

Markedness and Second Language Acquisition of Word Order in Mandarin Chinese

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The study explores the difficulties of native English speakers in acquiring the Chinese word order, aiming to relate it to the markedness theories. According to the Differential Markedness Hypothesis (DMH), the degrees of learner difficulty in second language acquisition can be predicted according to the degrees of typological markedness between learners' first language (L1) and their second language (L2). The study employs a grammaticality judgment task in which English Chinese learners were asked to judge four categories of sentence types in Chinese: topic comment, pro-drop, locative inversion, and canonical SVO order. Results show that subjects demonstrate a similar pattern of error rates among those four sentences: all learners have higher degrees of learning difficulty in topic-comment and pro-drop sentences, but lower degrees of difficulty in locative inversion and canonical SVO sentences. The study mostly supports the hypothesis, suggesting the instructional importance of realizing the typological markedness relations between the L1 and the L2.

0. Introduction

Chinese has a more flexible word order compared with English. Li & Thompson (1981) state that Chinese has no basic word order since it is a language claimed to be more discourse-oriented; the word order variation is related to variations not only in major constituents but also in modifiers and pragmatic factors (p.26). As a result, word order variation in Mandarin Chinese poses a great challenge to English learners who learn Chinese as a foreign/second language in that English is more rigidly fixed in its SVO order.

There is a growing body of literature (Hu 1992; Li 1996; Li 1999, among others) focusing on second language acquisition of Chinese word order. Hu (1992) investigated Chinese learners of English and English learners of Chinese in terms of cohesive devices in their second language writing and found that due to the interference of their L1, English speakers have more difficulty in using topic-comment constructions as a cohesive device while Chinese speakers have more difficulty in using lexical devices such as English articles and pronouns. Li (1999) explored the relationship between word order acquisition, proficiency level, and pragmatic context by using two different tasks

and 11 word order categories. However, learners' achievement in the two tasks was surprisingly low, which did not reveal very much insight into learners' acquisition of word order related to discourse appropriateness. Among the 5 hypotheses, Li found that "semantic characteristics of the categories and the influence from the learners' L1 were two major factors affecting the acquisition" (p. 54). She implied that the differences between L1 and L2 would cause learning difficulty. Li was actually adopting a CA (Contrastive Analysis) point of view proposed by Lado (1957) in that structural differences between L1 and L2 will lead to learning difficulty. However, markedness theories predict it is not necessarily the structural differences that will lead to difficulty but the differences in markedness relations will do.

1. The Markedness Theory

The markedness theory has been extensively explored and applied in various fields of linguistic studies such as phonology, morphology, semantics, and syntax since last century. Greenberg (1966) assigns the designations "marked" and "unmarked" to opposing structural entities that exhibit a consistently asymmetric relationship in term of distribution and/or syntagmatic structure and or paradigmatic complexity. The one of the two entities that is consistently more widely distributed and/or simpler is called "unmarked"; its complement is the 'marked' members of the opposition. An important point to help understand the concept of markedness is "[m]arkedness relations are not fixed, but rather depend on the language-internal evaluation of the terms of an opposition" (Battistella 1990:4); a marked form as opposed to a different form from within a language might be an unmarked as opposed to a third form or a marked form in one language can be unmarked in another. For example, in Russian, the nominative case is unmarked and the other cases marked, while in English, the objective case is unmarked and the nominative is marked.

The notion of markedness can be applied within a particular language or between languages. "Universal markedness relations are defined independent of individual languages. Language-particular values are those assigned on the basis of the facts of an individual language system" (Battistella 1990:61). The Differential Markedness Hypothesis (DMH) proposed by Eckman (1977) indicates the markedness relations cross-linguistically. Markedness is defined as follows by Eckman (1977):

Markedness: A phenomenon A in some language is more marked than B if the presence of A in a language implies the presence of B; but the presence of B does not imply the presence of A.

Given this previous definition, Eckman (1977) proposes the Markedness Differential Hypothesis (p. 321):

- (a) Those areas of the target language which differ from the native language and are more marked than the native language will be difficult.
- (b) The relative degree of difficulty of the areas of the target language which are more marked than the native language will correspond to the relative degree of markedness.
- (c) Those areas of the target language which are different from the native language, but are not more marked than the native language will not be difficult.

