43	学	3	84	闹	2
3	过	22	44	干	3	85	飞	2
4	笑	20	45	惹	3	86	骂	2
5	说	18	46	改	3	87	骗	2
6	吓	17	47	离	3	88	下	1
7	写	16	48	累	3	89	传	1
8	打	16	49	跳	3	90	作	1
9	吃	15	50	争	2	91	刨	1
10	走	14	51	切	2	92	到	1
11	哭	11	52	升	2	93	刻	1
12	活	11	53	吹	2	94	剪	1
13	做	10	54	害	2	95	去	1
14	听	10	55	恨	2	96	吵	1
15	忙	9	56	找	2	97	呛	1
16	长	9	57	拍	2	98	喜	1
17	穿	8	58	挤	2	99	嚼	1
18	跑	8	59	握	2	100	围	1
19	看	7	60	搅	2	101	坠	1
20	冻	6	61	摔	2	102	堵	1
21	卖	6	62	撞	2	103	定	1
22	急	6	63	晒	2	104	当	1
23	放	6	64	杀	2	105	待	1
24	玩	6	65	泡	2	106	念	1
25	睡	6	66	洗	2	107	懂	1
26	聊	6	67	淋	2	108	扔	1
27	想	5	68	烤	2	109	托	1
28	搞	5	69	熬	2	110	扣	1
29	来	5	70	生	2	111	扩	1
30	羞	5	71	画	2	112	抓	1
31	讲	5	72	留	2	113	抢	1
32	坐	4	73	站	2	114	抱	1
33	开	4	74	考	2	115	拂	1
34	爱	4	75	肿	2	116	拉	1
35	谈	4	76	脱	2	117	拌	1
36	输	4	77	荡	2	118	拖	1
37	伤	3	78	记	2	119	招	1
38	刺	3	79	踢	2	120	挂	1
39	办	3	80	转	2	121	挖	1
40	压	3	81	逗	2	122	捆	1
41	叫	3	82	逼	2	123	捣	1

Rank	V	Freq
124	推	1
125	揉	1
126	提	1
127	摆	1
128	撇	1
129	撑	1
130	撕	1
131	撩	1
132	教	1
133	晃	1
134	栽	1
135	沾	1
136	涂	1
137	涨	1
138	混	1
139	滑	1
140	满	1
141	炒	1
142	炸	1
143	烧	1
144	烫	1
145	照	1
146	煮	1
147	理	1
148	用	1
149	疼	1
150	病	1
151	盯	1
152	砍	1
153	破	1
154	碎	1
155	等	1
156	给	1
157	耍	1
158	落	2
159	藏	1
160	蜇	1
161	补	1
162	读	1
163	败	1
164	起	1
165	蹲	1
166	躲	1
167	载	1
168	连	1
169	醉	1
170	铺	1
171	错	1
172	靠	1
173	驳	1
174	发展	4
175	感动	4
176	表现	4
177	进行	4
178	保持	3
179	折磨	3
180	控制	3
181	体现	2
182	兴奋	2
183	刻画	2
184	发挥	2
185	服侍	2
186	消失	2
187	考虑	2
188	装扮	2
189	了解	1
190	亲近	1
191	休息	1
192	出台	1
193	出落	1
194	剪裁	1
195	压抑	1
196	压迫	1
197	厌恶	1
198	厮杀	1
199	变性	1
200	叙说	1
201	吸引	1
202	回答	1
203	复习	1
204	完成	1
205	崇拜	1
206	工作	1
207	延续	1
208	建设	1
209	心疼	1
210	怀旧	1
211	愉快	1
212	感激	1
213	打扫	1
214	把握	1
215	挤压	1
216	掌握	1
217	掩映	1
218	掩饰	1
219	搅和	1
220	撩拨	1
221	收拾	1
222	暴露	1
223	树立	1
224	模拟	1
225	流行	1
226	消耗	1
227	消费	1
228	清洗	1
229	溶解	1
230	演奏	1
231	演绎	1
232	激励	1
233	照顾	1
234	生产	1
235	生活	1
236	知道	1
237	磨砺	1
238	纯洁	1
239	结合	1
240	编写	1
241	老练	1
242	衬托	1
243	装点	1
244	装饰	1
245	解释	1
246	认识	1
247	辉映	1
248	过渡	1
249	运用	1
250	销售	1
251	难过	1

