Typological Markedness and Avoidance in Chinese College Students’ Production of English Relative Clauses

Li Jinman
Shanghai Jiao Tong University

Abstract

Research on students’ avoidance in the production of English relative clauses is of vital importance, which can help researchers and teachers know better how students learn languages. However, there are only a few experimental studies on it and no consensus has been achieved. When it comes to Mainland Chinese foreign language learners, hardly any relevant research on such a phenomenon has been conducted so far. This paper has analyzed a sample of materials out of Chinese Learner English Corpus and used sentence completion and sentence joining tests to investigate 37 college students’ behavior on four types of relative clauses in order to explore the relationship between their avoidance and typological markedness.

Keywords
markedness, relative clause, avoidance

Introduction

In the research and studies of second language acquisition, SLA, “error analysis” has been playing a very important role. By analyzing the errors produced by second language L2 learners, researchers can gain much insightful and revealing information about language learning. According to Cordeiro 1967, errors could be significant in three ways: 1. they provide the teacher with information about how much the learner has learnt; 2. they provide the researcher with evidence of how language is learnt; and 3. they serve as devices by which the learner discovers the rules of the target language. Ellis 1994

However, if learners employ “avoidance strategy” by avoiding using those structures which they have not mastered or they are not sure of, errors related to such structures would be less likely to occur. Then only by observing errors would researchers have no idea about whether the students under study are able to correctly use those structures. Thus, it is necessary to conduct research on “avoidance” phenomenon, which could make up for the limitation of error analysis, exposing the truth hidden in L2 learners’ production during the process of their foreign language study. By analyzing the data from a corpus and two tests, this paper attempts to investigate the avoidance that occurred in Chinese college students’ production of English relative clauses and to explore the relationship between this phenomenon and typological markedness.

1 Research Background

1.1 Typological markedness and relative clauses

The notion of markedness was first developed for phonological systems in the 1930s and then gradually explored in other linguistic fields such as morphology, semantics, and syntax. Although markedness has since been adopted by both the generative and the typological approaches to linguistic theory, it is used not surprisingly in rather different ways. As a consequence, markedness in generative
grammar is considerably different from markedness in typology. Croft 2003 This study will be restricted to the role of typological markedness.

Of considerable importance for SLA research is the way markedness is handled in language typology. Whereas classical markedness is defined by such linguists in the Prague School of Linguistic Theory as Trubetzkoy views features as either unmarked or marked for example in the pair of features “a” and “an” the former is unmarked and the latter is marked. Language typology sees markedness primarily as a relative phenomenon one feature is more marked than another. For instance simple implicational universals presuppose a markedness relationship if a language that has property X also has property Y then Y is less marked in relation to X. Degrees of markedness can be reflected even more clearly in universal hierarchies such as the Noun Phrase Accessibility Hierarchy proposed by Keenan and Comrie 1977. This hierarchy concerns the various functions of the pronoun in relative clauses in which the least marked function is that of subject and the most marked is that of object of comparative.

subject □ direct object □ indirect object □ oblique □ object of preposition □ genitive □ object of comparative

Comrie and Keenan cross-linguistic observation showed that this hierarchy reflected both frequency of the different relative pronoun functions possible in the languages they investigated and also the presence and absence of specific functions in a single language. For example any language that permitted the indirect object to be relativized would also allow relativization of all the other noun phrase functions above it in the hierarchy □ □ □ direct object and subject □ but not below it □ □ oblique □ genitive □ and object of comparative □. Furthermore the proposal regarding the role of markedness was also found in many interlanguage studies to have explanatory power for some acquisition phenomena concerning relative clauses.

Research on avoidance behavior of English relative clauses

In SLA research the AH has been used to seek answers to some questions concerning relative clauses acquisition. One of them is that if the AH or the markedness factor determined typologically accounts for avoidance phenomenon.

Schachter 1974 is the earliest person to point out that Chinese students avoid using relative clauses. Her study of relative clauses showed that learners of English whose first language L1 does not contain relative clauses or contains left-branching rather than right-branching clauses for example Japanese and Chinese tend to avoid using relative clauses in their English production. She did not investigate whether the extent of this avoidance was related to the function of the relative pronoun.

Gass 1980 however conducted research to explore the possible relationship between the AH and learner avoidance behavior of relative clauses. She used a sentence-joining task to elicit use of all the different pronoun functions in the AH and reported that her subjects adult learners with mixed L1 backgrounds tended to avoid relativizing on low positions in the AH by changing a part of one of the sentences so as to make relativization in a higher position possible. For example:

1a) He saw the woman □ □ 1b) The man kissed the woman.

The above two sentences were intended to elicit use of a relative pronoun functioning as direct object.

2a) He saw the woman that the man kissed.

However several learners contrived to use a subject relative pronoun as in

3a) He saw the woman who was kissed by the man.

