

Individual Verb Differences in Chinese Learners' Acquisition of English Non-alternating Unaccusatives

Junhua Mo

School of Foreign Languages, Soochow University, China

Abstract—Individual verb differences in L2 acquisition of English unaccusatives have been neglected by previous studies. This study focuses on such differences by investigating Chinese learners through the combined use of a written production task, an acceptability judgment task, interviews and a textbook corpus survey. It finds that there are significant individual verb differences in Chinese learners' acquisition of English non-alternating unaccusatives. It suggests that the differences are mainly caused by varied lexical frequencies and teachers' explicit instructions.

Index Terms—second language acquisition, non-alternating unaccusatives, individual verb differences, contributing factors

I. INTRODUCTION

The Unaccusative Hypothesis (Burzio, 1986; Perlmutter, 1978) posits that intransitives can be divided into unaccusatives (e.g. *happen, break*) and unergatives (e.g. *jump, sleep*). The surface subject of unaccusatives is the deep structure object, whereas that of unergatives is the deep structure subject. The distinction between unaccusatives and unergatives is widespread, which can be found in English, Chinese and many other languages. As far as English is concerned, its unaccusatives can be further divided into non-alternating unaccusatives and alternating ones. The former can only be used as intransitives (e.g. *fall, remain*), while the latter can also be used as transitives without undergoing morphological changes (e.g. *close, shrink*).

II. LITERATURE REVIEW

Most of the previous studies are concerned with verb group differences such as the differences between unaccusatives and unergatives or the differences between alternating and non-alternating unaccusatives (Deguchi and Oshita, 2004; Hwang, 1999; Hirakawa, 2000; Ju, 2000; Yip, 1995; Oshita, 2001). Of all these studies, Ju (2000) is the only one that paid some attention to individual verb differences among unaccusatives. After examining differences between the group of non-alternating unaccusatives and that of alternating unaccusatives, she looked at individual verb differences within each of these two verb groups. She found that there were no significant differences among non-alternating unaccusatives in terms of susceptibility to the passivization error, whereas such differences existed among alternating unaccusatives. Ju explained these individual verb differences by suggesting that alternating unaccusatives denote different degrees of external causation. The stronger the external cause is, the more likely the verb is to be passivized.

In spite of the attention that Ju devoted to such differences, they have been largely ignored by the previous studies. However, as some of the recent studies report, individual verb differences are not only real, but also wide (No and Chung, 2006; Zyzik, 2006). They argue that it is of great importance to account for L2 learners' variable performance on verbs that belong to the same verb group. On the other hand, Sikorska (2002) cautions that "group results are misleading because they hide variability by subject and by lexical items" (p. 204). She advises researchers to study learners' responses on individual verbs.

Recognizing the emerging trend of studying individual verb differences in SLA research, this study focused on the such differences in Chinese learners' acquisition of non-alternating unaccusatives. It also attempted to discuss factors that led to these differences if they were found to be statistically significant. In doing so, it would yield a better understanding of L2 learners' acquisition of English unaccusatives.

III. METHODOLOGY

A. Research Questions

This study had two research questions to answer. (1) Are there individual verb differences in Chinese learners' acquisition of English non-alternating unaccusatives? (2) If so, what factors contribute to these differences?

B. Participants

A total of 184 Chinese English learners participated in this study. Of them, 54 were 2nd-year students from Hua Luogeng High School in Jintan, Jiangsu Province, 58 3rd-year students from the same school, 43 2nd-year English majors from Suzhou University, Jiangsu Province, 29 1st-year graduate students of English from Nanjing University in the same province.

C. Target Words

This study chose six non-alternating unaccusatives as its target words. They were *appear, arrive, exist, fall, happen,* and *remain*.

D. Instruments

This study devised four instruments. First was a controlled written production task, which asked the participants to make sentences with a target verb and a noun phrase. They were free to make the sentences they liked, but their sentences must contain the given verb and noun phrase and must be grammatically correct. Furthermore, they were encouraged to create as many sentences as possible, as long as the given verb was used differently in each sentence.

