

The Typology of Labile Verbs and Chinese

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Labile verbs can be used transitively and intransitively without any overt marking. They are widely seen in Chinese. The lexical semantics of Chinese labile verbs is consistent with the typology of labile verbs. Specifically, change of state is the prototypical meaning of labile verbs, while the contingency between labile verbs and their transitive/intransitive use is sensitive to the likelihood of spontaneous occurrence of the event. This finding can be explained by features of the conceptualization of change-of-state events: they allow two competing strategies of profiling in human construal. Moreover, as an isolating language in which causative/anticausative is not marked, Chinese exhibits an overwhelmingly large group of labile verbs in comparison with other languages.

1. Introduction and disputed terminology

Lv (1987) identified a famous phenomenon whereby Chinese verbs (including verb compounds) can alternate between transitive and intransitive use, and allow object deletion. He employed a pair of antonyms, 打胜 *da-sheng* ‘play-win’ and 打败 *da-bai* ‘play-defeat’, as follows:

- (1) a. 中国 队 打 胜 了 韩国 队。
Zhongguo dui da-sheng-le Hanguo dui.
China team play-win-LE South Korea team
‘The Chinese team won over the South Korean team.’ (The Chinese team won.)
- b. 中国 队 打 胜 了。
Zhongguo dui da-sheng-le.
China team play-win-LE
‘The Chinese team won.’
- (2) a. 中国 队 打 败 了 韩国 队。
Zhongguo dui da- bai- le Hanguo dui.
China team play-defeat-LE South Korea team
‘The Chinese team defeated the South Korean team.’ (The Chinese team won.)
- b. 中国 队 打 败 了。
Zhongguo dui da- bai- le.
China team play-defeat-LE

‘The Chinese team lost.’

(Lv, 1987)

Example (1) shows that 打胜 *da-sheng* ‘play-win’ allows object deletion, and example (2) that object deletion is prohibited by 打败 *da-bai* ‘play-defeat’. In the same article, Lv also gave the name 第二格局 ‘syntactic pattern 2’ to the phenomenon of verbs like 打败 *da-bai* ‘play-defeat’ being able to alternate between transitive and intransitive use, to contrast with 第一格局 ‘syntactic pattern 1’, as shown in example (1). Syntactic pattern 2 is illustrated in example (3), below.

- (3) a. 中国队打败了韩国队。
 Zhongguo dui da - bai - le Hanguo dui.
 China team play-defeat-LE South Korea team
 ‘The Chinese team defeated the South Korean team.’ (The Chinese team won.)
- b. 韩国队打败了。
 Hanguo dui da- bai- le.
 South Korea team play-defeat-LE
 ‘The South Korean team lost.’

Therefore, some Chinese verbals (including verbs and verb compounds) including 打败 *da-bai* ‘play-defeat’ only permit transitivity alternation; and some other verbals such as 打胜 *da-sheng* ‘play-win’ only allow object deletion.

A large body of literature has been devoted to discussion of the above phenomenon of transitivity alternation. Accordingly, a considerable number of terms have been adopted to designate relevant words and phenomena, including ‘ergative’ (e.g., Cikoski, 1978; Shen & Sybesma, 2012; Song, 2009; Wu, 2009; Zeng, 2009; L. Zhang, 2009), ‘unaccusative’ (e.g., C.-T. Huang, 1989; Y.-H. Li, 1990; Lv, 1987; Xu, 1999, 2001; S. Yang, 1999; N. Yu, 1995), ‘anticausative’ (e.g., Haspelmath, 1987; Levin, 1993; Nedjalkov & Sil’nickij; 1969/1973; Schafer, 2009) and ‘labile’ (e.g., Dixon, 1994, p. 6; Gianollo, 2014; Haspelmath, 1987, 1993; Heidinger, 2014; Kulikov, 2003; Letuchiy, 2009, 2015; Mcmillon, 2006; Nichols, 1984, p. 195). Among these terms, this paper will use ‘labile’ because unlike other notions that are originally derived from case markers, the word ‘labile’ itself only focuses on the alterable use of verbs, thus more intuitive for the discussion in this paper.

2. The typology of labile verbs

Discussion of lability cannot proceed entirely independently of the notion of the anticausative, insofar as the former is frequently taken as a subtype of non-directed inchoative/causative verb alternation systems (cf. Haspelmath, 1987, 1993; Nedjalkov & Sil’nickij, 1969/1973), in parallel with causative alternation and anticausative alternation. In causative alternation, the inchoative verb is basic, and the causative verb is derived by

marking; whereas in anticausative alternation, the causative verb is basic and the inchoative verb is derived by marking. In non-directed alternations, neither the inchoative nor the causative verb is derived from the other. Labile alternation is just one of three specific types of non-directed alternation, and is characterized by the same verb being used both in the inchoative and in the causative sense. The other two types of non-directed alternations are equipollent alternations, in which both verbs are derived from the same stem by means of different marking, and suppletive alternations, in which different verb roots are used. Some examples are shown in Table 1, below.

Table 1.

Formal types of inchoative/causative verb pairs (Haspelmath, 1993)

Subtype	Language Verb Stem	Transitive (Causative)	Intransitive (Anticausative)
Causative	French <i>fonder</i> ‘melt’	<i>faire fondre</i>	<i>fondre</i>
Anticausative	Hindi-Urdu <i>naa</i> ‘open’	<i>khol-naa</i>	<i>khul-naa</i>
Equipollent	Japanese <i>atum</i> ‘gather’	<i>atum-eru</i>	<i>atum-aru</i>
Suppletive	Russian <i>goret’/zhech’</i> ‘burn’	<i>zhech’</i>	<i>goret’</i>
Labile	Modern Greek <i>svíno</i> ‘go out/extinguish’	<i>svíno</i> ‘extinguish’	<i>svíno</i> ‘go out’

Prior scholars have noted that the selection of alternation types is sensitive to verbal semantics and varies across languages. Nedjalkov & Sil’nickij (1969/1973) investigated 60 languages’ realizations of four alternations – ‘laugh/make laugh’, ‘boil (intr.)/(tr.)’, ‘burn (intr.)/(tr.)’, and ‘break (intr.)/(tr.)’ – i.e., 240 verb pairs; counted the number of languages using a given alternation type for each verb pair; and calculated the ratios of the numbers of anticausative pairs to causative pairs, with the results presented below in Table 2.

