Not All Unaccusatives Are Acquired Equal: Between-Verb Variations in Chinese Learners' Acquisition of English Alternating Unaccusatives



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Abstract English unaccusatives pose a great challenge to L2 learners. L2 acquisition of these verbs has drawn consistent attention from researchers. However, betweenverb variations have been largely neglected by previous studies. This study focuses on the between-verb variations in Chinese learners' acquisition of English alternating unaccusatives. Through a combined use of a written production task and an acceptability judgment task, it was found that there were significant between-verb variations in Chinese learners' acquisition of English alternating unaccusatives. Case studies showed that Chinese learners mainly acquired the transitive use of *break* and the intransitive use of *sink*. Interviews and a textbook corpus survey suggested that the variations between *break* and *sink* were mainly caused by verb semantics and relative frequency. Based on these findings, this study concludes that not all unaccusatives are acquired equal by L2 learners on the grounds that English alternating unaccusatives do not pose the same acquisition problems to L2 learners. It advises L2 researchers to consider the theoretical implications of the between-verb variations in L2 acquisition of English alternating unaccusatives. It also recommends L2 teachers to teach these verbs with an integrated approach of rule-based and item-based methods.

Keywords Chinese learners · Alternating unaccusatives · Between-verb variations · Verb semantics · Frequency

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© Springer Nature Singapore Pte Ltd. 2022 M. Chan and A. G. Benati (eds.), *Challenges Encountered by Chinese ESL Learners*, https://doi.org/10.1007/978-981-16-5332-2_6

¹ Unaccusatives are also termed as ergatives.

1 Introduction

The Unaccusative Hypothesis (Burzio, 1986; Perlmutter, 1978) suggests that intransitives are not homogenous, but can be further divided into unaccusatives¹ (e.g. *happen, melt*) and unergatives (e.g. *jump, sleep*). The only Noun Phrase (NP) of unaccusatives, which appears as the surface subject, plays the semantic role of a theme and therefore is mapped to the object position at the deep structure. In contrast, the sole NP of unergatives, which assumes the agent role at the semantic level, is the subject at both the deep and surface structures. In English, the distinction between unaccusatives and unergatives is morphologically unmarked. In addition, both types of verb are typically used in the active voice. Therefore, the distinction between English unaccusatives and unergatives is not readily observable on the surface, as shown in (1a), (1b) and (1c).

(1)	a	The cat appeared.	(Unaccusative)	
	b	The window broke.	(Unaccusative)	
	c	The man slept.	(Unergative)	

In English, many unaccusatives can be used transitively without undergoing any morphological change. Such unaccusatives are called alternating unaccusatives in (2a) and (2b), while those only used intransitively are called non-alternating unaccusatives in (3a) and (3b).

(2)	a	His hairstyle changed.	(Intransitive/inchoative)
	b	The boy changed his hairstyle.	(Transitive)
(3)	a	The ball disappeared.	(Intransitive)
	b	*The boy disappeared the ball.	(Transitive)

The symbol * stands for an error.

The shift from the intransitive use to the transitive use and vice versa is called the inchoative/causative alternation (Haspelmath, 1993), which is simply referred to as the causative alternation (Pinker, 1989). The fact that alternating unaccusatives can be used transitively while non-alternating ones cannot dictates that the former can be used in the passive voice while the latter cannot, as shown in (4a) and (4b).

(4)	a	His hairstyle was changed.	(Passive)
	b	*The ball was disappeared.	(Passive)

The symbol * stands for an error.

The unique semantic and syntactic properties of English unaccusatives cause considerable difficulties to L2 learners. Researchers have noted that L2 learners with diverse L1 backgrounds all tend to make errors with English unaccusatives (Cai, 2000, 2008; Deguchi & Oshita, 2004; Hirakawa, 2000; Hwang, 1999; Ju, 2000; Mo,

2006, 2011; Yip, 1995; Zobl, 1989). According to Montrul (2005), there are four types of unaccusative errors in L2 English. The first error is passivisation, which refers to L2 learners' production and acceptance of English unaccusatives in the NP-Be-Ven structure (e.g. *An accident was happened or *The window was broken). The second error is avoidance, which refers to L2 learners' reluctance to accept English unaccusatives in the NP-V structure in judgment tasks (e.g. A leaf fell or The fish burned in the pan). The third error is L2 learners' production and acceptance of non-alternating unaccusatives in the There/It/Ø-V-NP structure with or without an expletive (e.g. *There/It/Ø arrived a stranger*). The last error is transitivisation, which refers to L2 learners' production and acceptance of non-alternating unaccusatives in the NP1-V-NP2 structure (e.g. **The magician appeared a bird from his sleeve*). Of these four types of error, passivisation is the most frequently detected. According to Oshita (2000), it is one of the most universal, conspicuous and persistent errors in L2 English. In contrast, avoidance is much less noticeable in that it will not become an issue unless in experimental settings like judgment tasks. Production of the postverbal NP structures for unaccusatives is often limited to L2 learners whose L1s have null expletives. Transitivisation is observable in L2 English, but much less frequently than passivisation.

2 Theoretical Background of Language Acquisition Studies

Among the various linguistic theories fueling language acquisition research, the Universal Grammar (UG) and the usage-based linguistics figure prominently, with the former as a classic and the latter as a revolution. These two approaches to language acquisition are contending with each other in their description and explanation of language acquisition.

2.1 UG-Based Approach to Language Acquisition

Chomsky (1986) suggests that children are born with a language acquisition device (LAD), which underpins and facilitates their language acquisition. Thanks to this innate language faculty, children efficiently develop native language grammar based on limited input. That is, most of the grammar that children learn does not stem from the input they are exposed to, but from an innate Universal Grammar (UG). According to the UG-based approach, language acquisition is a process of setting parameters, which are afforded by the UG but activated by limited language input.

As a supporter of the UG-based approach, Pinker (1989) proposes the Semantic Verb Class Hypothesis. It posits that syntactic representations of verbs are determined by their semantic meanings. Verbs with the same semantics are conflated into the same syntactic class via linking rules and lexical rules. The linking rules are innate, while the lexical rules, consisting of broad-range rules and narrow-range rules, are

to be acquired. The broad-range rules are a necessary condition, while the narrowrange ones are a sufficient condition for the argument structure alternation to take place. Regarding the English causative alternation, its broad-range rule is that the verb should describe a dynamic event, while the narrow-range rule is that the verb, instigated by an external force, undergoes a change of physical state (e.g. *break*, *shrink*) or a change of location (e.g. *drop*, *slide*). To acquire English causative alternation, learners should apply both the broad-range rule and the narrow-range rule after they get a correct understanding of the semantic meaning of a given alternating unaccusative.

2.2 Usage-Based Approach to Language Acquisition

Goldberg (1995) and Tomasello (2003) advocate a usage-based approach that language acquisition is based on sense and experience. According to this approach, children must go through several stages in their language acquisition. That is, they start with formulas, induce low-scope patterns and then establish argument structure constructions, which are abstract and productive. Tomasello (1992) suggests the Verb Island Hypothesis that verbs represented in young children's minds are like islands, quite independent of each other. That is, their knowledge of the verbal argument structures is item-specific or tied to particular verbs. It is after some time that children start to generalise syntactic rules.

In the usage-based approach, frequency of input is crucial to language acquisition (Ellis, 2002). Braine and Brooks (1995) propose the Entrenchment Hypothesis that if a verb is repeatedly presented in a certain structure, it will impress the learners that this verb cannot be used in other structures, thus preventing the learners from associating this verb with other structures. In other words, the higher the frequency at which a structure is presented for a particular verb, the less likely it will be used in other structures. Goldberg (2006) expresses a similar view by pointing out that what impresses the learners is not the frequency of occurrence of a given verb, but the relative frequency at which this verb is chosen in a certain argument structure.