The second instrument was an acceptability judgement task. Following Hwang (1999), this task presented each target word in the NP-V, NP-Be-Ven and NP1-V-NP2 structures. 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, 12 pseudo passive sentences (e.g. *His mobile phone lost last week*) were included as distracters. All the test sentences and distracters were mixed and randomized. But sentences with the same target word were so ordered that they did not appear in adjacency. The participants were asked to rate the acceptability of each sentence on a 5-point scale ranging from -2 to +2.

The third instrument was the use of interviews, which were conducted by the author of this paper with some participants after they finished the the written production task and the acceptability judgment task. The interviews, which were aimed at finding out what was going on in the participants' minds when they were performing on certain target verbs in these two tasks, were carried out mostly in Chinese and occasionally in English.

The fourth instrument was a textbook corpus survey. An English textbook corpus with a total of 600,314 words was constructed. This corpus consisted of three series of textbooks developed by Liu (1996a, 1996b), Li (2001), and Zheng (2003) respectively.

E. Data Processing

When dealing with the production data, this study followed Hirakawa (2000) to categorize its production data into six structures: NP-V, NP-Be-Ven, There-V-NP, Ø-V-NP, It-V-NP and NP1-V-NP2. When handling the judgment data, this study divided the participants into qualified and unqualified by setting a threshold of 3 for the 12 distracters. Any participant who made 3 or more wrong judgments on the distracters was disqualified, resulting in the deletion of his or her data from the data pool. In the end, the 2nd-year high school student group had 33 qualified participants, the 3rd-year high school student group 49, the college student group 43, the graduate student group 29. The interview data was transcribed and translated into English by the author of this paper. In the analysis of its textbook corpus data, this study followed Oshita (1997) 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,* etc); (2) idioms and metaphorical usage of verbs (e.g. *fall in love, fall ill,* etc); (3) nonfinite verbs (e.g. infinitives (with or without *to*), gerunds, and participle constructions).

This study analysed the individual verb differences on a structural basis in that it examined six structures in its written production task and four structures in its acceptability judgment task. Furthermore, it focused on two verbs that constituted the greatest difference in each structure. This way of analysis was named the Extreme Verb Method.

IV. RESULTS AND DISCUSSION

A. Written Production Results

TABLE 1:
RESULTS OF A ONE-WAY ANOVA ON NON-ALTERNATING UNACCUSATIVES IN THE WRITTEN PRODUCTION

Overall		appear	arrive	exist	fall	happen	remain	F	P
NP-V	M	0.89	0.98	0.79	0.94	0.94	0.72	15.976	.000
	SD	0.31	0.14	0.41	0.24	0.24	0.45		
NP-Be-Ven	M	0.11	0.02	0.22	0.09	0.03	0.29	16.943	.000
	SD	0.31	0.14	0.42	0.29	0.18	0.45		
There-V-NP	M	0.09	0.18	0.16	0.05	0.13	0.14	3.362	.005
	SD	0.29	0.38	0.37	0.21	0.34	0.35		
Ø-V-NP	M	0.08	0.01	0.09	0.05	0.01	0.03	4.260	.001
	SD	0.27	0.11	0.29	0.22	0.08	0.18		
It-V-NP	M	0.00	0.00	0.00	0.00	0.00	0.00	16.258	.000
	SD	0.00	0.01	0.06	0.02	0.01	0.17		
NP1-V-NP2	M	0.00	0.08	0.24	0.14	0.11	0.38	16.258	.000
	SD	0.00	0.08	0.24	0.14	0.11	0.38		

Table 1 shows the results of a one-way ANOVA performed on the six non-alternating unaccusatives in their respective chance of being used in the NP-V, NP-Be-Ven, There-V-NP, Ø-V-NP and NP1-V-NP2 structures, with the exception of the It-V-NP structure, the means of which was zero. The P-values in the right column of Table 1 indicate that there were significant differences between these verbs in five structures.