Table 2.

Expression types by verb pairs (Nedjalkov & Sil’nickij, 1969/1973)

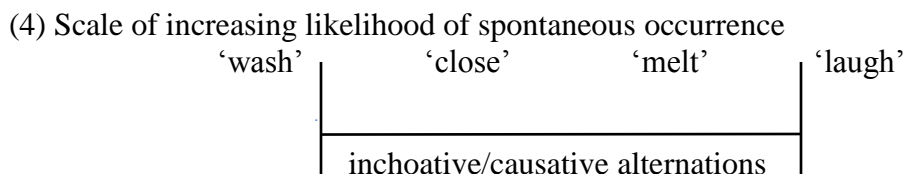
	Total	Anti- causative	Causative	Equipol- -lent	Supple- -tive	Labile	Others	A/C
‘laugh/ make laugh’	60	0	54	6	0	0	0	0
‘boil’	60	2	36	5	7	9	1	0.05
‘burn’	60	8	19	5	14	14	0	0.42
‘break’	60	22	9	8	0	19	2	2.44
Total	240	32	118	17	21	42	3	0.27

Haspelmath (1993) expanded the scope of this enquiry from four alternations to 31, and generally replicated the previous findings, as shown in Table 3.

Table 3.
Expression types by verb pairs (Haspelmath, 1993)

	Total	Anti-causative	Causative	Equipol-lent	Suppletive	Labile	A/C
'boil'	21	0.5	11.5	3	0	6	0.04
'freeze'	21	2	12	3	0	4	0.17
'dry'	20	3	10	4	0	3	0.30
'wake up'	21	3	9	6	1	2	0.33
'go out/ put out'	21	3	7.5	5.5	2	3	0.41
'sink'	21	4	9.5	5.5	0.5	1.5	0.42
'learn/teach'	21	3.5	7.5	6	3	2	0.47
'melt'	21	5	10.5	3	0	2.5	0.48
'stop'	21	5.5	9	3.5	0	3	0.61
'turn'	21	8	7.5	4	0	1.5	1.07
'dissolve'	21	10.5	7.5	2	0	1	1.40
'burn'	21	7	5	2	2	5	1.40
'destroy'	20	8.5	5.5	5	0	1	1.55
'fill'	21	8	5	5	0	3	1.60
'finish'	21	7.5	4.4	5	0	4	1.67
'begin'	19	5	3	3	0	8	1.67
'spread'	21	11	6	3	0	1	1.83
'roll'	21	8.5	4.5	5	0	3	1.89
'develop'	21	10	5	5	0	1	2.00
'get lost/lose'	21	11.5	4.5	4.5	0.5	0	2.56
'rise/raise'	21	12	4.5	3.5	1	0	2.67
'improve'	21	8.5	3	8	0	1.5	2.67
'rock'	21	12	40	3.5	0	1.5	3.00
'connect'	21	15	2.5	1.5	1	1	6.00
'change'	21	11	1.5	4.5	0	4	7.33
'gather'	21	15	2	3	0	1	7.50
'open'	21	13	1.5	4	0	2.5	8.67
'break'	21	12.5	1	4	0	3.5	12.50
'close'	21	15.5	1	2.5	0	2	15.50
'split'	20	11.5	0.5	5	0	3	23.00
'die/kill'	21	0	3	1	16	1	—
Total	636	243	164.5	128.5	69	31	

Both Nedjalkov & Sil'nickij (1969/1973) and Haspelmath (1993) explained the distributions they identified from the perspective of the likelihood of spontaneous occurrence. This can be expressed on a scale, as in the following example:



(Nedjalkov & Sil'nickij, 1969/1973; Haspelmath, 1993)

Haspelmath (1993) elaborated on the sensitivity of alternation-type selection to the likelihood of spontaneous occurrence as follows:

- (5) Verb meanings on the left of this scale (e.g. ‘wash’) are so unlikely to occur spontaneously that they can never or almost never occur in an inchoative/causative alternation. The closest approximation to an inchoative version is a passive (‘is washed’). The next category of verbs (e.g., ‘close’) is somewhat more likely to occur spontaneously, but still normally caused externally. Such verbs show a preference for anticausative expression. Verb meanings further to the right are increasingly more likely to occur spontaneously. In verbs like ‘melt’ there is a preference for causative expression, for which anticausative expression is still possible. Finally, in verb on the right of the scale only causative derivations are possible. (Haspelmath, 1993)

This sensitivity can be explained by a general principle of iconicity: that cognitively marked categories tend also to be structurally marked (Givon, 1991, p. 106). Based on this principle, it is reasonable to conjecture that lability favors verb pairs that stand near the middle of the spontaneity scale: i.e., representing events that are neither so spontaneous as to render causative marking unnecessary, nor so heavily reliant on external force that anticausative marking is not needed either. However, Nedjalkov & Sil'nickij (1969/1973) and Haspelmath (1993) both refrained from drawing conclusions about non-directed inchoative/causative verb alternation systems, possibly due to the lack of clear patterns in their data.

The inchoative/causative verb alternation on which Nedjalkov & Sil'nickij's (1969/1973) and Haspelmath's (1987, 1993) studies were centered is defined as a pair of verbs that express the same basic situation – generally a change of state, or more rarely a going-on – and that differ only in that the causative verb meaning includes an agent participant who causes the situation, whereas the inchoative verb meaning excludes a causing agent and presents the situations as occurring spontaneously (Haspelmath, 1993). In other words, a change of state is generally assumed in the verb pairs that these authors

picked for their respective cross-linguistic investigations. It has also been pointed out repeatedly that concepts of actions involving agent-oriented meaning components, such as tools or methods, virtually never occur in inchoative/causative verb alternation (Haspelmath, 1987, 1993). The verb ‘cut’ was cited as an example: it minimally differs from ‘tear’, in that it has the agent-oriented meaning component ‘by means of a sharp instrument’, but while ‘tear (tr.)’ has a corresponding inchoative verb – ‘tear (intr.)’ – ‘cut’ lacks one.