3 Previous Studies of L2 Acquisition of English Unaccusatives

L2 acquisition of English unaccusatives is a hot topic in L2 studies. There are three foci of attention in the studies of this topic. First is the L2 acquisition of the distinction between unaccusatives and unergatives, which is implicit to L2 learners. Researchers found that L2 learners tended to make errors with unaccusatives, but not with unergatives (Deguchi & Oshita, 2004; Hirakawa, 2000; Mo, 2006, 2011; Oshita, 2000, 2001; White, 2003; Zhang, 2009; Zhang & Qiao, 2013; Zobl, 1989). They suggested that

L2 learners were able to detect the thematic and deep-structure differences between these two groups of verbs.

The second research focus is the distinction between L2 acquisition of nonalternating unaccusatives and that of alternating ones. Yip (1995) argues that nonalternating and alternating unaccusatives pose different acquisition problems. To acquire non-alternating unaccusatives, L2 learners need to expunge the ungrammatical passive use of these verbs from their interlanguage grammar. To acquire alternating unaccusatives, they need to functionally distinguish the intransitive use of these verbs from their passive use. Other researchers are concerned with the acquisition order of non-alternating and alternating unaccusatives (J.T. Cai, 2000, 2008; Y. Cai, 2000; Tang & Huang, 2010; Wang & Yu, 2008; Yin & Yang, 2006; Zhang & Shi, 2012; Zhang & Qiao, 2013). They found that L2 learners overcame the passivisation or avoidance of non-alternating unaccusatives before they did with alternating ones. They suggested that L2 learners acquired non-alternating unaccusatives before they did with alternating ones.

The third research focus is the L2 acquisition of causative alternation, which is mainly concerned with alternating unaccusatives. Y. Cai (2000) focused on the acquisition of alternating unaccusatives that denote a change of state. He suggested that L2 learners first acquired the transitive use of alternating unaccusatives and then their intransitive use. His viewpoint was later echoed by J.T. Cai (2000) and Wang (2002). J. T. Cai suggested that the transitive use of alternating unaccusatives was unmarked, while its intransitive use was marked. The unmarked use was supposed to be acquired earlier than the marked use. Wang maintained that the intransitive use of alternating unaccusatives was a weakness in Chinese learners' acquisition of these verbs. He called upon Chinese English teachers and textbook developers to pay more attention to this usage, which, in his opinion, was commonplace in both Chinese and English and therefore was supposed to be acquired by Chinese learners.

Of the above three research foci of L2 acquisition of English unaccusatives, the third one is least investigated as far as Chinese learners of English are concerned. What is more, English alternating unaccusatives are not semantically differentiated, but regarded as a homogeneous group. Only a few studies have been conducted to investigate the potential between-verb variations in Chinese learners' acquisition of English alternating unaccusatives (Ju, 2000; Kang, 2010). Studies of L2 learners of other L1 backgrounds acquiring English alternating unaccusatives are rare, too.

Ju (2000) is the first to note between-verb variations among alternating unaccusatives in L2 English. She investigated the influence of conceptualisable agents in discourse on advanced Chinese English learners' tendency to passivize English unaccusatives, non-alternating and alternating alike. Through a forced-choice judgment task, she found that there were no significant differences among non-alternating unaccusatives in terms of susceptibility to the passivisation error, whereas such differences existed among alternating unaccusatives. She further attributed these between-verb variations in alternating unaccusatives to their varying degrees of external causation, suggesting that the stronger the external cause was, the more likely the alternating unaccusative was to be passivised.

Kang (2010) investigated the effect of verb semantics and frequency on Chinese learners' acquisition of English causative alternation by examining three verb groups: alternating unaccusatives, non-alternating unaccusatives and unergatives. For each group, there were three target verbs: a high-frequency verb, a low-frequency verb and a nonce verb. Through a grammaticality judgment task, she found that advanced Chinese learners could generally distinguish the three verb groups correctly, thus lending support to the Semantic Verb Class Hypothesis and the Entrenchment Hypothesis. However, there were great variations within the alternating unaccusative group, casting doubt on the validity of these two hypotheses. Kang chose break as a high-frequency alternating unaccusative, *shrink* a low-frequency one and *bart* a nonce one. If the Semantic Verb Class Hypothesis held true, Chinese learners would have acquired both the intransitive use and the transitive use of *break* and *shrink*, as both are externally caused and describe a change of state. If the Entrenchment Hypothesis were valid, Chinese learners would have acquired the two usages of break more successfully than they did with shrink. However, Chinese learners mastered the transitive use of *break*, but not its intransitive use. When it comes to *shrink*, however, the opposite is true. Thus, Kang concluded that Chinese learners' acquisition of alternating unaccusatives did not support the Semantic Verb Class Hypothesis or the Entrenchment Hypothesis.

Ju's and Kang's studies have showed that between-verb variations are not only real, but also wide. However, it is not clear what variation patterns alternating unaccusatives may have. And it is not clear what factors may have led to such variations. Therefore, it is necessary to study L2 learners' variable performance on verbs that belong to the same verb group. As Sikorska (2002) notes, "group results are misleading because they hide variability by subject and by lexical items" (p. 204). She recommends researchers to study learners' responses to individual verbs in that "by looking at responses on individual verbs, it can be established whether L2 learners treat verbs of the same class alike, as UG theory would predict" (p. 204).

Recognising the emerging trend of studying between-verb variations in second language acquisition research, this study set out to examine such variations in a more detailed way. In light of the strengths and weaknesses of the previous studies, it tried to make several improvements. First, it employed multiple instruments to elicit more types of learner data in a complementary sense. Second, it re-tested the validity of the Semantic Verb Class Hypothesis by making a finer semantic distinction between alternating unaccusatives. Third, it re-tested the Entrenchment Hypothesis by examining both verb frequency and relative frequency. Finally, it discussed the theoretical and pedagogical implications of the possible between-verb variations among alternating unaccusatives.

4 The Present Study

4.1 Research Questions

This study attempted to answer three research questions.

- 1. Are there significant between-verb variations in Chinese learners' written production and acceptability judgment of English alternating unaccusatives with respect to the intransitive use, the passive use and the transitive use respectively?
- 2. If so, what are the greatest between-verb variations among English alternating unaccusatives in these two tasks respectively?
- 3. Do verb semantics and frequencies contribute to the greatest between-verb variations among English alternating unaccusatives?

4.2 Participants

A total of 184 Chinese English learners participated in this study. They were studying in educational institutions of different levels in Jiangsu Province, People's Republic of China. Among them, 54 were 2nd-year students from a senior high school, 58 3rd-year students from the same school, 43 2nd-year English majors from a university, and 29 1st-year graduate students of English from another university. These students were the same subjects of Mo's (2011) study, which categorised them, according to their school years, as English learners of different proficiencies ranging from low, lower-intermediate, intermediate to advanced. They were so categorised because Mo's study had multiple research purposes, one of which was to track the developmental path of English unergatives, in Chinese learners' acquisition of these intransitive verbs. The influence of L2 proficiency, however, was not a concern of this study, which, under the influence of Kang (2010), preoccupied itself with the effect of verb semantics and frequency. Therefore, this study did not include L2 proficiency as a mediating variable, but took the students as a homogenous whole.

4.3 Target Verbs

This study chose six English alternating unaccusatives as its target verbs. They were *break*, *change*, *improve*, *increase*, *melt* and *sink*.