First, as far as the NP-V structure was concerned, the frequency of *arrive* was the highest while that of *remain* the lowest. Results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 7.091$, $p = .000$. Therefore, *arrive* and *remain* constituted the greatest difference among non-alternating unaccusatives in the NP-V structure. According to the Extreme Verb Method, which targeted only two verbs that formed the greatest difference in each structure, they were selected for individual analysis.

Second, with respect to the NP-Be-Ven structure, the frequency of *remain* was the highest while that of *arrive* the lowest. Results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 7.215$, $p = .000$. Therefore, *remain* and *arrive* constituted the greatest individual verb difference among non-alternating unaccusatives in the NP-Be-Ven structure. According to the Extreme Verb Method, they were selected for individual analysis.

Third, as for the There-V-NP structure, the frequency of *arrive* was the highest while that of *fall* the lowest. Results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 3.955$, $p = .000$. Therefore, *arrive* and *fall* constituted the greatest individual verb difference among non-alternating unaccusatives in the There-V-NP structure. According to the Extreme Verb Method, they were selected for individual analysis.

Fourth, regarding the Ø-V-NP structure, the frequency of *exist* was the highest while that of *arrive* the lowest. Results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 3.309$, $p = .001$. Therefore, *exist* and *arrive* constituted the greatest individual verb difference among non-alternating unaccusatives in the Ø-V-NP structure. According to the Extreme Verb Method, they were selected for individual analysis.

Fifth, concerning the NP1-V-NP2 structure, the frequency of *remain* was the highest while that of *appear* the lowest. Results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 5.575$, $p = .000$. Therefore, *remain* and *appear* constituted the greatest individual verb difference among non-alternating unaccusatives in the NP1-V-NP2 structure. According to the Extreme Verb Method, they were selected for individual analysis.

B. Acceptability Judgment Results

TABLE 2:
RESULTS OF A ONE-WAY ANOVA ON NON-ALTERNATING UNACCUSATIVES IN ACCEPTABILITY JUDGMENT

Overall		appear	arrive	exist	fall	happen	remain	F	P
NP-V	M	1.47	1.64	1.44	1.29	1.84	1.06	12.030	.000
	SD	1.03	0.88	0.98	0.91	0.56	1.34		
NP-Be-Ven	M	-1.10	-0.34	-0.93	-0.25	-1.70	-0.73	20.853	.000
	SD	1.34	1.70	1.55	1.62	0.80	1.53		
NP1-V-NP2	M	-0.32	-0.42	-0.40	0.18	-1.27	0.68	30.267	.000
	SD	1.58	1.52	1.54	1.49	1.20	1.51		

Table 2 shows the results of a one-way ANOVA performed on the six non-alternating unaccusative verbs in the NP-V, NP-Be-Ven and NP1-V-NP2 structures when the four groups of participants were combined as one big group. The P-values in the right column of Table 2 indicate that there were significant differences between these verbs in every given structure.

First, as far as the NP-V structure was concerned, the participants' overall mean score for *happen* was the highest while that of *remain* the lowest. Results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 7.798$, $p = .000$. Therefore, *happen* and *remain* constituted the greatest individual verb difference among non-alternating unaccusatives in the NP-V structure. According to the Extreme Verb Method, they were selected for individual analysis.

Second, with respect to the NP-Be-Ven structure, the participants' overall mean score for *fall* was the highest while that of *happen* the lowest. The results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 10.815$, $p = .000$. Therefore, *fall* and *happen* constituted the greatest individual verb difference among non-alternating unaccusatives in the NP-Be-Ven structure. According to the Extreme Verb Method, they were selected for individual analysis.

Third, as for the NP1-V-NP2 structure, the participants' overall mean score for *remain* was the highest while that of *happen* the lowest. The results of paired samples *t*-tests showed that the former was significantly higher than the latter, $t(153) = 15.500$, $p = .000$. Therefore, *remain* and *happen* constituted the greatest individual verb difference among non-alternating unaccusatives in the NP1-V-NP2 structure. According to the Extreme Verb Method, they were selected for individual analysis.