The study of verb lability did not end with Haspelmath’s discussion. It became a consensus that lability does not usually spread to all verbs; rather, it is subject to certain semantic restrictions (Gianollo, 2014; Haspelmath 1987, 1993; Heidinger, 2014; Kulikov, 2003; Letuchij, 2004; Letuchiy, 2009, 2015; Mcmillion, 2006). With specific reference to semantic restrictions, Letuchij (2004) proposed four groups of verbs that are labile more often than others, with the first being phase verbs, corresponding to the English verbs ‘finish’ and ‘begin’; evidence for this was drawn from a range of typologically remote languages including German, Bulgarian, Arabic, and Turkish. It is noteworthy that on Haspelmath’s (1993) spontaneity scale, phase verbs were in the middle. So, the high probability that phase verbs will be labile coincides with the predications of the principle of iconicity: i.e., that verbs denoting caused events are more likely to be anticausative-marked, and those denoting spontaneous events, causative-marked.

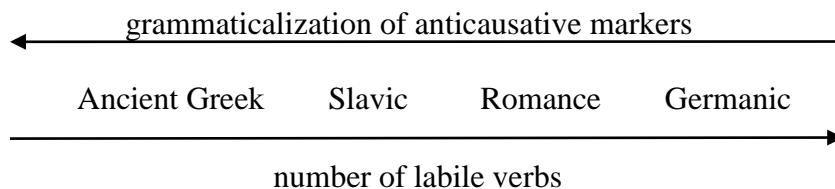
Moreover, Letuchiy (2009) found that Indo-European languages including Greek, Russian, and German use more anticausative marking than causative marking, whereas Caucasian languages including Georgian and Lezgian are comparatively more developed in causative marking. After examining verb lability in the major Indo-European and Caucasian languages, she proposed the following contrast:

(6)

<u>Indo-European</u> languages:	Vs.	<u>Caucasian</u> languages:
Grammaticalization of anticausative		Grammaticalization of causative
“spontaneous” labile verbs		“non-spontaneous” labile verbs
		(Letuchiy, 2009)

In the Indo-European languages in particular, Letuchiy (2009) found a negative correlation between the degree of grammaticalization of anticausative markers and the number of labile verbs, as shown in example (7).

(7) Indo-European languages:



(Letuchiy, 2009)

Based on these findings, she argued that properties of labile systems depend on areal and grammatical properties. The main grammatical parameter is determined by properties of derivational markers – not only their (non)existence, but also their degree of grammaticalization (Letuchiy, 2009). In other words, the occurrence of verb lability negatively correlates with the degree of grammaticalization of causative/anticausative.

If the hypothesized correlation between labile systems and grammatical properties is correct, then languages with little morphology are presumably rich in verb lability; and this reasoning has been used to account for “the overwhelming preference for labile verbs” in English (Nichols, 1986, p. 57; see also Haspelmath, 1993). However, data from isolating languages have never been included in such analyses, despite being necessary to meaningful testing of this hypothesis, according to Haspelmath (1993) himself.

3. Two factors determining verbal lability in Chinese

3.1 Change of state

In discussions of the anticausative, a defining property of the inchoative/causative verb pairs is that they express the same basic situation, which is primarily a change of state (cf. Haspelmath, 1987, 1993; Nedjalkov & Sil’nickij, 1969/1973). Based on this criterion, Haspelmath (1993) extrapolated that three large classes of situations are excluded from the inchoative/causative alternation:

- (8) First, a state cannot be the inchoative member of an inchoative/causative alternation. Second, an action that does not express a change of state (e.g. ‘help’, ‘invite’, ‘cite’, ‘criticize’, ‘read’) cannot be the causative member of such an alternation. Third, agentive intransitive verbs like ‘talk’, ‘dance’, ‘work’, etc. cannot be the inchoative member of an inchoative/causative pair because they are not conceived of as occurring spontaneously. This still leaves us with a large class of transitive verbs such as ‘wash’, ‘build’, ‘cut’, ‘dig’, ‘paint’, etc., which do express a change of state. (Haspelmath, 1993)

Haspelmath’s (1993) above-cited opinion coincides with the causal approach to lexical semantics (cf. Croft, 1991; Leven & Rappaport Hovav, 2005), which was introduced to account for transitivity alternation in English. According to Levin & Rappaport Hovav (2005, p. 117), the causal approach to lexical semantics “takes the facets of verb meaning relevant to argument realization to involve the causal structure of the events denoted”. Tsunoda’s (1981, 1985) simplified hierarchy, which originally organized the semantic classes of two-place verbs according to the likelihood of their members’ transitivity, was adopted by Levin (2009) in the following form:

- (9) Change of state > Surface contact > Perception/cognition

Examples are as follows:

- (10) Change-of-state verbs: break, open, close, warm, dim, cool, flatten, ...
 Surface-contact verbs: hit, kick, shoot, slap, beat, wipe, rub, scratch, sweep, ...
 Perception/cognition verbs: hear, see, smell, know, enjoy, fear, hate, ...
 (adapted from Levin, 2009)

Change-of-state verbs (including change-of-location verbs) are perceived as inherently causative. Citing Croft (1991, 1994, 1998), DeLancey (1984), Langacker (1987), and Talmy (1976), Levin (2009) concluded that “one instantiation of the causal approach models events in terms of individuals acting on individuals, thus involving causal chains, consisting of a series of segments (or ‘atomic events’), each relating two participants in the event” and that “a single participant may be involved in more than one segment”. The transitive form of ‘break’ has been used as an example to illustrate the causal chain, as follows:

- (11) *Harry broke the vase*. Modelled with a three-segment causal chain:
 (i) Harry acts on the vase
 (ii) the vase changes state
 (iii) the vase is in a result state (i.e., broken)
 (Croft, 1994, p. 38)

Complex event structures can be observed for this kind of verbs.

- (12) break: [[x ACT] CAUSE [BECOME [y <BROKEN>]]]
 (Levin & Rappaport Hovav, 2005, p. 113)

In English, only change-of-state verbs are labile and able to participate in transitivity alternation. In Chinese, the situation is more or less the same, as shown in the following example:

- (13) a. 琳琳 完成 了 论文。
 Linlin wancheng-le lunwen.
 Linlin complete-LE paper
 ‘Linlin completed her paper.’
 b. 论文 完成 了。
 Lunwen wancheng-le.
 paper complete-LE
 ‘The paper is completed’

Something special about Chinese is the existence of verb compounds. Even if a verb does not inherently encode a change of state, it may combine with a resultative complement to express a change-of-state event. For example:

- (14) a. 琳琳 买好了 礼物。
 Linlin mai-hao-le liwu.
 Linlin buy-ready-LE gift
 ‘Linlin bought a gift.’
 b. 礼物 买好了。
 liwu mai-hao-le.
 gift buy-ready-LE
 ‘The gift is ready.’