4.4 Instruments and Data Collection

To address the three research questions, this study devised four instruments. Of them, the first and second instruments were used to answer the first and second research questions while the third and fourth ones were used to answer the third research question.

The first instrument was a controlled written production task (see Appendix A), in which participants were asked to make sentences with a given verb and a given noun phrase. Their sentences were required to contain a given verb and a noun phrase and be grammatically correct. Furthermore, they were encouraged to create as many sentences as possible, as long as the given verb was used differently in different sentences. A sample of the controlled production task is shown in (5).

(5)	Break / the glass cup (玻璃杯)
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The second instrument was an acceptability judgment task (see Appendix B). Following Hwang (1999), this task presented each target verb in three syntactic structures: NP-V, NP-Be-Ven and NP1-V-NP2, which correspond to the intransitive use, the passive use and the transitive use respectively. Since this study was concerned with L2 acquisition of English unaccusatives, qualified subjects should, as suggested by Ju (2000), have acquired the rule of English passive voice. Therefore, twelve pseudo-passive sentences (e.g. *His mobile phone lost last week*) were included as distracters. All the test sentences and distracters were mixed and randomised. But sentences with the same target verb were so ordered that they did not appear in adjacency. Participants were asked to rate the acceptability of each sentence on a 5-point scale ranging from -2 to +2. They were also asked to provide a correct alternative when they assigned a negative score. A sample of the acceptability judgment task is shown in (6).

(6)	The window broke when it was hit by a stone.
	-2 - 1 0 + 1 + 2

The third instrument was interviews, which were conducted by the first author with 8 participants after they finished the written production task and the acceptability judgment task. These participants were 3 students with the student numbers of 12, 32 and 52 from the 3rd-year high school group and 5 students with the student numbers of 1, 3, 5, 9 and 21 from the 2nd-year English major group. These participants were chosen for the interviews on a random basis for the purpose of "minimizing any conscious or unconscious biases in the results of the study" (Brown, 2006, p. 22). The purpose of the interviews was to uncover the participants' thinking processes when they were performing on certain target verbs in these two tasks. The participants thus had an opportunity to recall how they dealt with the given language tasks and explain why they did with a particular verb in this way rather than another. For the

sake of smooth communication, the interviews were carried out mostly in Chinese. English was used sporadically when there arose a need to do so. No interviews were conducted with the 2nd-year high school group and the 1st-year English graduate group in that they were not available for immediate follow-up interviews.

The last instrument was a textbook corpus survey. Given that English textbooks constitute the major source of input in L2 settings (Xu, 2012), an English textbook corpus with a total of 600,314 words was constructed by the first author to examine the effect of L2 input on Chinese learners' acquisition of English alternating unaccusatives. It consisted of three series of textbooks developed by Liu (1996a, 1996b), Li (2001) and Zheng (2003) respectively. Liu's textbooks comprise both student books and student workbooks ranging from the first grade in junior high to the third grade in senior high. Li's textbooks are the *New Horizon College English series: Student's Books 1–4*, while Zheng's textbooks are the *Integrated Course of New College English series: Student's Books 1–4*.

It must be pointed out that the four instruments of this study were not designed on an equal footing in that they involved different numbers of participants and different numbers of target words. The first and second instruments (i.e. the production task and the acceptability judgment task) were the major instruments of this study in that they involved all the participants and all the target words. The third instrument (i.e. the interview) was supplementary by nature in that it only investigated a very small sample of participants. The fourth instrument (i.e. the textbook corpus survey) was also supplementary in that it only focused on the target words that constituted the largest variation in each syntactic structure.

4.5 Data Analysis

Data analysis of this study started with the handling of distracters, which were embedded in the judgment task to disqualify participants who had not acquired the English passive rule. This study divided participants into qualified and unqualified by setting a threshold of three for the 12 distracters. Any participant who made three or more wrong judgments on the distracters was disqualified, leading to the deletion of his or her data from the data pool. In the end, 33 out of 54 in the 2nd-year high school student group, 49 out of 58 in the 3rd-year high school student group, 43 out of 54 in the 2nd-year English major group, and 29 out of 29 in the 1st-year English graduate student group were considered as qualified participants. Thus, the total number of qualified participants was 154 and their data were kept for analysis.

When dealing with the production data, this study followed Hirakawa (2000) in identifying three structures in the data: NP-V, NP-Be-Ven and NP1-V-NP2. Five principles were established with reference to the data analysis methods used by the previous studies (Hirakawa, 2000; Oshita, 1997, 2000) and in light of the peculiarities of the data collected by the present study. First, learner sentences must contain the given verbs before they were included for further consideration. Second, only finite uses of the given verbs were included in data analysis. Third, learner sentences of

the same structural pattern were counted only once when they were produced by the same participant for the same verb (e.g. *The sun had melted the snow* and *The sun is melting the snow*). Fourth, learner errors in tense, number and other non-essential aspects were ignored. Finally, indeterminable structures and unintelligible sentences were excluded from data analysis. Guided by these five principles, the production data for each target verb were calculated as the probability at which a given structure was applied to a given target verb. Since each target verb was likely to be associated with three structures, it had three possible production probabilities, all of which fell in the range of 0–1 and were supplied with two decimals. With the use of Statistical Product and Service Solutions (SPSS), a one-way ANOVA test was performed on the production probabilities of all the six target verbs in each structure and paired samples t-tests on the production probabilities of the two target verbs that constituted the greatest variation in each structure.

The judgment data for each target verb was calculated as the participants' acceptance score of a given sentence containing this given verb. It fell in the range of -2 to 2 and was supplied with two decimals. The acceptance scores of all the six target verbs in each structure were first subject to a one-way ANOVA test with SPSS. When the greatest variation in each structure was preliminarily identified, it was put to paired samples t-tests.

The interview data was transcribed into Chinese and then translated into English. The Wordsmith Tools were used to retrieve concordance lines containing the six target verbs in the English textbook corpus. When analysing the textbook data, this study followed Oshita (1997, 2000) by deleting three special usages: (1) unaccusative verbs with propositional complements, namely, raising verbs (e.g. *appear (to be) happy, happen to be in the room*); (2) idioms and metaphorical usage of verbs (e.g. *fall in love, fall ill*); and (3) nonfinite verbs (e.g. infinitives (with or without *to*), gerunds, and participle constructions). This study made a distinction between verb frequency and relative frequency. The former was defined as the total occurrence of a target verb found in the cleaned data, whereas the latter was the number of times that a structure occurred for the same target verb, divided by the total verb frequency. The verb frequency was a natural figure while the relative frequency was a small figure between 0 and 1 with two decimals.

Since this study attempted to investigate the between-verb variations of six alternating unaccusatives used in three structures in two tasks, it may encounter a plethora of between-verb variations. It would be impossible to finish if every between-verb variation was included for cause analysis. To enhance the feasibility of cause analysis, this study only focused on two verbs constituting the greatest variation in each structure. Given that these two verbs represent the two extremes of the variation range of each structure, this method was named by this study as the Extreme Verb Method.

5 Results

5.1 **Between-Verb Variations in the Written Production Task** and the Acceptability Judgment Task

Statistical results showed that there were significant between-verb variations in both Chinese learners' written production of English alternating unaccusatives and their acceptability judgment of these verbs. Such variations existed in all the three syntactic structures: NP-V, NP-Be-Ven and NP1-V-NP2.

Table 1 shows the results of a one-way ANOVA performed on the six alternating unaccusatives in their respective chance of being used in the NP-V, NP-Be-Ven and NP1-V-NP2 structures in the written production task. As suggested by the p values, there are significant differences between these verbs in every given structure. That is to say, there are significant between-verb variations among alternating unaccusatives in the participants' written production data.