C. Summary of Written Production and Acceptability Judgment Results

Both the written production results and the acceptability judgment results showed that there were significant individual verb differences among non-alternating unaccusatives. However, the between-differences found in these two types of data were not exactly the same.

TABLE 3:
SUMMARY OF THE GREATEST INDIVIDUAL VERB DIFFERENCES AMONG NON-ALTERNATING UNACCUSATIVES
IN THE WRITTEN PRODUCTION AND ACCEPTABILITY JUDGMENT

Individual verb differences	Written production		Acceptability judgment	
	Highest	Lowest	Highest	Lowest
NP-V	arrive	remain	happen	remain
NP-Be-Ven	remain	arrive	fall	happen
There-V-NP	arrive	fall		
∅-V-NP	exist	arrive		
NP1-V-NP2	remain	appear	remain	happen

Table 3 summarizes the greatest individual verb differences among non-alternating unaccusatives in the written production data and the acceptability judgment data respectively. It shows that individual verb differences in the There-V-NP and ∅-V-NP occurred only in the written production data. The reason was that these two structures were not tested in the acceptability judgment task. It also shows that there were differences between the written production data and the acceptability judgment data in the three structures that they both had. Of these three structures, the NP-V structure is the only grammatical syntactic form for the six non-alternating unaccusatives, while the NP-Be-Ven and NP1-V-NP2 structures are both ungrammatical. As far as these three structures were concerned, it could be seen that the participants' performance on *remain* was least accurate in that it was produced and scored in the grammatical NP-V structure at the lowest rate, but in the ungrammatical NP1-V-NP2 structure at the highest rate. It was also produced in the ungrammatical NP-Be-Ven structure at the highest rate.

On the other hand, the participants' written production of *arrive* was most accurate in that it was produced in the grammatical NP-V structure at the highest rate, but in the ungrammatical NP-Be-Ven structure at the lowest rate. When it comes to the participants' acceptability judgment data, their performance on *happen* was most accurate, because it was scored the highest in grammatical NP-V structure, but the lowest in the ungrammatical NP1-V-NP2 structure.

It is evident that *remain*, *arrive* and *happen* stood out in the individual verb differences among non-alternating unaccusatives in both the written production data and the acceptability judgment data. For this reason, they were chosen to be the focus of explanation.

D. Contributing Factors

1. Lexical frequency

TABLE 4:
LEXICAL FREQUENCIES OF NON-ALTERNATING UNACCUSATIVES IN THE ENGLISH TEXTBOOK CORPUS

Non-alternating unaccusatives	happen	arrive	fall	appear	exist	remain
Lexical frequencies	275	171	146	46	32	13

Table 4 shows that *happen* was ranked the first, while *arrive*, *fall*, *appear*, *exist*, and *remain* were ranked the second, the third, the fourth, the fifth and the sixth respectively. However, the actual lexical frequency differences between these verbs were much larger than what their ranks suggested. For example, the top three verbs all had a lexical frequency of over 100, while the lexical frequencies for the last three verbs were all below 50. To look at it from another angle, the lexical frequency of *happen* was more than 20 times that of *remain*. It is therefore evident that there were huge differences between the six non-alternating unaccusatives in terms of lexical frequency. Setting 100 as a tentative threshold, the present study classified *happen*, *arrive* and *fall* as verbs of high lexical frequency, while *appear*, *exist* and *remain* as verbs of low lexical frequency. Furthermore, this study argued that the lexical frequency differences between these verbs might have contributed to the participants' different performances on them in the written production task and the acceptability judgment task.

The high lexical frequency of *happen* could help explain the participants' performance in the acceptability judgment task that they were most accurate in accepting its use in the grammatical NP-V structure and in rejecting its use in the ungrammatical NP-Be-Ven and NP1-V-NP2 structures. Since *happen* was a verb with the highest lexical frequency, the participants had received a lot of input. As a result, they successfully established the correct argument structure and syntactic structure representations for it. It is natural that they were able to recognize the grammaticality of using *happen* in the NP-V structure and the ungrammaticality of using it in the NP-Be-Ven and NP1-V-NP2 structures.