Occasionally, when combined with certain verbs, the aspect marker 了 *le* can imply a change of state:

- (15) a. 琳琳 吃了 蛋糕。
 Linlin chi-le dangao.
 Linlin eat-LE cake
 ‘Linlin ate the cake.’
 b. 蛋糕 吃了。
 Dangao chi-le.
 cake eat-LE
 ‘The cake is eaten.’

In contrast, agentive intransitive verbs such as 工作 *gongzuo* ‘work’ can never participate in this type of transitivity alternation.

- (16) a. 琳琳 在 工作。
 Linlin zai gongzuo.
 Linlin PROG work
 ‘Linlin is working.’
 b. *爸爸 工作 琳琳。
 Baba gongzuo Linlin.
 father work Linlin
 ‘Father caused Linlin to work.’

3.2 Spontaneity

A problem remains with regard to the potential correlation between the spontaneity of events and the distribution of verbs. In an attempt to test this correlational

conjecture in Modern Mandarin, I selected as target verbs the Chinese counterparts of six change-of-state verbal characters that differ markedly in spontaneity, according to Haspelmath's (1993) spontaneity scale shown in Table 3¹. Specifically, these targets were 醒 *xing* 'wake', 停 *ting* 'stop', 完 *wan* 'finish', 丢 *diu* 'lose/be lost', 开 *kai* 'open' and 破 *po* 'break'. Additionally, in consideration of the fact that resultant states in Modern Mandarin can also be implied by the aspect marker 了 *le* being added to some action verbs, 买 *mai* 'buy' and 吃 *chi* 'eat' were also included, as representatives of change-of-state events that absolutely cannot occur spontaneously.

These eight target verbs were searched for in the Modern Mandarin part of Cncorpus. Since the number of tokens for each target verb was immense, 500 tokens of each target were randomly selected for coding, and tokens of their intransitive use enumerated. For each verbal character, the type frequency of the intransitive labile construction (the intransitive use of a labile verb, ILC, henceforth) is presented in Table 4, with its estimated faithfulness² shown as a percentage.

Table 4.

Faithfulness to the intransitive labile construction of verbs differing in spontaneity

Verbal character	Token frequency	ILC Type Frequency	Faithfulness to ILC
醒 <i>xing</i> 'wake'	256	211	82.42%
停 <i>ting</i> 'stop'	385	277	71.95%
完 <i>wan</i> 'finish'	433 ¹⁴	180	41.57%
开 <i>kai</i> 'open'	469	148	31.56%
破 <i>po</i> 'break'	210	65	30.95%
丢 <i>diu</i> 'lose/be lost'	410	114	27.80%
吃 <i>chi</i> 'eat'	422	39	9.24%
买 <i>mai</i> 'buy'	639	45	7.04%

Note. If the target character occurred in a token's subject or object (including cases in which the character independently occurs as a modifier or in a relative clause), it was not counted for the token-frequency purpose. Data presented in the table include tokens in which target characters play various roles in the predicates (i.e., independent, X of 'XY' compound verbal, or Y of 'XY' compound verbal).

¹ Although this paper acknowledges the fact that events differ in the likelihood of spontaneous occurrence and the overall tendency proposed by Nedjalov & Sil'nickij (1969/1973) and Haspelmath (1993), it needs to be noted that the specific order of events on the spontaneity scale (Haspelmath, 1993) needs to be interpreted with caution. It is hard to say which event is more likely to occur spontaneously among 'boil' and 'freeze'. Essentially, Haspelmath's (1993) finding is based on quantitative analysis of 21 languages. If the sample size increases, there may be some variability. Therefore, the target verbs that I selected are those significantly differ in terms of spontaneity.

² The term 'faithfulness' here refers to how often a verb occurs in a certain construction.

The faithfulness of verbal characters to the intransitive labile construction can be graphed, as shown in Figure 1.

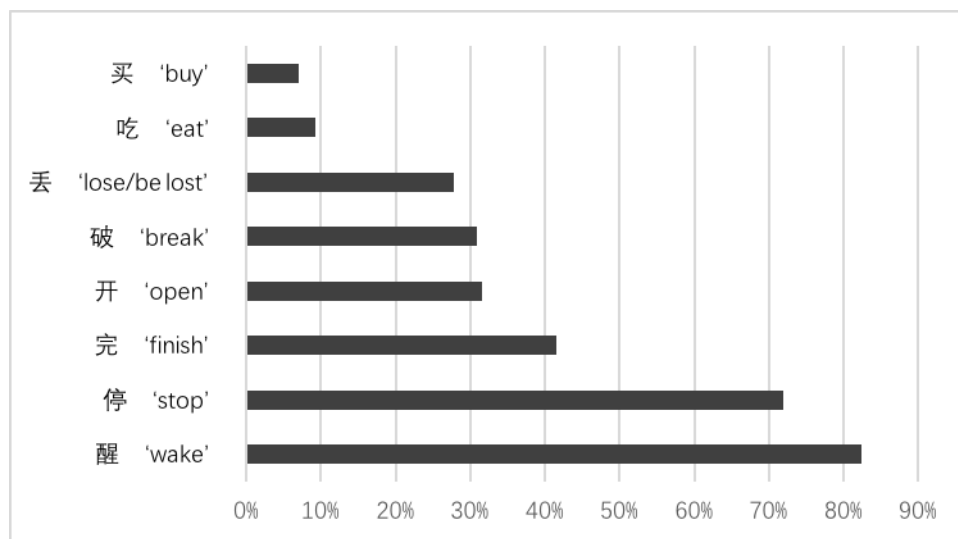


Figure 1.