Table 2 shows the results of a one-way ANOVA performed on the mean scores of the six alternating unaccusatives in the acceptability judgment task. According to the p values, there are significant differences between these verbs in every given structure,

Structure	Verb								
		Break	Change	Improve	Increase	Melt	Sink	F	p
NP-V	М	0.12	0.55	0.31	0.77	0.90	0.97	122.324	0.000
	SD	0.33	0.50	0.46	0.42	0.31	0.16		
NP-Be-Ven	М	0.95	0.60	0.73	0.43	0.19	0.18	84.627	0.000
	SD	0.22	0.49	0.45	0.50	0.38	0.39		
NP1-V-NP2	М	0.88	0.72	0.35	0.31	0.14	0.05	106.582	0.000
	SD	0.33	0.45	0.48	0.46	0.34	0.22		

Table 1 Production probabilities of each syntactic structure for each alternating unaccusative in the written production task

Table 2	Acceptance	scores c	f each	alternating	unaccusative	in each	syntactic	structure	in the
acceptab	ility judgmer	nt task							

Structure		Verb	Verb						
		Break	Change	Improve	Increase	Melt	Sink	F	p
NP-V	М	-0.29	0.49	0.67	1.22	1.20	1.77	41.225	0.000
	SD	1.69	1.74	1.56	0.87	1.42	0.64		
NP-Be-Ven	М	1.37	1.05	0.84	-0.36	0.30	-1.08	61.390	0.000
	SD	1.27	1.42	1.45	1.56	1.73	1.38		
NP1-V-NP2	М	1.82	1.69	1.22	1.23	0.54	-0.03	68.862	0.000
	SD	0.50	0.68	0.76	1.08	1.37	1.53		

indicating significant between-verb variations among alternating unaccusatives in the acceptability judgment data. This finding lends support to Ju (2000), who found that there are significant between-verb variations in Chinese learners' acceptance of the passivisation of English alternating unaccusatives in the NP-Be-Ven structure.

5.2 Greatest Between-Verb Variations in the Written Production Task and the Acceptability Judgment Task

Data analysis based on the Extreme Verb Method showed that of the six alternating unaccusatives, *break* and *sink* constituted the greatest variation in both the written production task and the acceptability judgment task.

Figure 1 displays the probabilities of the NP-V, NP-Be-Ven and NP1-V-NP2 structures for each alternating unaccusative in the written production task. A glimpse of the production probabilities of the six verbs reveals that *sink* and *break* stand at the two extremes in all the three structures. But the pattern in the NP-V structure is opposite to those in the other two structures. In the NP-V structure, the probability of *sink* is the highest while that of *break* the lowest, whereas the probability of *break* is the highest and that of *sink* the lowest in the NP-Be-Ven and NP1-V-NP2 structures. Additional t-tests revealed significant differences in the production probabilities in each of the three structures (p = 0.000), verifying that these two verbs always constitute the greatest variations in the three structures, though in two different directions.

Figure 2 shows the mean score for each alternating unaccusative presented in each structure in the acceptability judgment task. It is obvious that *break* and *sink* occupy the two extremes of each zigzagging line, whatever structure it refers to.

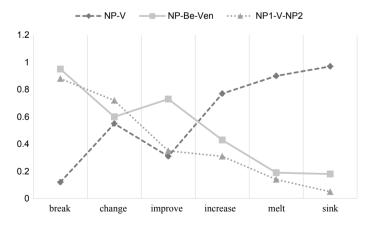


Fig. 1 Production probabilities of each syntactic structure for each alternating unaccusative in the written production task

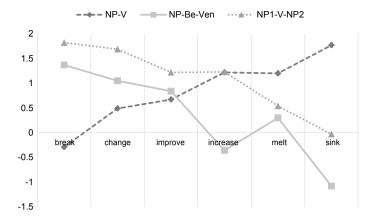


Fig. 2 Acceptance scores of each alternating unaccusative presented in each syntactic structure in the acceptability judgment task

However, the participants' acceptance of these two verbs in the NP-V structure is drastically different in that their acceptance of *break* was the lowest while that of *sink* was the highest. However, this pattern is completely reversed when it comes to the NP-Be-Ven and NP1-V-NP2 structures, both of which manifest the highest acceptance of *break* and the lowest acceptance of *sink*. Results of t-tests revealed that the differences between *break* and *sink* in the NP-V, NP-Be-Ven and NP1-V-NP2 structures were all statistically significant (p = .000). Therefore, the variations between *break* and *sink* were the greatest among the six alternating unaccusatives in each structure of the acceptability judgment task.

Table 3 summarises the greatest between-verb variations among the six alternating unaccusatives in the written production task and the acceptability judgment task respectively. It shows that *break* and *sink* form sharp contrasts in all the three structures.

Figure 3 shows that participants produced *break* in the NP-V structure with a ratio less than 0.15, but produced it in the NP-Be-Ven and NP1-V-NP2 structures with high probabilities exceeding 0.85. When it comes to *sink*, however, it is a contrasting

Structure	Variation						
	Highest		Lowest				
	Written production task	Acceptability judgment task	Written production task	Acceptability judgment task			
NP-V	Sink	Sink	Break	Break			
NP-Be-Ven	Break	Break	Sink	Sink			
NP1-V-NP2	Break	Break	Sink	Sink			

 Table 3
 Summary of greatest between-verb variations among alternating unaccusatives in the written production task and the acceptability judgment task

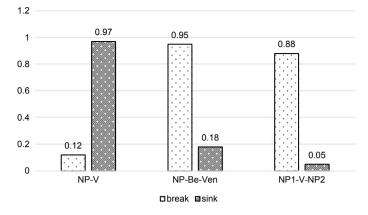


Fig. 3 Production probabilities of break and sink in the written production task

picture. That is, *sink* is produced in the NP-V structure with a probability of more than 0.95, but in the NP-Be-Ven and NP1-V-NP2 structures with probabilities less than 0.20.

Figure 4 shows that participants assigned a negative score to *break* in the NP-V structure, but gave very positive scores to its uses in the NP-Be-Ven and NP1-V-NP2 structures. When it comes to *sink*, however, it is a different picture. That is, *sink* in the NP-V structure was scored very positively, but its uses in the NP-Be-Ven and NP1-V-NP2 structures were both rated negatively.

The above results demonstrated that participants only acquired the transitive use of *break* and the intransitive use of *sink*. This finding echoes Kang (2010), who found that Chinese learners only acquired the transitive use of *break* and the intransitive use of *shrink*. These variations suggest that Chinese learners do not acquire alternating unaccusatives in the same way, despite the fact that they belong to the same group.

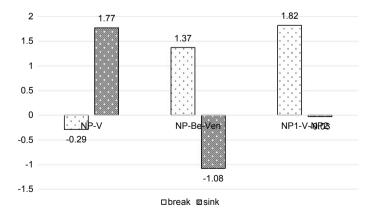


Fig. 4 Acceptance scores of *break* and *sink* in the acceptability judgment task

These variations confirm the Verb Island Hypothesis (Tomasello, 1992) that the initial acquisition of verbs is item-based.

6 Discussion

6.1 Effects of Verb Semantics

In this study *break* and *sink* were found to be both semantically similar and different. They are similar in that they are both externally caused. Their difference is that *break* has a stronger external causation than *sink*. Interview results showed that the semantic difference between *break* and *sink* affected Chinese learners' acquisition of these two verbs.