The proposal “centers around the notions of typological markedness and implicational relations”. As a result, “the notion of ‘degree of difficulty’ corresponds to the notion of ‘typologically marked’ (p. 320). Eckman (1977) gives the following example to illustrate the theory. There are languages (e.g. Arabic, Greek, etc..) in which passive sentences occur without expressed agents (see example 1a below), but do not with expressed agents (example 1b).

- (1) a. The door was closed.
b. The door was closed by the janitor.

There are languages (e.g. English, French, Japanese) that have both types of passive sentences. However, there are apparently no languages which have passives with agents without also having agents. Therefore, the presence of passives with agents implies the presence of passives without agents, but the reverse is not true. Thus, sentences like b are more marked than sentences like a. Based on Eckman (1977), typological markedness also implies to refer to the cross-linguistic frequency of a feature in an unbiased sample; markedness means cross-linguistically rare or rarer, while unmarked means cross-linguistically frequent or more frequent. This notion is essential for the current study.

2. Design of the Current Study

Though there is a growing body of literature in second language acquisition of Chinese, very few empirical studies have applied the markedness theories to the field analysis. Thus, the purpose of the current study is to explore the difficulties of native English speaking learners, in acquiring Chinese as a second language and how it is related to the markedness theories, in particular, the typological markedness hypothesis. Secondly, in order to gain more insights into how L1 -L2 structural relationship takes a part in the acquisition process, the current study employs four different sentences closely related to the SVO structure by employing a grammaticality judgment task since learners tend to use a canonical word order in translation tasks and thus demonstrates less knowledge on word order variations in L2 (Li 1999).

2.1 Word Order Categories Covered by the Present Study

Four types of sentences are tested based on the SVO order and syntactic relations between Chinese and English: 1) pro-drop, 2) topic comment, 3) locative inversion, and 4) canonical SVO order. These four types are chosen because they demonstrate an interesting pattern in markedness relations: topic-comment sentences are structurally similar in English and Chinese but differ in frequency of distribution/use; pro-drop is a unique feature in Chinese; locative inversion and SVO sentences are both present in English and Chinese and they demonstrate a similar degree of frequency/use. The majority of the sentences are simple sentences due to learners' proficiency level in this study and in order to eliminate any interference of secondary elements such as adverbials and modifiers since their word order can also be varied in Chinese and may cause difficulty in judging.

1) Topic Comment

It is well known that Chinese is a topic-prominent language (Li & Thompson 1981). "The term 'prominence' refers to the role that a linguistic notion or relation plays in the structure of a language. If structure A plays an important role in the construction of sentences in a language, then the language is said to be 'A prominent'" (Li 1996: 30). Xie (1992: 69) reports on a survey using data from the oral narration of Chinese and English native speakers. He concludes that the difference between Chinese and English narratives in terms of using topic-comment features is statistically significant. Such observations have provided grounds for the well-established and widely-accepted claim that Chinese is a "more discourse-oriented" language and topic is such a dominant feature in Chinese compared with English.

Hu (1992) also comments that "topic-comment sentences in Chinese are productive". Word order in English is also sensitive to the status of topic, the general tendency being to place the topic in the initial position" (p. 80). For example, we can have a topic comment sentence in both Chinese and English with the topic NP at the sentence initial position.

- (2) Chuanghu ta da po le.
Window he break PERF
'The window, he broke it.' (From Hu 1992)

However, Hu (1992) further notes English does not use word order to code topic as consistently as in Chinese. For instance, Bates & MacWhinney (1982) indicate that when agents compete with topic for the initial position, more often than not, it is the agent that takes the priority and occurs at the sentence initial position. (3) below is an example:

- (3) Tom bought *a book* yesterday. But someone has borrowed *it*.

Undoubtedly, ‘a book’ is the topic since it occurs in both sentences but ‘Tom’ is not present in the second sentence. However, it is not coded at the beginning of either sentence. In the second sentence of the above example, ‘someone’ is the agent, not definite, nor a topic, but still occupies the first position of the sentence. Thus, “English marks the definiteness of a noun phrase more consistently with the lexical devices, such as definite and indefinite articles and pronouns. Since definite noun phrases are more likely to be topics in discourse, the status of topic is coded by lexical devices as well as word order in English” but Chinese more consistently codes topic with word order (Hu 1992: 73-74).

Furthermore, Li (1996) further comments that Chinese is a topic-prominent language but English is a subject-prominent language. Li (1996) notes that even the topic occurs in the sentence initial position, native English may consider it incorrect due to its uncommon usage (p. 53). For instance,

- (4) The book I bought here.
Shu wo zai zhe'r mai de.