Chen 1999 study of relative clauses produced by University students in Hong Kong did agree with the findings of Gass. The least marked structure □ □ subject relative clause was used most frequently while the more marked structures □ □ indirect object clause and oblique relative clause were usually avoided by students.

Nevertheless Akagawa 1990 found no support for the hypothesis that Japanese learners display
more avoidance on lower positions than on higher positions in the AH. Thus although there is clear evidence that differences between the L1 and L2 structure of relative clauses induce avoidance, to date there is only mixed evidence to show that the degree of avoidance corresponds to markedness.

2 The Present Study

Like error analysis, L2 learners' avoidance behavior study is also of vital importance in the field of SLA. Yet there is only a limited amount of research specifically relating to such sort of phenomenon and no consensus has been achieved as to the relationship between the degree of markedness and the tendency to avoid certain types of relative clauses. When it comes to the students in Mainland China, hardly any relevant research on such an issue has been conducted according to the author's knowledge. Consequently, the present study aims to investigate Chinese mainland college students' avoidance behavior in their production of English relative clauses and to provide empirical data to show whether there is a correspondence between the degree of learners' avoidance and typological markedness. Particularly, the study sets out to answer the following research questions:

1. Do Chinese mainland college students avoid using some types of English relative clauses?
2. Does their avoidance reflect the degree of typological markedness?

It is hypothesized that Mainland Chinese college students' avoidance behavior is in accordance with the sequence proposed by AH. That is, they use the least marked subject relative clause most frequently while avoiding those more marked relative clause structures.

3 Methods

This study consists of two parts: The first part is an investigation of the use of relative clauses in a learner corpus and the second is an experimental study composed of two tasks eliciting relative clauses.

3.1 Corpus-based study

The corpus being employed was Chinese Learner English Corpus (CLEC) developed under the direction of Gui and Yang (2003) which contained one million word English compositions collected from Chinese learners of English with different levels of proficiency covering senior secondary school students, English-major and non-English-major university students in China. The two sub-corpora of non-English majors were made up of articles collected from College English Test CET Band 4 and Band 6 on which the present study focused. Firstly, 50 articles were chosen randomly from CET4 sub-corpuse and CET6 sub-corporus respectively. Then, by means of the corpus search and retrieval software Concordance for Windows, all the relative clauses in the 100 articles introduced by that which who m.4 and whose were picked out. Besides, those relative clauses having a zero pronoun were identified one by one manually. After that, various types of relative clauses were tagged and counted according to the function of the relative pronoun. Finally, chi-square tests were carried out to evaluate statistical significance of the observed differences.

3.2 Experimental study

3.2.1 Participants

Thirty-seven second-year students at a junior college in Shanghai with low intermediate or intermediate English proficiency participated in the study. They had learned different structures of English relative clauses in high school. Their age ranged from 18 to 20 years old. They spoke Mandarin Chinese and their hometown dialect mostly Shanghai dialect and wrote in Chinese. In other words, all of those students mainly learned English in a classroom setting with little exposure to English outside the classroom.

3.2.2 Instrumentation

Two tests were set to investigate those students' avoidance behavior on different types of English relative clause. The first one was a sentence completion test which consisted of 12 half-finished sentences. Among them, 4 sentences were introduced by who, m.4 by which, and 4 by that. Students were required to complete all the sentences to make them grammatical in 15 minutes. The other test was a sentence combination test including 20 items, which was adapted from Izumida (2003). In each item, there...
was a pair of two simple sentences. Participants were asked to combine the two sentences into one with that, or who, by attaching sentence b to sentence a. In this way different types of relative clauses which students were expected to use could be controlled. There were altogether four types of relative clauses including subject relative clause, direct object relative clause, indirect object relative clause, and object of preposition relative clause. With 5 items for each of them, 20 items were arranged randomly in the test and students were given 20 minutes to complete them.

3.2 Data collection and analysis

All the testing items were clearly printed out and sent to each student. Both tests were carried out in the classroom and students were told to finish them carefully and honestly. After clearly understanding the directions of the tests, participants began their tests. The researcher collected those data with the help of the classroom instructor.

Since the purpose of the tests was to investigate students’ avoidance of relative clauses, it was the types of relative clauses that were relevant and meaningful rather than the correctness of those clauses produced by students. Thus after taking out sentences left blank, sentences without relative clause, and ambiguous sentences, all the remaining sentences containing some type of relative clause were counted and classified in test 1. In other words, errors involving subject-verb agreement, spelling, and mistakenly used pronouns, were excluded for which for whom for who were alligned. Moreover, a chi-square test and two binomial tests were carried out to test if there was any significant difference between different types of relative clauses produced by students.