A participant whose student number was 1 in the 2nd-year English major group produced two sentences for break. Sentence One is The glass cup is broken, which takes the NP-Be-Ven structure, while Sentence Two is Who break the glass cup, whose syntactic structure is NP1-V-NP2. When asked what she meant by her first English sentence The glass cup is broken, she answered in Chinese that "玻璃杯破 \vec{j} " (Bolibei po le) (The glass cup broke). When asked if there were any other ways to express *Bolibei po le* (the glass cup broke) in English, she said in English that "[T]he glass cup is broken into pieces." When asked what she thought of the given sentence The glass cup broke when it fell on the floor, she did not say whether this sentence was correct. She just insisted that "[T]he glass cup is always broken by somebody." This participant's response showed that although she was capable of the intransitive use of "破" (po) (break) in Chinese, she had not mastered the intransitive use of break in English. She associated the action of breaking with an external force so strongly that in her English mental grammar, break was represented as a transitive verb only. A participant with the student number of 9 in the same group not only assigned -2 to the intransitive use of *break* presented in the NP-V structure in the acceptability judgment task, but also changed this sentence into the passive voice by replacing broke with was broken. She explained that "[T]he breaking of the window did not happen voluntarily. It must be a result of external forces. It must be broken by somebody or something. Therefore, it should use the passive voice." Feedback from these two participants showed that they always associated the verb action of breaking with an external force such as human actions. In other words, they believed that *break* was a verb with a clear and strong external causation, which rendered it difficult for them to acquire the intransitive use of this verb.

A participant with the student number of 52 in the 3^{rd} -year high school group assigned +2 to *sink* in the NP-V structure. When asked why he made such a judgment, he answered the small ship sank on its own. Therefore, it should be used in the active voice, as the given sentence *The small ship sank after it ran into a huge iceberg* did. A participant with the student number of 32 in the same group assigned -2 to *sink* in the NP-Be-Ven structure. When asked why he assigned such a negative score, he explained "[W]hen I was working on Sentence 20 [The small ship was sunk after it ran into a huge iceberg], I thought that this sentence was saying that the small ship was made to sink after it ran into the iceberg. It emphasised that it [the small ship] was made to sink. However, my view is that the small ship ran into the iceberg and then sank by itself. As far as a ship is concerned, it can do nothing but sink by itself. It is not possible to say that the ship was made to sink." Responses of these participants showed that they did not conceive any external cause for the sinking action of the small ship. Instead, it happened by itself. Therefore, it was easy for them to acquire the intransitive use of *sink*.

The fact that *break* has a stronger external causation than *sink* may have led Chinese learners to establish different mental representations for these two verbs. They may consider *break* as a transitive and *sink* as an intransitive in their interlanguage grammar. The divergent acquisition patterns of *break* and *sink* highlight the role of verb semantics in L2 acquisition. The pivotal role of verb semantics is exactly what the Semantic Verb Class Hypothesis (Pinker, 1989) argues for. Therefore, this study supports the Semantic Verb Class Hypothesis. It is noteworthy, however, that the acquisition difference between *break* and *sink* showed that Chinese learners had not acquired the causative alternation rules specified by this hypothesis, implying that there may be other factors at work.

6.2 Effects of Relative Frequency

This study found that verb frequency could not explain the found variations between *break* and *sink*. It was relative frequency that contributed to the sharp variations between these two verbs.

Table 4 shows the verb frequency and relative frequency of *break* and *sink* in the English textbook corpus. It is apparent that the verb frequency of *break* is much higher than that of *sink*. With regard to the relative frequency, however, the story between them is much more complicated. The relative frequency of *break* in the NP-V structure is proportionally lower than that of *sink*, whereas the reverse pattern emerges in the other two structures. The NP-V structure is the syntactic manifestation of the intransitive use of *break* and *sink*, the NP-Be-Ven structure the passive use, and the NP1-V-NP2 structure the transitive use. Given that the passive use is converted from the transitive use, it is in essence a transitive use, too. Therefore, it is possible to

Structure	Frequency	Frequency						
	Verb frequency	Relative frequency						
		NP-V	NP-Be-Ven	NP1-V-NP2				
break	91	0.16	0.44	0.40				
sink	19	0.89	0.00	0.11				

Table 4 Verb frequency and relative frequency of *break* and *sink* in the English textbook corpus

combine the passive use and the transitive use as a broad transitive use, thus yielding a rule that *break* has a lower relative frequency as an intransitive and a higher relative frequency as a transitive. By contrast, the relative frequency of *sink* as an intransitive is high but its relative frequency as a transitive is low. Interview results showed that the verb frequency difference between *break* and *sink* did not contribute to the variations between *break* and *sink*, because participants did not mention it at all. What impressed them was the distribution of the relative frequency of each verb.

A participant with the student number of 3 in the 2nd-year English major group produced break in NP1-V-NP2 and NP-Be-Ven structures. When asked if she had learned other usages of *break*, she answered no. A participant with the student number of 21 in the same group assigned -2 to *break* in the NP-V structure, suggesting that she did not accept the intransitive use of break at all. When asked why, she said that "[W]hat I have learned before is that the window and the breaking action formed a passive relationship. Therefore, I changed break into was broken." When asked if she ever encountered *break* used in a way like the given sentence *the window broke*, she said no. From the responses of these two participants, it can be seen that they did not have the faintest idea that *break* could be used as an intransitive verb in the NP-V structure. Naturally, they failed to produce or accept *break* in this structure. At the same time, participants were aware that the major relative frequency of *break* was its transitive use. For example, a participant with the student number of 21 from the 2ndyear English major group assigned -2 to *break* in the NP-V structure. When asked why she gave such a negative score, she answered that "[A]s far as I can remember, break is always used in the form of somebody breaking something or something being broken by somebody. I have never seen that *break* is used in the active voice when the sentence starts with something." This participant's response indicated that break was always used as a transitive. This could help to explain the finding participants produced and judged this verb in the NP1-V-NP2 and the NP-Be-Ven structures at a high rate.

A participant with the student number of 12 from the 3^{rd} -year high school group assigned +2 to *sink* in the NP-V structure. She explained "[T]his is the way that *sink* is used most of the time." On the other hand, a participant from the same group assigned to -2 to *sink* in the NP-Be-Ven structure. When asked whether her negative judgment of this sentence was made for grammatical reasons or for contextual considerations, she said that it was for grammatical reasons. "It [The small ship was sunk after it ran into a huge iceberg] is ungrammatical. I think *sink* is an intransitive verb." A participant with the student number of 5 in the 2^{nd} -year English major group produced two sentences for *sink*, which include *The small boat sank after hitting big stones under the water* and *They made the small boat sinking by holing on it*. When asked why she did not produce a sentence like *they sank the small boat by holing on it*, she answered "I have never used *sink* in a way that puts a noun immediately after it. I remember that that there is such a usage in the later acceptability judgment test. But I myself have never seen such a usage."

The fact that *break* had a high verb frequency did not guarantee that Chinese learners acquired both the transitive use and the intransitive use of this verb as an alternating unaccusative. It was the low relative frequency of *break* presented

in the NP-V structure that rendered it difficult for Chinese learners to acquire the intransitive use of this verb. The effect of relative frequency was also attested by Chinese leaners' acquisition pattern of *sink*. Despite its low verb frequency, *sink* boasted a high relative frequency of being used in the NP-V structure, which made it easy for Chinese learners to acquire its intransitive use. The importance of the relative frequency to Chinese learners' acquisition of alternating unaccusatives verifies the Entrenchment Hypothesis (Braine & Brooks, 1995).