Li (1996) notes that the above example sounds like unacceptable to English speakers because they tend to consider it as a relative clause. To summarize both Li (1996) and Hu (1992), we can conclude Chinese demonstrate a much higher frequency to code topic at the sentence initial position. Since Chinese is categorized as a topic-prominent language, it is expected that the notion of topic is utilized in the construction of sentences to a greater degree than in other non topic-prominent languages. Though English has a similar structure of topic comment sentences, the frequency of topic-comment sentences is much lower (some native speakers may consider a correct topic-comment sentence as unacceptable as is shown above), as a subject-prominent language. As Li (1996) comments “Topic is an essential unit in Chinese sentences, but only a peripheral phenomenon in English” (p.19). Furthermore, topic-prominent languages are well known for their so called double-subject constructions, which only occur in very casual spoken register in English (Li 1996: 32). In this sense, it is safe to claim that topic-comment sentences with double NPs at sentence initial positions are more marked to in English and to English Chinese learners because they are cross-linguistically rarer than subject-initial sentences. For English Chinese learners, the learning difficulty is predicted in acquiring this language feature.

2) Pro-Drop: Null Subjects

Due to the significance of topic in Chinese, the notion of subject is then, not as important in the construction of Chinese sentences as it is in English. Many Chinese sentences do not even have a subject. As Song (2005) observes, pro-drop is both very common in modern Chinese and old Chinese. He further notes “Chinese is a subject pro-drop language in that subject of a clause need not be overt. Thus a Chinese speaker has

the choice of using either a null subject or an overt pronoun in the subject position of a sentence” (p.233). For instance,

- (5) *Ta kanjian yige nuhaizi, Ø/ta daizhe yiding xiaohongmao.*
 He see one-classifier girl. Ø/she wear one-classifier small red hat.
 He saw a girl; she is wearing a red hat.’

In English, a subject-prominent language, an expletive subject such as *it* or *there* is required when the logical subject of a sentence does occur in preverbal position. In Chinese, however, this never occurs because sentences without subjects are very common (Li 1996:31). As White (1986:319) also states that English is a non pro-drop language that requires a subject in surface structure but pro-drop languages allow missing subjects. For another example, in the following sentence, there is no need for a subject in the sentence in Chinese, but the English sentence requires a subject even when it is an empty category or a dummy subject.

- (6) *e Xia yu le.*
 Drop rain PERF
 ‘It is raining.’
 * is raining.

According to the concept of typological markedness, pro-drop means presence of non pro-drop feature (as in Chinese); but non pro-drop does not mean the presence of pro-drop (such as in English). As a result, pro-drop feature is a more typologically marked than non pro-drop parameter. Thus, to English Chinese learners, learning difficulty of the more marked feature is anticipated.

3) Locative Inversion

Locative inversion applies to cases of inversion with the locative PP in the preverbal and the theme NP in the postverbal position. As Pan (1996) notes “Locative inversion is generally associated with unaccusative verbs or passivized verbs” (p.409). On the basis of Chicheŵa and English data, that locative inversion applies under the following conditions (Bresnan and Kanerva 1989, cited in Pan 1996:409):

- a. The argument structure of the verb is: <theme, location>
- b. The theme phrase bears a discourse function *focus*.

These conditions also apply to Chinese (Tan 1991, cited in Pan 1996:409). For example:

- (7) Menkou zhan –zhe yige ren.
Door stand ZHE one CL person
“At the door is standing a man.”
- (8) Chunzili lai –le san ge ren.
Village-inside come PERF three CL person.
‘To this village came three person.’
- (9) Qiangshang *bei* John ke –le henduo zi.
Wall-on by carve PERF many words.
On the wall was carved many words by John.

Li (1996) also points out certain verbs allow locative inversion structure such as existential verbs such as *you* ‘exist/there be’, verbs of positions such as *zuo* ‘sit’, *gua* ‘hang’ or verbs of motion such as *lai* ‘come’ and *zou* ‘leave’ (p. 35). Though Pan (1996) points out in Chinese non-passivized transitive verbs can also occur in locative inversion as in *zhuo shang fang le yiben shu* ‘on the table is placed a book’ (passive is required in English sentences of this type), which is more marked in English as opposed to Chinese, but it is not included in the current study. In this case, the distribution of locative inversion in existential verbs, verbs of motion, verbs of positions is similar in both Chinese and English, so this feature is not typologically marked to English Chinese learners. Learning difficulty is not anticipated.