In test 2 only those sentences containing a certain relative clause type different from the target type were counted. The produced relative clause type and its corresponding target relative clause type in those sentences were both coded for further categorization and analysis.

4. Results

4.1 Corpus-based study

All the relative clauses retrieved from the 100 articles out of CLEC were categorized into different types and counted. From Table 1 it can be seen that SU structure was used most frequently by both those students attending CET4 and those attending CET6. DO structure ranked second in the frequency of relative clause use and OP was only used 6 times. Surprisingly, there was not even a single IO or GE or OC structure occurring in the sample corpus texts.

Table 1 Number of different relative clause types

<table>
<thead>
<tr>
<th></th>
<th>SU</th>
<th>DO</th>
<th>IO</th>
<th>OP</th>
<th>GE</th>
<th>OC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET4</td>
<td>16</td>
<td>13</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CET6</td>
<td>21</td>
<td>13</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>37</td>
<td>26</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Notes**: GE = Genitive; OC = Object of Comparative

In order to probe further if there was any significant difference between those three relative clause types being identified, a chi-square test and two following binomial tests were performed. As Table 2 shows, there was a high statistical significance of the observed difference between any two of the three relative clause types SU, DO, and OP all p values were 0.001.

Table 2 Chi-square tests of identified relative clause types, p value

<table>
<thead>
<tr>
<th></th>
<th>SU</th>
<th>DO</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DO</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>OP</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

**p < 0.01** indicates significant.
4.2 Experimental study

The students’ choice of different types of relative clauses in test 1 is shown in Table 3. From it we may easily find that participants in the test had an obvious tendency to use the SU structure but to avoid those more marked structures, especially the OP and the IO. Among the 333 relative clauses produced by the students, 301 SU structures were found, occupying 90.39 percent of the total, whereas OP and IO were only 17 percent and 0.3 percent, respectively. It is interesting to note that the IO structure was the least used type even less than the OP structure despite the position of IO being higher than that of OP in the AH.

Table 3: Number and percentage of relative clause types in test 1

<table>
<thead>
<tr>
<th></th>
<th>SU</th>
<th>DO</th>
<th>IO</th>
<th>OP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>301</td>
<td>25</td>
<td>1</td>
<td>6</td>
<td>333</td>
</tr>
<tr>
<td>Percentage</td>
<td>90.39</td>
<td>7.51</td>
<td>0.30</td>
<td>1.80</td>
<td>100</td>
</tr>
</tbody>
</table>

The result of chi-square tests of the differences between those relative clause types in Table 4 indicates that there was a significant difference between any two types of all four structures except the IO, which was less than the more marked OP type, hence excluded from the following statistical test.

Table 4: Chi-square tests of test 1: p value

<table>
<thead>
<tr>
<th></th>
<th>SU</th>
<th>DO</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU</td>
<td>0.30</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DO</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>OP</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

p < 0.01 significant

In test 2, although students were required to combine the two simple sentences in each pair by attaching sentence b to sentence a, some students avoided using the target type but substituted them with another type of structure. All such kinds of relative clauses had been identified and the detailed results of substituting one type for another were shown in the following Table 5.

Table 5: Avoidance results of test 2

<table>
<thead>
<tr>
<th></th>
<th>Produced SU</th>
<th>Produced DO</th>
<th>Produced IO</th>
<th>Produced OP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected SU</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Expected DO</td>
<td>51</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>Expected IO</td>
<td>35</td>
<td>19</td>
<td>1</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Expected OP</td>
<td>31</td>
<td>0</td>
<td>0</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

The results show that avoidance happened when students faced such structures as DO and OP rather than SU and most of the sentences involving avoidance were substituted by SU structure except 19 and 1 IO being replaced by DO and OP, respectively. The finding agrees broadly with the AH, the least marked structure, especially SU, was preferred by students while the more marked structures, especially DO, IO, and OP, would be avoided if they caused difficulty or uncertainty.

5. Discussion

According to the above results obtained with different investigating measures, Chinese college learners’ avoidance behavior of English relative clauses is generally consistent with the prediction of AH. That is, students use SU relative clause most frequently, DO relative clause less, but use OP especially IO relative clause very rarely. In the corpus-based study, there was not even a single IO structure being found and only 6 OPs had been identified. In the sentence completion test, only 1 IO and 6 OPs had been produced out of 333 relative clauses while in the sentence combination test students avoided using DO and OP sometimes. On the contrary, SU relative clause is the least marked structure and was produced much more than other types of relative clauses in all the three investigations with different measures.
On the whole Chinese mainland college students have a descending tendency to use those relative clauses sequenced in the Ah. In specific, they tend to use Su frequently and use do less frequently but use op occasionally and I Rarly. The reason why I Rarly rather than OP was even more likely to be avoided in the data might be due to the subtle difference between their descriptive features. Keenan 1975 points out that IO and OP are indistinguishable in most languages including English as both are expressed as prepositional phrases for example:

4a The official to whom Mary gave the present is sick
4b The official to whom Mary spoke is sick

Or we may assume that there is only a slight difference between their degrees of markedness so that the use of them is easily influenced by other imperceptible factors.