Faithfulness to the intransitive labile construction of verbs differing in spontaneity

It can clearly be observed from Figure 1 that, as the spontaneity of the event increases, faithfulness to the intransitive labile construction also increases (i.e., the verb is used intransitively more often than used transitively). This strongly supports the hypothesized relation between the spontaneity of a change-of-state event and the lability of the verbal that describes it. It is especially interesting that the faithfulness of the phase verb 完 *wan* 'finish' to the intransitive labile construction is closest to 50% among all eight of the target verbal characters, suggesting that it occurs in the predicates of transitive structures and intransitive structures with roughly equal frequency. In this context, it is worth reiterating that in Letuchij's (2004) cross-linguistic investigation, phase verbs were found to be labile more often than other groups of verbs; and that on Haspelmath's (1993) spontaneity scale, phase verbs occur in the middle. Thus, my finding that the transitive use of 完 *wan* 'finish' is generally as frequent as its intransitive use in Modern Mandarin provides another piece of empirical evidence that phase verbs occupy a central position in the radial category of labile verbs. Centered around 完 *wan* 'finish', this pattern sees 停 *ting* 'stop' and 醒 *xing* 'wake' occur more frequently in intransitive use, whereas 开 *kai* 'open', 破 *po* 'break' and 丢 *diu* 'lose/be lost' are more frequently used transitively. All of this is generally consistent with these verbs' ranks on the spontaneity scale, apart from the fact that the spontaneity differences between 开 *kai* 'open', 破 *po* 'break' and 丢 *diu* 'lose/be lost' are not reflected in their distributions. It

can also be observed that the commonly known transitive verbs 买 *mai* 'buy' and 吃 *chi* 'eat', which definitely cannot happen spontaneously, are indeed predominantly used transitively, although they can imply a change of state when co-occurring with 了 *le*.

3.3 The Interaction of Two Factors

In the previous two sections, we have seen that the lability of verbs is sensitive to two factors: the involvement of change/non-change of state in, and the likelihood of spontaneous occurrence of, the events they describe. Based on these two factors, events can be categorized into four types: (i) change of state, spontaneous; (ii) change of state, caused by external force; (iii) non-change of state, but affected by external force; (iv) non-change of state, but spontaneous. Surface-contact verbs (including exertion-of-force verbs) and perception/cognition verbs express events that are affected by external force, but do not involve changes of state. States and agentive intransitive verbs are also non-change-of-state, but can be considered spontaneous (since they are definitely not affected by external forces). They are excluded from the category of labile verbs by the change-of-state factor. Change-of-state events' transitive/intransitive distribution in Modern Mandarin is largely related to their likelihood of spontaneous occurrence: the more likely an event is to occur spontaneously, the more dominant its intransitive use will be, and vice versa. Inasmuch as the factor of spontaneity in verbal semantics is not dichotomous but scalar, and some Chinese action verbs can imply changes of state in the perfective aspect, the abovementioned four types of events are not mutually exclusive, and thus Figure 2 includes a shaded area presenting the prototype of labile verbs. The darker the shade, the more labile the verb is. The percentage in the bracket show how often the verb is used intransitively in corpus data.

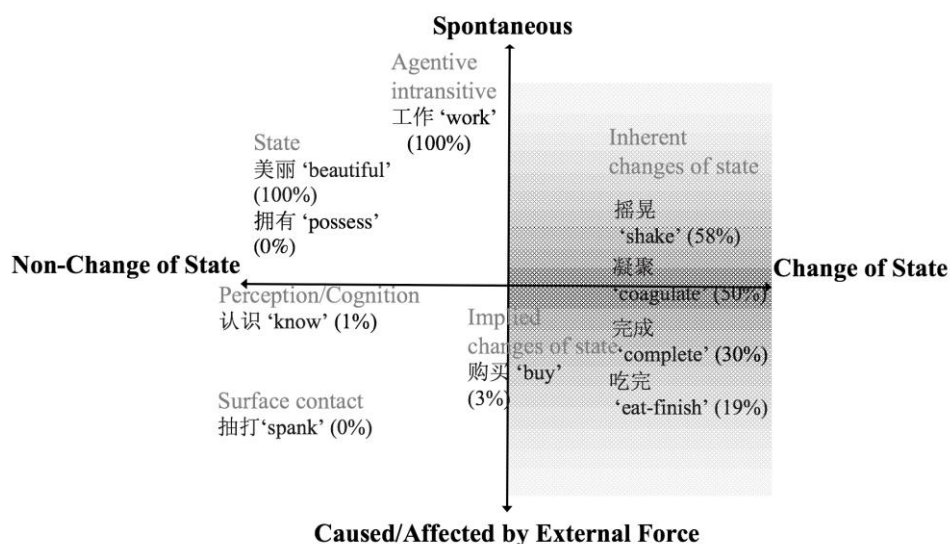


Figure 2. Four types of events based on two factors

4. The prototype of verbal lability and its extension in Chinese

Assuming that there is no clear-cut border between transitive verbs and intransitive verbs, and that labile verbs (and verb compounds) constitute a radial category, its central members and peripheral members in Modern Mandarin can be identified, as follows:

4.1 Prototypical labile verbs

Prototypical labile verbals inherently denote change-of-state events that can commonly happen spontaneously or caused by outside forces. Representative semantic frames include:

(17) a. Phase verbs (change of state in the temporal domain):

开始 *kaishi* ‘start’, 完成 *wancheng* ‘complete’, 结束 *jieshu* ‘finish’, 终结 *zhongjie* ‘end’, etc.

b. Verbs of moving (change of state in the spatial domain):

动 *dong* ‘move’, 抖 *dou* ‘tremble’, 摇 *yao* ‘swing’, 晃 *huang* ‘shake’, 摆 *bai* ‘sway’, 升 *sheng* ‘ascend’, 降 *jiang* ‘descend’, 停 *ting* ‘stop’, 聚 *ju* ‘accumulate’, 散 *san* ‘disperse’, 转 *zhuan* ‘turn’ and compound verbals formed by them that do not contain agent-oriented meaning components.

Prototypical labile verbals feature comparable levels of contingency to the transitive use (including in the disposal structures and cases of object deletion) and the intransitive use. Verbs denoting these types of events are also the most likely to be labile in other languages (cf. Letuchij, 2004; Mcmillan, 2006).