In the same vein, the high lexical frequency of *arrive* could help explain the participants' performance in the written production task that they produced this verb in the grammatical NP-V structure at the highest frequency and in the ungrammatical NP-Be-Ven and NP1-V-NP2 structures at the lowest frequencies. Since *arrive* was a verb of high lexical frequency, the participants had received a lot of input, which enabled them to acquire it successfully. The participants' acquisition of *arrive* was so successful that they made it one of their productive vocabularies. Therefore, they produced it very accurately.

The low lexical frequency of *remain* could help explain the participants' performance in the acceptability judgment task that they were least accurate in accepting its use in the grammatical NP-V structure and in rejecting its use in the ungrammatical NP1-V-NP2 structure. Since *remain* was a verb with the lowest lexical frequency, the participants did not receive much input of it. As a result, they failed to fully establish the correct argument structure and syntactic structure representations for it. In other words, they might have acquired its argument structure representation that there is only an internal argument and no external argument, but have not acquired its syntactic representations that the movement of this internal argument to the surface subject position is both obligatory and morphologically unmarked. For this reason, they showed the greatest reluctance to accept *remain* in the NP-V structure whose subject NP is the deep structure object but is not marked with the passive morphology. As for their tendency to accept *remain* in the NP1-V-NP2 structure, it could also be attributed to their incomplete acquisition of the argument structure and syntactic structure representations for *remain*. Since there is no external argument in its argument structure, it was tempting for the participants to insert an additional argument in the empty external argument position.

Likewise, the participants' incorrect performance on *remain* in the written production task could also be attributed to its low lexical frequency. That is, the low lexical frequency of *remain* led to a lack of input for the participants, who failed to acquire it successfully. As a result, they produced *remain* in the grammatical NP-V structure at the lowest frequency, but in the ungrammatical NP-Be-Ven and NP1-V-NP2 structures at the highest frequencies.

2. Teachers' explicit instructions

The participants' different performances on *happen* and *remain* in the acceptability judgment task could also be attributed to their difference in teachers' explicit instructions. Interview results revealed that high school English teachers provided lengthy instructions on the usage of *happen*. That is, they explicitly told their students that *happen* is an intransitive. Therefore, it can only be used in the active voice. It cannot be used in the passive voice or transitively.

Participant 12 from the 3rd-year high school student group assigned -2 to *happen* in the NP-Be-Ven structure. When asked why she assigned such a score, she explained

I have a very deep impression that *happen* is definitely not used in this way [the NP-Be-Ven structure]. From the very moment when I started to use *happen*, I knew it cannot be used in the passive voice. Moreover, other verbs of occurrence such as *take place* and *occur* cannot be used in the passive voice, either. My teacher told us so. She said that *happen* is an intransitive. Therefore, it cannot be used in the passive voice.

Participant 12's response was echoed by all the other interviewees in her proficiency group. Moreover, it was also echoed by most of the interviewees at higher proficiency groups. For example, Participant 19 from the graduate student group explained why she assigned -2 to *happen* in the NP1-V-NP2 structure in the following way.

I was very certain that *happen* is an intransitive. When I was first exposed to this word in my junior high school, my English teacher told us that *happen* is an intransitive.

It is evident that the teachers' explicit instructions on the usage of *happen* had been engraved in the participants' memory in that even the graduate-level interviewees could easily recall them. Such instructions effectively helped the participants to acquire *happen*, putting them on the alert against using this verb in the passive voice or transitively. For this reason, the participants were very certain about the grammaticality of using *happen* in the NP-V structure and the ungrammaticality of using it in the NP-Be-Ven and NP1-V-NP2 structures. As a result, they scored the former most positively and the latter two most negatively.