7 Theoretical and Pedagogical Implications

7.1 Advocating a Dual Theoretical Approach to Language Acquisition

The finding of this study on Chinese learners' varied acquisition patterns of *break* and sink corroborates both the Semantic Verb Class Hypothesis and the Entrenchment Hypothesis. This is opposite to Kang (2010), whose finding on break and shrink does not support either of these two hypotheses. This disagreement results from Kang's inappropriate research design and inadequate data interpretation. In Kang's study, *break* and *shrink* are thought to be semantically identical on the grounds that both of them are externally caused to describe a change of state. It is justified in doing so when they are grouped as alternating unaccusatives to contrast with nonalternating unaccusatives or unergatives. However, when efforts are made to make a comparison within the alternating unaccusatives, the semantic difference between break and shrink cannot be ignored. That is, break has a much greater external cause than *shrink*. This semantic difference between *break* and *shrink* contributes to the acquisition difference that Chinese learners have more difficulty acquiring the intransitive use of *break* than that of *shrink*, thus lending support to the Semantic Verb Class Hypothesis. In the same vein, Kang's failure to confirm the Entrenchment Hypothesis is also due to his inadequate handling of the frequency factor. Kang only identified the verb frequency difference between break and shrink. He did not examine the relative frequency difference between them. If he showed that *break* had a low relative frequency of being used in the NP-V structure while shrink had a high relative frequency in the NP-V structure, he would have explained his finding that Chinese learners were not able to acquire the intransitive use of break, but were capable of using shrink in this way. Therefore, a new interpretation of Kang's finding on break and shrink is also in favor of the Semantic Verb Class Hypothesis and the Entrenchment Hypothesis.

The finding of this study is similar to some of the L1 studies. Ambridge et al. (2008) detected the effect of both verb semantics and frequency on L1 children's and adults' graded judgments of argument structure overgeneralisation error. Tomasello (2003) found that frequency played a role in the early stage of children's language acquisition, while semantic constraints started to work after the age of four and a

half. Despite the fact that the Semantic Verb Class Hypothesis is proposed from a UG-based approach to language acquisition and the Entrenchment Hypothesis is grounded in a usage-based approach, both of them are supported by this and other studies, L2 and L1 alike. This suggests that these two approaches are not as incompatible as they seem to be. They may be complementary rather than mutually exclusive of each other. Therefore, this study recommends the combined use of the UG-based approach and the usage-based approach to language acquisition studies. A dual approach may be more effective than a single one in revealing the whole picture of language acquisition in case that both innateness and experience may be at work in language acquisition.

7.2 Promoting an Integrated Approach to the Teaching of English Alternating Unaccusatives

There are two misconceptions about the teaching of English alternating unaccusatives. The first is the view of Yip (1995), who suggests the acquisition task of alternating unaccusatives is to functionally distinguish between the intransitive use and the passive use. For alternating unaccusatives that denote a strong external causation (e.g. *break*, *drop*), the crux of the problem is not that L2 learners are not able to distinguish the two different uses, but that they have great difficulty acquiring the intransitive use in the first place. For alternating unaccusatives that denote a weak external causation (e.g. *sink*, *shrink*), the passive use of these verbs is found by this study to be nearly non-existent in the L2 learners' interlanguage grammar, which does not provide any ground for L2 learners to figure out the functional meaning of their passive use. Therefore, Yip's view on the teaching of English alternating unaccusatives is seriously flawed. It is only applicable to advanced L2 learners who have acquired both the transitive use and intransitive use of English alternating unaccusatives and reached the stage of distinguishing the functional differences of these verbs used in the NP-V and NP-Be-Ven structures respectively.

Compared with Yip's view, the second misconception is more widespread that the teaching task of English alternating unaccusatives is to help L2 learners acquire their intransitive use on the basis of the transitive use (J.T. Cai, 2000; Y. Cai, 2000; Wang, 2002). This view is partially supported by this study, because it only captures half of the teaching story. That is, it is applicable to English alternating unaccusatives that denote a strong external causation (e.g. *break*, *drop*), but not to those that denote a weak external causation (e.g. *sink*, *shrink*). For the latter type of unaccusative, L2 teachers do not need to instruct learners on the intransitive use, but rather remind them of the transitive use.

It is evident that there is no single, uniformed rule of teaching English alternating unaccusatives. Given that not all unaccusatives are acquired equal, L2 teachers should not teach them in an equal way, either. A sensible teaching approach should take into account the between-verb variations of English alternating unaccusatives. It takes at

least two steps to adopt such an approach. First, a subtle semantic distinction must be made among English alternating unaccusatives. Despite the fact that these verbs are all externally caused, the degree of external causation varies from verb to verb. They are not a homogenous group, but form a hierarchy of external causation. On the top of the hierarchy are alternating unaccusatives with a strong external causation (e.g. break, drop), while on the bottom are those with a weak external causation (e.g. sink, shrink). Second, a subtle frequency distinction must be made among English alternating unaccusatives. Given that a high verb frequency alone cannot lead to a full, successful acquisition of English alternating unaccusatives, L2 teachers should stay alert, devoting attention not only to low-frequency unaccusatives, but also to highfrequency ones. This is necessary because both low-frequency and high-frequency alternating unaccusatives may have a skewed distribution of relative frequencies. For example, as this study shows, the major relative frequency of *sink* is the intransitive use, while that of *break* the transitive use. Since each alternating unaccusative deserves the teachers' attention, an item-based teaching is called for. Therefore, an effective approach to the teaching of English alternating unaccusatives should integrate both verb semantics and frequencies. It will be an explicit vocabulary teaching method which tells students that some English verbs can be used both intransitively and transitively. These verbs are called alternating unaccusatives. The greater the external cause of an alternating unaccusative is, the more probably it will be used transitively. Even high-frequency alternating unaccusatives deserve students' attention in that students may fail to acquire both the transitive use and intransitive use of these verbs.

8 Conclusion

Through a combined use of a written production task and an acceptability judgment task, this study reported significant between-verb variations among the six alternating unaccusatives in three syntactic patterns in two tasks. By utilising the Extreme Verb Method, this study found that Chinese learners mainly acquired the transitive use of *break* and the intransitive use of *sink*. Interviews and a textbook corpus survey revealed that these acquisition differences between *break* and *sink* were attributable to verb semantics and relative frequency.

By revealing the between-verb variations among alternating unaccusatives, this study provided fresh insights into L2 acquisition. That is, L2 acquisition of the same verb group may be more diverse than what the UG-based or the usage-based approach suggests. Underneath the verb group results, there may exist significant individual verb differences. However, these differences have not received due attention. Thus, it is high time to heed these differences. Only in this way can L2 researchers and teachers arrive at a complete understanding of L2 learning and teaching.

This study has some limitations. First, the number of target words, which is six in this study, may not be adequately large. Second, the Extreme Verb Method used in the

data analysis may have hidden some of the between-verb variations, thus producing an incomplete picture of the acquisition story. Third, the role of English proficiency is not investigated in this study, which has not brought to light the developmental path of L2 acquisition of alternating unaccusatives. Fourth, the influence of pragmatic discourse and the transfer of L1 are not examined in this study, which may also contribute to the between-verb variations of alternating unaccusatives. Fifth, the interview data and the textbook corpus data are not analysed systematically. Future studies are encouraged to overcome these limitations by including more target words, analysing the learner data in a more careful way, tracking the development of L2 acquisition of alternating unaccusatives and considering more contributing factors such as discourse pragmatics and L1 influence.

Acknowledgements This study is funded by two research projects. The first one is *The Use of Corpus in the Cultivation of English Stylistic Competence* (2910341520), which is a teaching reform project of Suzhou City University. The second one is *Effects of L1 transfer and intra-lingual factors on the use of English verb argument constructions by Chinese learners*, which is a research project funded by the Chinese Ministry of Education (18YJA740001).