4.2 Transitive-dominated labile verbs

In comparison with prototypical labile verbs, some labile verbs are more frequently used transitively than intransitively. Verbs denoting change-of-state events that are typically caused by outside forces, and actions that bring about changes of state, belong to this group – which in Modern Mandarin is oftentimes expressed by ‘action-resultant state’ compounds. Some common semantic frames are as follows:

(18) a. Verbs of breaking:

毁 *hui* ‘ruin’, 灭 *mie* ‘extinguish’, 破坏 *pohuai* ‘destroy’, 毁灭 *huimie* ‘destroy’, etc.

Resultative compounds 打碎 *da-sui* ‘break’, 打破 *da-po* ‘break’, 弄坏 *nong-huai* ‘break’, etc.

b. Creation verbs:

做 *zuo* ‘make’, 制 *zhi* ‘make’, 造 *zao* ‘produce’, 写 *xie* ‘write’, 作 *zuo* ‘make’, 画 *hua* ‘draw’, 唱 *chang* ‘sing’, 建 *jian* ‘build’, etc.

Resultative compounds 做完 *zuo-wan* ‘do-finish’, 画好 *hua-hao* ‘draw-complete’, 创作完成 *chuangzuo-wancheng* ‘create-complete’, 唱错 *chang-cuo* ‘sing-wrong’, etc.

V+VP, V+PP or descriptive complement structures 写成论文 *xie-cheng lunwen* ‘write up as a paper’, 写得精彩 *xie-de jingcai* ‘is written wonderfully’, 建在市中心 *jian-zai shizhongxin* ‘be built at downtown area’, etc.

c. Transfer verbs:

买 *mai* ‘buy’, 卖 *mai* ‘sell’, 给 *gei* ‘give’, 送 *song* ‘deliver’, 传 *chuan* ‘pass’, 放 *fang* ‘put’, 运 *yun* ‘carry’, etc.

Resultative compounds 买来 *mai-lai* ‘buy-come’, 卖完 *mai-wan* ‘sell-finish’, 卖掉 *mai-diao* ‘sell-out’, 送还 *song-huan* ‘deliver-return’, 放下 *fang-xia* ‘put-down’, etc.

VP, V+VP, V+PP or descriptive complement structures 授予琳琳 *shouyu Linlin* ‘award/be awarded to Linlin’, 送给琳琳 *song-gei Linlin* ‘give to Linlin’, 放在桌子上 *fang-zai zhuozi-shang* ‘put on the table’, etc.

Along this direction on the periphery of the radial category of lability lie verbals denoting change-of-state actions in which the theme and the agent are the same in terms of animacy, especially when both are human beings. These include compound verbals structured around 打 *da* ‘hit’, 骂 *ma* ‘scold’, 杀 *sha* ‘kill’, 表扬 *biaoyang* ‘praise’, 批评 *piping* ‘criticize’, 邀请 *yaoqing* ‘invite’ and 帮助 *bangzhu* ‘help’. Although resultant states can be expressed by compounding, sentences are usually ambiguous when these verbals are used intransitively. Readings of object deletion and of transitivity alternation are both allowed, as shown in the famous example:

(19) 鸡 不 吃了。

Ji bu chi-le.

chick NEG eat-LE

‘The chick does not eat (anything). / The chick will not be eaten.’

(Chao, 1959)

Signaling that the only overt argument is the theme, 被 *bei* is frequently used as a device for eliminating this ambiguity. By definition, if the intransitive use of a verbal is marked, it can no longer be treated as labile.

Compared to other lability-attested languages, Chinese has an exceptionally rich repertoire of transitive-dominated labile verbs. In languages that are more morphologically developed, the intransitive use of transfer verbs, creation verbs and other action verbs tends to be marked as anticausative or passive.

4.3 Intransitive-dominated labile verbs

Some Chinese labile verbs tend to be used intransitively more often than transitively. Verbs that fall into this group include those indicating change-of-state events that typically happen spontaneously. Intransitive-dominated labile verbs do not often take prototypical themes, since spontaneity is related to agentivity (Cysouw, 2008). Specifically, if an event only involves one participant, it being spontaneous means the participant acts volitionally, in the sense that it deliberately instigates the action and has control over it, which makes it an agent (cf. O'Grady, 2013, p. 46). It is also known that agentive intransitives such as 工作 *gongzuo* 'work' are never used transitively in Modern Mandarin, so the subjects of intransitive-dominated labile verbs when used intransitively are neither prototypical agents nor prototypical themes. The following are some common semantic frames:

(20) a. Uncontrolled process:

沉 *chen* 'sink', 熔 *rong* 'melt', 化 *hua* 'melt', 醒 *xing* 'wake up', 干 *gan* 'dry', etc., and compounds formed by them that do not involve agent-oriented meaning components, e.g., 化开 *hua-kai* 'melt-open= dissolve', 沉没 *chen-mo* 'sink-submerge = sink', 溶解 *rongjie* 'dissolve', etc.

b. Change of location (controlled):

来 *lai* 'come', 到 *dao* 'arrive', 去 *qu* 'go' and 回 *hui* 'return'

Along this direction of intransitive dominance, the peripheral labile verbs are 坐 *zuo* 'sit', 站 *zhan* 'stand' and 躺 *tang* 'lie'. On the one hand, they denote volitional actions, but on the other, they can also express modes of existence, which are stative. The transitive use of them is normally referred to as locative inversion, if locative inversion is considered as a transitive structure.

(21) a. 床 上 坐 着 一 个 人。

Chuang-shang zuo-zhe yi-ge ren.
bed above sit-ZHE one-CL person
'There is a person sitting on the bed.'

b. 一 个 人 坐 着。

Yi-ge ren zuo-zhe.
One-CL person sit-ZHE
'There sits a person'.