Like *happen*, *fall* was also a verb of high lexical frequency. Unlike *happen*, however, its usage must have eluded the teachers' attention. This is because the participants like Participant 12 from the 3rd-year high school student group suggested only verbs of occurrence such as *happen*, *occur* and *take place* when they were asked to recall which verbs had been identified by their English teachers as incompatible with the passive voice. None of them mentioned *fall*. Therefore, there was a lack of explicit instructions on *fall*. As a result, the participants' knowledge of *fall* as an intransitive was not as solid as that of *happen*. For this reason, the participants rejected the ungrammatical use of *fall* in the NP-Be-Ven structure significantly less frequently than they did with that of *happen*.

3. L1 transfer

Incorrect semantic and syntactic analogies with L1 as a contributing factor were suggested primarily for two findings of this study. One was that of the six non-alternating unaccusatives, *remain* was wrongly produced most frequently in both the NP-Be-Ven and NP1-V-NP2 structures in the written production task. The other was that it was scored most positively in the ungrammatical NP1-V-NP2 structure in the acceptability judgment task. Interview results revealed that some participants erred in understanding the semantic meaning of *remain*.

Participant 32 from the 2nd-year high school student group produced two sentences for *remain* in different structures. One was *only a few things have been remained*, while the other was *we can remain only a few things*. When asked what he intended to express by writing these two sentences, he gave the following response.

The meaning of the first sentence is *zhìyou shaoshu jìyàng dōngxì bei bāocun zhìjīn* (only a few things were kept till today). The meaning of the second sentence is *women zhìnèng bāocun shaoshu dōngxì* (we can keep only a few things).

When asked if *bāocun* (keep) was the correct meaning of *remain*, he said yes and added that it can also be translated into *baoliu* (keep).

Participant 31 from the graduate student group produced *remain* in the NP-V, There-V-NP, and NP-Be-Ven structures. The complete form of her production in the NP-Be-Ven structure was *Only a few things were remained*. When asked what she meant by this sentence, she answered

Zhiyou shaoshu jiyang dongxi bei baoliu xia lai (only a few things were kept).

Since *baocun* (keep) and *baoliu* (keep) are transitives in Chinese, they can be used in the passive voice. When the participants transferred the syntactic properties of *baocun* (keep) and *baoliu* (keep) to *remain*, they were apt to commit transitive and passive errors with it.

In the written production task, the participants produced *exist* in the Ø-V-NP structure at the highest frequency. Altogether they produced 14 sentences of this structure for *exist*, which could be further classified into three types: the complete locative-inversion construction, the incomplete locative-inversion construction, and the non-locative-inversion construction.

TABLE 5:
FURTHER CLASSIFICATION OF THE PARTICIPANTS' PRODUCTION OF *EXIST* IN THE Ø-V-NP STRUCTURE

Sentence type	Number	Sample sentence
Complete locative-inversion	2	In some people's mind exist some old customs.
Incomplete locative-inversion	11	*The village still exists some old customs.
Non-locative-inversion	1	*Now exists some old customs.

Table 5 shows that 13 of the 14 sentences that the participants produced were classified as the locative-inversion construction, although 11 of them were incomplete for missing an appropriate preposition. This could not be considered as a result of L2 input because this construction is rarely used in English. Results of the English textbook corpus survey showed that there was not a single instance of such a construction for *exist*. However, such constructions are common in Chinese, as shown in (1) and (2).

- (1) In outer space not exist without any substances absolute vacuum
"There does not exist an absolute vacuum devoid of any substances in the outer space."
- (2) Newtonian mechanics actually exist PROG these two unsolved issues
"In fact, there exist two unsolved issues in Newtonian mechanics."

Structurally speaking, Sentence (1) corresponds to the sample sentence classified as the complete locative-inversion construction in Table 5; whereas Sentence (2) corresponds to the sample sentence classified as the incomplete locative-inversion construction in the same table. It is noteworthy that Sentence (2) is not preceded by any preposition, but is still grammatically correct in Chinese. The participants' production of the incomplete locative-inversion construction for *exist* could be easily explained if they were assumed to be under the influence of their L1 Chinese.