Appendixes

Note 1: The two tasks of this paper are part of another study with more research purposes. To keep the two tasks unchanged in the least sense, the full form of the original version is provided as follows.

Note 2: The following two tasks were designed in Chinese. English instructions, directions and reminders were provided when they were included in this book for publication. They are written in the italicised form and brackets for the purpose of differentiation.

(Hello, there.

Thank you very much for participating in this English language survey, which is composed of two tasks. Please proceed with Task 1. When you finish it, you can start doing Task 2.

Before you start, please provide some background information about yourself. Your information and your performance in the two tasks will be used for research purposes only. Please feel safe.

Thank you.)

同学:

您好!

首先,非常感谢您参与本次的英语能力测试。本测试由两个语言任务组成。 请先完成任务1,再完成任务2。

在开始之前,请简单说明您的背景信息。您提供的信息和将要完成的两个语 言任务,都会被严格保密,将只用于研究的目的。敬请放心。

谢谢!

(School:	Class:	Student number:	Chinese name:
).			
学校:	班级:	·	
学号:	姓名:	·	

Appendix A

Written Production Task

(Task 1)

任务1

(Directions: Please make sentences with the given verb and noun phrase. You can make whatever sentences you like, as long as your sentences contain the given verb and noun phrase and are grammatically correct. You are encouraged to make as many different sentences as possible, as long as each sentence uses the given verb in a different way.)

说明:请用所给的动词和名词短语组合造句。你可以自由地造句,但你造出 来的每一个句子都必须包含所给的动词和名词短语组合,而且都必须合乎语法 。我们希望你能为每个组合造尽可能多的句子(越多越好),但是每个句子中动 词的用法要各不相同。

(Example: learn / the Chinese language.

More and more foreigners (外国人) are learning the Chinese language.

The Chinese language is learned by more and more foreigners (外国人).)

例如: learn / the Chinese language.

More and more foreigners ($\# \equiv \wedge$) are learning the Chinese language.

The Chinese language is learned by more and more foreigners (外国人).

(As is shown above, a student makes two sentences with the given verb "learn" and the given noun phrase "the Chinese language." Both sentences are grammatically correct. What's more, they use the given verb "learn" in different ways. One is in the active voice, and the other the passive voice.)

如上所示,某学生用learn / the Chinese language组合造了两个合乎语法的句子,而且在这两个句子中动词learn的用法各不相同。一个是主动态的用法,一个是被动态的用法。

(Reminders: First, although some of the given verbs (e.g. fall, break, change and laugh) can be used as nouns, you are asked to use them not as nouns, but as verbs. Second, if you meet any unknown words, you can ask the survey administrator for help. Third, although there is no time limit on this task, please move on to the next task when you finish it.)

提醒:(1)虽然有些动词也可以做名词,比如fall、break、change和laugh等, 但是请你不要把它们用做名词,而<u>要把它们作为动词来造句</u>。(2)如果你遇到 不认识的单词,可以提出来。(3)本任务没有时间限制,但你做完之后就请开始 下一个任务。

Arrive/a strange man (陌生人)

Run/the young athletes (年轻的运动员)

Break/the glass cup (玻璃杯)

Exist/some old customs (旧风俗)

Cry/the little boy (小男孩)

Improve / people's health (人们的健康)

Appear / a new product (新产品)

Sing/the famous singer (著名歌星)

Sink/the small boat (小船)

Remain/only a few things (只有少数几样东西)

Dance/the beautiful girl (美丽的女孩)

Increase/the vegetable prices (蔬菜的价格)

Fall/many leaves (许多树叶)

Laugh/the audience (观众)

Change/her life attitude (她的生活观念)

Happen/a traffic accident (交通事故)

Swim/the little ducks (小鸭子)

Melt/the snow (雪)

(Thank you very much for finishing Task 1. Please move to the next page to start Task 2.)

感谢您完成任务1,请翻至下一页开始任务2。

Appendix B

Acceptability Judgment Task

(Task 2)

任务2

(Directions: Please read each of the following paragraphs and decide on a 5point scale the acceptance of each underlined part in terms of both grammatical correctness and contextual appropriateness. If you assign a negative score, please identify the error you perceive and correct it.)

说明:请仔细阅读下面的段落,然后从语法正确和语境得体两个方面来判断 各划线句子的可接受程度,并根据所给的5分制对其打分。如果你给的是负值, 请指出错误并改正。

-2-1 - 0 +1 ----+ 2 slightly completely cannot slightly completely Unacceptable unacceptable decide acceptable acceptable -- -1 ----- 0 ------+1 -----+2 -2无法 有点 完全 完全 有点 判断 不能接受 不能接受 能接受 能接受 are (Example: Jane has three sisters. All of them \is\ v college students.) \mathcal{O} -10 +1+2are 例如: Jane has three sisters. All of them \is\ v college students. €2 -1 0 +1+2

(A student circles -2, because he/she finds the underlined part completely unacceptable. He/she perceives that the subject of the given sentence is given in the plural form and therefore "is" is not acceptable and "are" is needed. So he/she crosses "is" out and provides "are" for it, as shown above.)

某学生选择 -2, 是因为他觉得该划线句子完全不能接受。他发现, 该句子的 主语是复数, 所以不能用 is, 而要用 are。因此, 他把 is 划掉, 在其周围写上正确 的单词are (如上所示)。

(Reminders: First, please don't worry about whether your performance is correct or wrong in that this task only aims at investigating your language intuition. <u>What</u> you are expected to do is to make a quick judgment according to your first response. Second, please do the judgment according to its natural order. Don't refer back to the previous ones or skip any items. Third, the part without any underlining is correct. You only need to decide the acceptance of each underlined part. Fourth, when you meet any unknown word, you can ask for help. Fifth, there is no time limit on this task. But you are expected to submit your test paper as soon as you finish it.)

提醒: (1)因为本任务的目的是调查你的语感, 所以请不要担心对错。你只需 根据自己的第一反应迅速做出判断即可。(2)在做题的过程中,请按照先后顺序 依次往下做,而不要往回翻,也不要漏题。(3)不划线的部分都是正确的,你只需 判断划线句子的可接受程度。(4)如果你遇到不认识的单词,可以提出来。(5)本 任务没有时间限制,但你做完之后就请立即交卷。

(1) David had a party last weekend. Many people invited to his party.

(2) The birthday cake fell on the floor.

-2 -1 0 +1 +2

- (3) <u>The window broke</u> when it was hit by a stone. -2 -1 0 +1 +2
- (4) <u>The little boy cried</u> when the nurse was about to (准备) give him an injection (给他打针).
 -2 -1 0 +1 +2

(5) <u>I impr</u>	oved my s	spoken E	nglish (J	英语口语):	<u>a lot</u> after I went to college (上大学).
-2	-1	0	+1	+2	

(6) <u>The lab assistant (助手) happened an accident</u> when he mixed (混合) the wrong chemicals (化学药剂) together.
 -2 -1 0 +1 +2

(7) <u>The teacher sang all the students together</u> as she played the piano (弾钢琴). -2 -1 0 +1 +2

(8) The famous writer wrote a new novel (小说). It published a month later. -2 -1 0 +1 +2

(9) <u>That patient (病人) was remained in the hospital for a few more days.</u> $-2 \quad -1 \quad 0 \quad +1 \quad +2$

(10) <u>His lifestyle (生活方式) was completely changed</u> after he got married (结婚).