5. Change of state: the cognitive base of verbal lability

A change of state means that something exists in a different way than it did before, entailing an initial state and a final state. A change of state can occur spontaneously or result from external force, and in human languages is typically

expressed by verbs (the term verb is used in cognitive linguistics for any expression that profiles a process: e.g., Langacker, 2008, p. 354). So, change-of-state verbs inherently feature complex event structures; as Croft (1991, p. 173) put it, “the prototypical event type that fits this model is unmediated volitional causation that brings about a change in the entity acted on (i.e. the manifestation of the transmission of force)”. This can be represented by the following diagram, in which ‘AG’ signifies agent, and ‘TH’, theme:

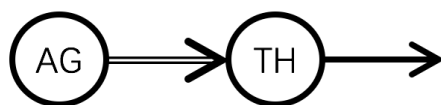


Figure 3. The complex event structure of change-of-state verbs

This complex event structure automatically gives way to two competing strategies of profiling in human construal: **agent orientation** and **theme orientation**. According to Langacker (2008, p. 355), since it is difficult to attend to a complex occurrence in a global and wholly neutral fashion, attention, as a limited resource, has to be allocated. As a matter of focal prominence, **trajector** and **landmark** are the primary and secondary focal participants in a profiled relationship, and subject/object relations are grammatical manifestations of trajector/landmark alignment. A subject is a nominal that codes the trajector of a profiled relationship, and an object is one that codes the landmark. It should be noted, however, that (i) different allocations are possible for a given structure, and (ii) the choice of trajector is a pivotal factor in canonical alignment. The key difference between the two major profiling strategies is that one aligns the trajector with the agent, and the other aligns it with the theme.

- (22) Agent and theme attract focal prominence because each has a kind of cognitive salience that sets it apart from other semantic roles in its experiential realm. Agents belong to the “active” realm – that of action, change, and force, of mobile creatures acting on the world. Here a willful human actor stands out as a paragon with respect to other active roles (like instrument, experiencer, or natural force). On the other hand, themes belong to the “passive” realm of settings, locations, and stable situations, where objects with particular properties are arranged in certain ways. The world thus constituted defines our circumstances, presents both problems and opportunities, and serves as the platform for human activity. (Langacker, 2008, p. 370)

In the complex event structure of a change of state, both participants have a chance of being profiled as the trajector, which means that each of them can be the subject of a clause: lability arises. In this sense, lability inherently hinges on change-of-state events.

Correspondingly, in a state or in an agentive intransitive event, because only one participant is involved, no alternative method of profiling is available. Meanwhile, in an

event depicted by a surface-contact verb or a perception/cognition verb (without any complement), the theme does not undergo any change – and sometimes is not even affected – so the focal prominence is naturally assigned to the agent, which starts this process. However, the presence of verb compounds makes the situation more complicated in Chinese. Some surface-contact verbs and perception/cognition verbs can be endowed with lability by verb complements, which themselves are typically stative or change-of-state, insofar as these theme-oriented elements increase the chance of the theme being profiled as the trajector.

This also sheds additional light on the factor of spontaneity. A position high on the spontaneity scale generally means that a situation is not likely to be caused by external force in the human world; it thus also indicates a low chance of the agent bearing the focal prominence in construal. Conversely, a low spontaneity-scale position suggests a high probability of focal prominence being placed on the agent. This explains the reason why we saw, in section 3.2, that as the spontaneity of a change-of-state event increases, the faithfulness of verbs to the intransitive labile construction also increases.

6. Summary

Prior cross-linguistic investigation of lability suggested (i) that it functioned as a substitute for the causative or anticausative, depending on which of the two is not morphologically marked in a given language (Haspelmath, 1993); and (ii) that in human languages, some groups of verbs are more frequently labile than others (Letuchij, 2004). Based on quantitative data on the realizations of a number of causative/inchoative verb pairs in more than twenty languages, Haspelmath has also suggested that lability is related to change-of-state events and a spontaneity scale. However, isolating languages that lack grammaticalized causative/anticausative markers have, until now, been completely left out of this discussion.

This paper has identified an overwhelmingly large group of labile verbs in Chinese, supporting the conjecture that languages not rich in morphology are presumably rich in verbal lability (e.g., Nichols, 1986, p. 57; Haspelmath, 1993). Nevertheless, some verbs in Chinese are more labile than others. Differing degrees of verbal lability are reflected in verb-construction contingency: verbs that are more labile, such as phase verbs, display comparable levels of faithfulness to the transitive structure and the intransitive structure; whereas verbs that are less labile have a main use and a peripheral use in respect to transitivity and intransitivity. Consistent with previous cross-linguistic findings, this chapter has shown that the degree of verbal lability in Chinese is determined by two factors: change of state and spontaneity of the event. Of these two factors, (non)change of state is the more basic, as the complex event structure it represents gives way to two competing strategies of profiling in human construal, agent orientation and theme orientation, which in turn lead to the transitive and intransitive use of a verbal, respectively. Therefore, a change of state can be described as inherent to verbal lability, and is the prototypical function of the transitive and intransitive

constructions formed by labile verbs. Built upon the change-of-state factor, the contingency between labile verbs and their transitive/intransitive use is sensitive to the likelihood of spontaneous occurrence of the events they express. If the event is more likely to occur spontaneously, the verb will be more faithful to the intransitive use, and vice versa.

REFERENCES

- CHAO, YUEN-REN. 1959. 汉语的歧义现象 Hanyu de qiyi xianxiang [Ambiguity in Chinese]. *Studia serica Bernhard Karlgren dedicata*. 1-3.
- CIKOSKI, JOHN S. 1978. An outline sketch of sentence structures and word classes in Classical Chinese—Three essays on Classical Chinese grammar I. *Computational Analyses of Asian & African Languages* 8. 17-152.
- CROFT, WILLIAM. 1991. *Syntactic categories and grammatical relations*. Chicago: University of Chicago Press.
- CROFT, WILLIAM. 1994. The semantics of subjecthood. *Subjecthood and subjectivity*. 29-75.
- CROFT, WILLIAM. 1998. The semantics of subjecthood. *The projection of arguments: lexical and compositional factors*. 21-63.
- CYSOUW, MICHAEL. 2008. Generalizing scales. *Scales*. 379-396.
- DELANCEY, SCOTT. 1984. Notes on agentivity and causation. *Studies in Language* 8. 181-213.
- DIXON, ROBERT M. W. 1979. Ergativity. *Language* 55.1. 59-138.
- GIANOLLO, CHIARA. 2014. Labile verbs in Late Latin. *Linguistics* 52.4. 945-1002.
- GIVON, TALMY. 1991. Isomorphism in the grammatical code: Cognitive and biological considerations. *Studies in Languages* 15. 85-114.
- HASPELMATH, MARTIN. 1987. Transitivity alternations of the anticausative type. *Institut für Sprachwissenschaft*. 1-51.
- HASPELMATH, MARTIN. 1993. More on the typology of inchoative/causative verb alternations. *Causatives and transitivity*. 87-120.
- HEIDINGER, STEFFEN. 2014. The persistence of labile verbs in the French causative-anticausative alternation. *Linguistics* 52. 1003-1024.
- HUANG, C.-T. JAMES. 1989. 中文的两种及物动词和两种不及物动词 Zhongwen de liangzhong jiwu dongci he liangzhong bujiwu dongci [Two kinds of transitive verbs and intransitive verbs in Chinese]. *Proceedings of the 2nd World Congress of Chinese Language Studies*. 39-59.
- KULIKOV, LEONID. 2003. The labile syntactic type in a diachronic perspective: The case of Vedic. *SKY Journal of Linguistics* 16. 92-113.
- LANGACKER, RONALD W. 1987. *Foundations of cognitive grammar*, vol. 1. Stanford: Stanford University Press.