Appendix B: V+Comp Distribution Patterns

V/C	Adjectival	Clausal	Formulaic	Idiomatic	Total
A	73	13	16	30	132
变	73	13	16	30	132
B	27	17	5	16	65
弄	3	10	2	8	23
打	8	4	2	2	16
做	9			1	10
搞		2		3	5
进行	4				4
办			1	2	3
干	2	1			3
作	1				1
C	77	8	9	17	111
过	17	3	1	1	22
活	5	1	1	4	11
长	7	1		1	9
放	6				6
玩	2		2	2	6
想	4		1		5
开	4				4
表现	2		1	1	4
输	2			2	4
学	3				3
控制	1		2		3
改		2		1	3
离	3				3
服侍				2	2
生	1		1		2
考虑	2				2
记	2				2
骗	1			1	2
了解	1				1
休息	1				1
到	1				1
完成	1				1
工作	1				1
当	1				1
懂	1				1
招		1			1
照顾	1				1
生产	1				1
生活	1				1

用	1				1
知道	1				1
结合				1	1
给	1				1
认识	1				1
运用				1	1
靠	1				1
D	146	34	23	51	254
笑	7	8	1	4	20
说	14	1		3	18
写	8		2	6	16
吃	10		2	3	15
走	10		4		14
哭	6	2		3	11
听	5	2		3	10
穿	5	1	1	1	8
跑	3	1		4	8
看	1	3		3	7
卖	4	1	1		6
睡	5	1			6
聊	5		1		6
来	4	1			5
讲	3		1	1	5
坐	3			1	4
谈	3			1	4
叫	1	1		1	3
唱	1		2		3
跳	1	1		1	3
争				2	2
切	1		1		2
吹		1		1	2
找	2				2
拍	2				2
挤				2	2
摔	1	1			2
晒	2				2
杀			1	1	2
洗	1			1	2
烤	2				2
熬	2				2
画	2				2
留	2				2
站	2				2
考	2				2

脱		2			2
装扮	1		1		2
踢	1		1		2
飞	2				2
骂		2			2
刨	1				1
剪	1				1
去	1				1
吵	1				1
嚼		1			1
回答		1			1
复习	1				1
抓		1			1
抱	1				1
拉			1		1
拖	1				1
挂	1				1
挖				1	1
捣	1				1
推	1				1
揉				1	1
摆				1	1
撕	1				1
收拾				1	1
教	1				1
暴露			1		1
栽	1				1
涂	1				1
消费			1		1
清洗			1		1
演奏	1				1
烧		1			1
烫	1				1
煮		1			1
盯	1				1
砍	1				1
编写				1	1
解释				1	1
读	1				1
起	1				1
蹲	1				1
躲	1				1
醉				1	1
铺				1	1

驳				1	1
E	25	49	3	12	89
吓	3	13		1	17
忙	2	4		3	9
冻	1	1		4	6
急	1	5			6
羞	1	4			5
感动		2		2	4
爱	2	1	1		4
伤	3				3
压		3			3
累	1	2			3
兴奋		2			2
恨		1		1	2
肿	2				2
闷	2				2
亲近			1		1
压抑	1				1
压迫			1		1
厌恶		1			1
喜		1			1
崇拜		1			1
心疼	1				1
怀旧		1			1
愉快		1			1
感激		1			1
涨	1				1
满		1			1
激励		1			1
疼	1				1
病	1				1
破		1			1
纯洁		1			1
老练	1				1
败				1	1
错	1				1
难过		1			1
F	49	36	9	24	118
发展	3	1			4
保持	3				3
刺		3			3
惹		3			3
折磨		2		1	3
体现	1			1	2

刻画				2	2
升	1		1		2
发挥	1			1	2
害		2			2
握	2				2
搅		2			2
撞		2			2
泡		1	1		2
消失	1			1	2
淋		2			2
荡		1	1		2
落				2	2
转	2				2
逗		2			2
逼		2			2
闹	1	1			2
下	1				1
传	1				1
出台	1				1
出落			1		1
刻				1	1
剪裁	1				1
厮杀				1	1
变性	1				1
叙说	1				1
吸引		1			1
呛		1			1
围	1				1
坠	1				1
堵				1	1
定	1				1
延续	1				1
建设	1				1
待		1			1
念		1			1
打扫				1	1
扔		1			1
托			1		1
扣			1		1
扩	1				1
把握	1				1
抢				1	1
拂			1		1
拌			1		1

挤压	1				1
捆		1			1
掌握	1				1
掩映	1				1
掩饰	1				1
提	1				1
搅和				1	1
撇				1	1
撑		1			1
撩	1				1
撩拨	1				1
晃		1			1
树立		1			1
模拟				1	1
沾		1			1
流行		1			1
消耗	1				1
混	1				1
溶解			1		1
滑	1				1
演绎				1	1
炒				1	1
炸	1				1
照				1	1
理				1	1
碎				1	1
磨砺	1				1
等				1	1
耍	1				1
藏	1				1
蜇				1	1
补	1				1
衬托				1	1
装点	1				1
装饰	1				1
载	1				1
辉映		1			1
过渡	1				1
连	1				1
销售	1				1
Total	397	157	65	150	769

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