 -2
 -1
 0
 +1
 +2

(11) <u>Tom is swum for more hours every day</u> after he got a new coach (教练). -2 -1 0 +1 +2

(12) Jane wrote a Christmas card (圣诞节贺卡) yesterday.
 -2 -1 0 +1 +2

(13) <u>Gender discrimination (性别歧视) exists in today's job market (人才市场).</u> -2 -1 0 +1 +2

(14) In less than a year, the number of workers in that factory increased from 100 to 500. -2 -1 0 +1 +2

- (15) Jack ran faster and faster when his classmates cheered (为...鼓劲加油) him loudly.
 -2 -1 0 +1 +2
- (16) <u>My grandma melted the butter (黄油) quickly</u> when she put it on the stove (炉子). -2 -1 0 +1 +2
- (17) <u>The little girl fell the birthday cake on the floor.</u> -2 -1 0 +1 +2

-1

(18) The audience (观众) danced the dancers (舞蹈演员) more enthusiastically (热情地) when they applauded (鼓掌).

+1

+2

0

(19) <u>A dove (鸽子) was appeared out of the magician's (魔术师) sleeve (袖子).</u>

 -2
 -1
 0
 +1
 +2

(20) <u>The small ship was sunk</u> after it ran into (撞上) a huge iceberg (冰山). -2 -1 0 +1 +2

(21) <u>The little boy was cried</u> when the nurse was about to (准备) give him an injection (给他打 针).

-2 -1 0 +1 +2

-2

(22) I borrowed a book from the library. <u>It returned to the library a week later.</u>

-2 -1 0 +1 +2

- (23) <u>He changed his lifestyle (生活方式) completely</u> after he got married (结婚). -2 -1 0 +1 +2
- (24) <u>The postman arrived today's newspaper earlier than usual (比平常早).</u> -2 -1 0 +1 +2

(25) The funny clown (滑稽的小丑) laughed all the people when he started to perform (开始表								
演).								
-2 -1 0 $+1$ $+2$								
(26) It is a new bicycle. It must keep inside the house at night.								
-2 -1 0 $+1$ $+2$								
(27) <u>An accident was happened</u> when the wrong chemicals (化学药剂) were mixed (混合) together.								
-2 -1 0 $+1$ $+2$								
(28) In loss than a year, the number of workers in that factory was increased from 100 to 500								
(28) In less than a year, the number of workers in that factory was increased from 100 to 500. -2 -1 0 $+1$ $+2$								
(29) <u>Jack was run faster and faster</u> when his classmates cheered (为 鼓劲加油) him loudly. -2 -1 0 +1 +2								
(30) That patient (病人) remained in the hospital for a few more days.								
-2 -1 0 $+1$ $+2$								
(31) My spoken English (英语口语) improved a lot after I went to college (上大学).								
-2 -1 0 $+1$ $+2$								
 (32) <u>The dancers (舞蹈演员) danced more enthusiastically (热情地)</u> when the audience (观众) applauded (鼓掌). -2 -1 0 +1 +2 								
(33) My son wanted a new football. <u>It bought this morning.</u>								
-2 -1 0 $+1$ $+2$								
(34)Gender discrimination (性别歧视) is existed in today's job market (人才市场)2-10+1+2								

- (35) <u>The window was broken</u> when it was hit by a stone. -2 -1 0 +1 +2
- (36) <u>All the students were sung together</u> as their teacher played the piano (弾钢琴). -2 -1 0 +1 +2
- (37) <u>Today's newspaper arrived earlier than usual (比平常早).</u> -2 -1 0 +1 +2
- (38) <u>The small ship sank</u> after it ran into (撞上) a huge iceberg (冰山). -2 -1 0 +1 +2
- (39) <u>All the people laughed</u> when the funny clown (滑稽的小丑) started to perform (开始表演).
 -2 -1 0 +1 +2
- (40) It rained heavily (下暴雨) for several days. <u>Many crops destroyed in this heavy rain (暴雨).</u> -2 -1 0 +1 +2
- (41) <u>A bad boy broke the window with a stone.</u> -2 -1 0 +1 +2
- (42) <u>The doctor remained that patient (\overline{n} λ) in the hospital for a few more days.</u> -2 -1 0 +1 +2

(43) <u>The nurse cried the little boy</u> when she was about to (准备) give him an injection (给他打 针).

-2 -1 0 +1 +2

- (44) Helen made an apology (道歉) to her mother. <u>Her apology accepted quickly.</u> -2 -1 0 +1 +2
- (45) <u>The birthday cake was fallen on the floor.</u> -2 -1 0 +1 +2
- (46) <u>My spoken English (英语口语) was improved a lot</u> after I went to college (上大学).

 -2
 -1
 0
 +1
 +2

(47) <u>The dancers (舞蹈演员) were danced more enthu</u>	usiastically (热情地) when the audience							
(观众) applauded (鼓掌).								
-2 -1 0 $+1$	+2							
(48) Several years passed by. The details (细节) of the event (事件) forgot.								
-2 -1 0	+1 +2							
(49) <u>An accident happened</u> when the wrong chemicals (-2 -1 0 $+1$ $+2$	化学药剂) were mixed (混合) together.							
(50) His lifestyle (生活方式) completely changed after h -2 -1 0 +1 +2	ne got married (结婚).							
(51) <u>Tom swims for more hours every day</u> after he got a -2 -1 0 $+1$ $+2$	new coach (教练).							
(52) The huge iceberg (沙山) sank the small ship. -2 -1 0 $+1$ $+2$								
(53) <u>The magician (魔术师) appeared a dove (鸽子) ou</u>	t of his sloove (袖子)							
-2 -1 0 +1 +2								
	-							
(54) <u>Jack's classmates ran Jack faster and faster</u> when the -2 -1 0 $+1$ $+2$	hey cheered (为鼓劲加油) him loudly.							
(55) The left brake (左刹车) of my bike didn't work well.	<u>It repaired immediately.</u> -2 -1 0 +1 +2							
(56) <u>Today's newspaper was arrived earlier than usual</u> -2 -1 0 +1 +2	<u>(</u> 比平常早).							
(57) <u>The butter (黄油) was melted quickly</u> when it was -2 -1 0 $+1$ $+2$	put on the stove (炉子).							

(58) <u>All the peo</u> 表演). -2 -1	ple were laug 0 +1 +		e funny clov	wn (滑稽的/	小丑) started to	perform (开始			
(59) Everyone a	greed that som	ething should	be done. <u>A</u>						
(60) In less than a year, <u>the factory owner (工厂的老板) increased the number of workers in</u> <u>that factory from 100 to 500.</u>									
	<u>III 100 to 500.</u>	-2	-1	0	+1	+2			
(61) <u>Some empl</u>	overs (雇主) e	exist gender d	liscriminat	ion (性别歧	视) in today's	job market (人			
<u>才市场).</u>	-2	-1	0	+1	+2				
(62) <u>Tom's new coach (教练) swims Tom for more hours every day.</u> -2 -1 0 +1 +2									
(63) The teacher pointed out the mistakes in the students' homework. The mistakes corrected immediately. $-2 -1 0 +1 +2$									
	(64) <u>A dove (鸽子) appeared out of the magician's (魔术师) sleeve (袖子).</u>								
-2	-1	0 +1	+2						
(65) <u>The butter (黄油) melted quickly</u> when it was put on the stove (炉子). -2 -1 0 +1 +2									
(66) <u>All the students sang together</u> as their teacher played the piano (弹钢琴). -2 -1 0 $+1$ $+2$									
(Please subm	it your test p	paper as so	on as you	finish it. T	^r hank you ve	ery much for			
your participatic 做完之后,请			》与和支持	寺!					

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