Moreover, the sample sentence classified as the non-locative-inversion construction in Table 5 could also be attributed to the transfer of L1 Chinese. When it was translated word by word into Chinese, it was grammatically correct, as shown in (3).

- (3) Now exist some CL old customs
"Now there exists some old customs."

4. Overgeneralization of Adjectival Passive Formation in English

Overgeneralization of adjectival passive formation in English as a contributing factor was suggested exclusively for the finding of the acceptability task that the participants assigned the highest score to *fall* in the NP-Be-Ven structure. The past participle form of *fall* is sometimes used as a pre-nominal adjective. Results of the textbook corpus survey showed that there were eight instances of such a usage in the two English textbook corpora investigated in this study. Some of these instances were *fallen trees*, *fallen leaves* and *newly fallen snow*. Therefore, it was possible that some participants overgeneralized adjectival passive formation in English and understood *fallen* in the test sentence *The birthday cake was fallen on the floor* as an adjective. This possibility was confirmed by the interview results.

Participant 2 from the college student group assigned +1 to *fall* in the NP-Be-Ven structure, indicating that she found this sentence somewhat acceptable. When asked why she assigned such a positive score, she answered

I thought it [The birthday cake was fallen on the floor] stressed a kind of state. It changed *fallen* into an adjective. When asked if *fallen* could be used as an adjective and if she could give an example, she suggested *fallen leaves*.

5. Structural Frequency

Structural frequency as a contributing factor was suggested exclusively for the finding of the written production task that the participants produced *arrive* in the There-V-NP structure at the highest frequency but produced *fall* in the same structure at the lowest frequency. Interview results revealed that the participants remembered that they had encountered *arrive* in the There-V-NP structure in the L2 input, but they did not remember if they ever encountered *fall* in the same construction.

Participant 35 from the graduate student group produced *arrive* in the There-V-NP structure. When asked how she produced this sentence, she answered

I have a very clear memory that there is such a structural pattern [There-V-NP] for *arrive*. For example, *here arrived a man*. There is such an inverted structural pattern [for *arrive*]. It came to my mind at the time [when I was taking this written production test]. Therefore, I used this pattern [for *arrive*].

Participant 35's response suggests that the L2 input does present *arrive* in the There-V-NP structure.

Participant 25 from the graduate student group was the only interviewee who produced *fall* in the There-V-NP structure. When asked what motivated her to use *fall* in this structure, she said

It is a result of stereotyped thinking. I produced *arrive* in this structure. I was under the influence of *arrive*.

Later, she added that she only knew that *exist* and *arrive* can be used in the There-V-NP structure. She did not say the same thing about *fall*.

From Participant 25's response, it can hardly be said that the L2 input presents *fall* in the There-V-NP structure.

Interview results of these two participants indicated that *arrive* and *fall* differed in structural frequency in that the former occurred in the There-NP-V structure more frequently than the latter. This difference might have contributed to the finding that the participants produced *arrive* in the There-V-NP structure with the highest frequency, but produced *fall* in the same structure with the lowest frequency.

V. CONCLUSION

This study examined the individual verb differences in Chinese learners' acquisition of English non-alternating unaccusatives. It found there were significant individual verb differences. Five factors were suggested for the individual verb differences among non-alternating unaccusatives in the participants' written production data and acceptability judgment data. These five factors were lexical frequency, teachers' explicit instructions, L1 transfer, overgeneralization of adjectival passive formation in English, and structural frequency. However, it must be pointed out that these factors were not on an equal footing. That is, lexical frequency and teachers' explicit instructions were considered as the major factors in that they were applicable to more than one verb and to more than one structure. In contrast, L1 transfer, overgeneralization of adjectival passive formation in English, and structural frequency were less applicable and therefore were weaker in terms of explanatory power.

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Junhua Mo was born in Changzhou, China, in 1977. He received his PhD in applied linguistics from Nanjing University in 2008. Since then, he has been teaching English in School of Foreign Languages, Suzhou University. His major interests include second language acquisition, syntax and corpus linguistics.