It should be noted that the proportions between Su and DO obtained in two studies differ from each other strikingly 37 16 in corpus data which are virtually CET compositions while 301 25 in sentence completion test. Different requirements in the two tests might be an important reason for such a discrepancy. The students attending CET were not required to use relative clauses thus unless there was a necessity they might express the same meaning by other means than relative clause such as infinitive, present or past participle or even two simple sentences. Conversely students taking part in the sentence completion test were asked to produce relative clauses when they met with a given head noun they felt difficult or unfamiliar. They tended to use the least marked type of Su. This could be partly justified by the data from the sentence combination test a large number of more marked types expected to produce 51 DOS 35 Ios and 31 OPs turned out to be in the form of Su. Another significant contributing factor seems related to the two types of tasks. In writing an article students could be forced by the information they had to convey to use DO while in completing a sentence students were not constrained by any definite information. Thus Su could be always their first resort.

Another interesting phenomenon reflected in the sentence combination test is that most of the DO IO OP structures students avoided had been substituted by Su yet not a single OP had been found to be replaced by DO which was a less marked type compared with it. One possibility is that students have an inclination to use the easiest structure of Su when they find the task difficult to handle in a test. It can be supported by the results of sentence completion test which shows that 301 out of 333 relative clauses are Su structure. Another possible reason is that one pair of sentences can not provide a chance for all the four types to occur simultaneously. Otherwise students might have more choices available to select rather than just between Su and the other three structures. Nevertheless nearly all the avoidance happening from lower position to higher position in Ah but not vice versa strongly indicates that markedness should be the major factor influencing avoidance behavior.

Is students another tongue another factor influencing the avoidance of certain kinds of relative structures since Chinese contains left branching clause differing from English right branching clause if L1 transfer functions to determine the avoidance behavior it may influence Chinese learners use of all kinds of relative clauses but not just influence some kinds of relative clause while not others. For example Chinese learners may avoid using relative clauses when necessary or they may tend to put noun phrases after relative clauses which is seldom found. Therefore Chinese learners avoidance of some relative clauses should be due to other factors. From our investigation it clearly indicates that the more marked the structure is the more likely it is to be avoided.

Then why should markedness influence the avoidance behavior of different relative clauses? Eckman 1977 assumes that the relatively more marked areas of the target language will be more difficult to learn. Accordingly the least marked structure like Su will be learned and mastered by students with ease and at an earlier time. Thus in the test when students encounter a more marked structure they may feel difficult or unconfident to use it hence taking avoidance strategy to use a less marked form.

For another reason those less marked structures are presumably less cognitively complex or more perceptually normal so they are easier to attract attention and to be stored and retrieved in the information processing. Comrie 1986 Givon 1995 Shen 1997 That is the cognitive complexity of the elements of Ah is negative from right to left the Su has the least complexity. Consequently when
the brain processes a sentence involving relative clause construction. The retrieval of the subject would be easiest while the retrieval of object of preposition hardest. That's why students tend to use SU most frequently while avoiding the use of other more marked types of relative clauses.

6 Conclusion

Through a corpus-based investigation and an experimental study involving two tests, the study has shown that while using relative clauses Chinese mainland college students with low/intermediate or intermediate English proficiency tend to adopt an avoidance strategy. They use the least marked SU relative clause most frequently but avoid those more marked types which justifies the hypothesis that the avoidance behavior corresponds to the AH reflecting degree of typological markedness.

The study suggests that in L2 teaching teachers should realize not only errors can reflect learning problems faced by students but also avoidance behaviors. And it is recommended that teachers attach more importance to those structures which students frequently avoid so as to give effective instruction helping students gain a mastery of what they think difficult to learn.

References

Chen Y 1999 Why Chinese English learners avoid using relative clauses. Fujian Journal of Foreign Languages Studies 1 149-155


Croft W 2003 Typology and Universals 2nd edition, Cambridge CUP

Eckman F 1977 Markedness and the contrastive analysis hypothesis. Language Learning 27 315-330


Guí S R Yang Z 2003 Chinese Learner English Corpus Shanghai Shanghai Foreign Language Education Press

Izumi S 2003 Processing difficulty in comprehension and production of relative clauses by learners of English as a second language. Language Learning 53 285-323

Keenan B B Comrie B 1977 Noun phrase accessibility and universal grammar. Linguistic Inquiry 8 63-99

Schachter I 1974 An error in error analysis. Language learning 24 205-214

Shen X 1997 Markedness pattern in typology. Foreign Language Teaching and Research 1 1-10