- LANGACKER, RANALD W. 2008. *Cognitive grammar: A basic introduction*. New York: Oxford University Press.
- LETUCHIJ, ALEXANDER. 2004. Lability of verbs and its relations to verb meaning and argument structure (based on the data of Indo-European, Arabic, Turkic, and other languages). *Vortrag beim LENCA-2-Symposium an der Universität Kasan*. 11-14.
- LETUCHIY, ALEXANDER. 2009. Towards typology of labile verbs: lability vs. derivation. *New challenges in typology: Transcending the borders and re ning the distinctions*. 247-268.
- LETUCHIY, ALEXANDER. 2015. Historical development of labile verbs in modern Russian. *Linguistics* 53.3. 611-647.
- LEVIN, BETH. 1993. *English verb classes and alternations*. Chicago: University Press of Chicago.
- LEVIN, BETH. 2009. *Lexical semantics of verbs III: causal approaches to lexical semantic representation*. Course LSA 116, UC Berkeley. Available at <http://web.stanford.edu/~bclevin/lisa09causapp.pdf>.
- LEVIN, BETH, and M. RAPPAPORT HOVAV. 2005. *Argument Realization*. Cambridge, UK: Cambridge University Press.
- LI, Y.-H. AUDREY. 1990. *Order and constituency in Mandarin Chinese*. Dordrecht: Kluwer.
- LV, SHUXIANG. 1987. 说“胜”和“败” Shuo "sheng" he "bai" [On win and defeat]. *中国语文 Zhongguo Yuwen [Studies of the Chinese Language]* 1. 1-5.
- MCMILLION, ALAN. 2006. *Labile verbs in English: Their meaning, behaviour, and structure* (Unpublished doctoral dissertation). University of Stockholm, Stockholm.
- NICHOLS, JOHANNA. 1984. Direct and oblique objects in Chechen-Ingush and Russian. *Objects*. 183-209.
- NICHOLS, JOHANNA. 1986. On form and content in typology. *Language typology 1985*. 141-162.
- O'GRADY, WILLIAM. 2013. *The syntax files*. Department of Linguistics, University of Hawaii at Manoa.
- SCHAFFER, FLORIAN. 2009. The causative alternation. *Language and Linguistics Compass* 3.2. 641-681.
- SHEN, YANG, and R. SYBESMA. 2012. 作格动词的形式和作格结构的构造 Zuoge dongci de xingshi he zuoge jiegou de gouzao [The property and structure of unaccusative verbs]. *Shijie Hanyu Jiaoxue [Chinese Teaching in the World]* 3. 306-321.
- SONG, YAYUN. 2009. 汉语作格动词的历史演变与动结式的语法化 Hanyu zuoge dongci de shili yanbian yu dongjieshi de yufahua [The diachronic evolution of Chinese ergative verbs and the grammaticalization of resultative verb compounds]. *语法化与语法研究 Yufahua yu yufa yanjiu [Studies on grammaticalization and grammar]* Vol. 4. 347-360.

- TALMY, LEONARD. 1976. Semantic causative types. *Syntax and semantics 6: the grammar of causative constructions*. 43-116.
- TSUNODA, TASAKU. 1981. Split case-marking patterns in verb-types and tense/aspect/mood. *Linguistics* 19. 389-438.
- TSUNODA, TASAKU. 1985. Remarks on transitivity. *Journal of Linguistics* 21. 385-396.
- WU, XUERU. 2009. 从认知语义学的角度看上古汉语的“作格动词” Cong renzhiyuyixue de jiaodu kan shanggu hanyu de 'zuoge dongci' [An investigation on the 'ergative verbs' in Pre-Qin Chinese from the viewpoint of cognitive semantics]. *清华中文学报 Qinghua Zhongwen Xuebao [Tsing Hua Journal of Chinese Literature]* 2. 161-198.
- XU, JIE. 1999. 两种保留宾语句式及相关句法理论问题 Liangzhong baoliu binyu jushi ji xiangguan jufa lilun wenti [Some theoretical issues of the two types of Chinese 'retained object' constructions]. *当代语言学 Dangdai Yuyanxue [Contemporary Linguistics]* 1. 16-29.
- XU, JIE. 2001. “及物性”特征与相关的四类动词 'Jiwuxing' tezheng yu xiangguan de silei dongci ['Transitivity' and four classes of relevant verbs]. *语言研究 Yuyan Yanjiu [Studies in Language and Linguistics]* 3. 1-11.
- YANG, SUYING. 1999. “从非宾格动词现象看语义与句法结构之间的关系 Cong feibingedongci xianxiang kan yuyi yu yufa jiegou zhijian de guanxi [On the relationship between syntax and semantics from the perspective of unaccusative verbs]. *当代语言学 Dangdai Yuyanxue [Contemporary Linguistics]* 1. 30-62.
- YU, NING. 1995. Towards a definition of unaccusative verbs in Chinese. *Proceedings of the Sixth North American Conference on Chinese Linguistics* Vol. 1. 339-353.
- ZENG, LIYING. 2009. *现代汉语作格现象研究 Xiandai hanyu zuoge xianxiang yanjiu [Ergativity in Mandarin Chinese]*. Beijing: Minzu University of China Press.
- ZHANG, LIN. 2009. 现代汉语作格结构的生成语法解释 Xiandai hanyu zuoge jiegou de shengcheng yufa jieshi [A generative grammar account to ergative structures in Contemporary Chinese]. *现代语文 Xiandai Yuwen [Modern Chinese]* 8. 27-29.