4) SVO Order

The SVO is considered to be the canonical order in Chinese by many researchers, teachers, and students. According to Li (1996), it is regarded as “the canonical clause type in Chinese in the sense that it is closest to our mental representation of the verb-controlled clause patterns, i.e., one based exclusively on syntactic and semantic consideration without being tempered with by the informational and discursal consideration” (Tsao 1990:67). SVO order is the also the canonical order with a high frequency of distribution/use. Thus, the Chinese SVO is typologically unmarked to English Chinese learners. Not much difficulty would be expected in acquiring this order.

2.2 Research Questions and Hypothesis

- 1) Do learners demonstrate levels of difficulty in L2 acquisition when L1 word order is more restricted but L2 word order is varied?
- 2) How does the difficulty level (if there is) relate to the markedness relations between L1 and L2?

The basic hypothesis is the different typological markedness relations correspond to the different degrees of acquisition difficulty.

2.3 Experiment and Subjects

The current study adopts a grammaticality judgment task combined with a survey on students' language learning habits and background. The subjects are asked to accomplish a grammatical judgment task. Tasks are completed as take-home projects. Subjects are instructed to judge based on their intuition with no reference to any textbooks or dictionaries. To avoid possible confusion in understanding caused by new vocabularies, all the vocabularies are from the textbooks or course materials they are using at the time of the experiment. In addition, English glosses of each test sentence are provided after the Chinese sentences to be judged with difficult vocabulary underlined in both the Chinese sentences and the English glosses so that subjects can have a better understanding on what the words mean. Furthermore, sentences use simple structures as much as possible without too many adjuncts or modifiers in order to get a more accurate result.

There are two factors involved in the current study: L2 proficiency level and syntactic features (word order variations). Due to a lack of subjects, there are 17 participants, divided into two groups (beginner level and intermediate level) of English speaking students (adult L2 learners) who are learning a Chinese as a second language at the time of experiment at a North American university. The beginner level (n=9) has learned Mandarin Chinese for 3-4 semesters (mostly 3 semesters with 1-2 for 4 semesters); the intermediate level (n=8) has learned Chinese as a second language for at least 3 years (3-5 years). All the students learn the language in the formal educational settings though they differ in ways of practicing Chinese such as listening to Chinese music, watching movies, or talking with native language partners after class according to the survey of their language learning background. Four categories of sentences (topic comment with double-subject constructions, pro-drop, locative inversion, and SVO) are tested in this study: 6 sentences for each category, and 8 filler items; in total, there are 32 sentences in the grammaticality judgment test. Since some students are more familiar with the traditional characters while others traditional characters, both traditional and simplified-character versions are provided for students to freely choose from on their own.

3. Results and Discussion

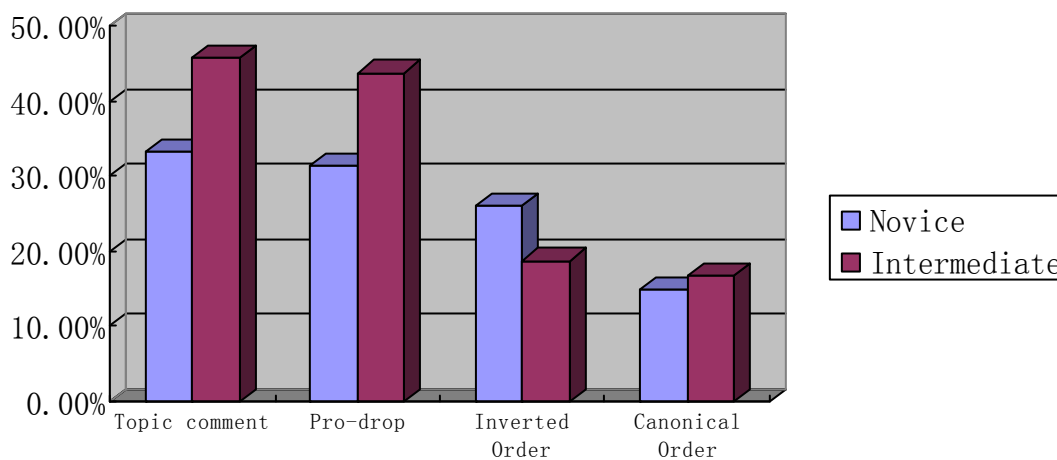
Error rates are counted and recorded for each subject for each category. A two-way ANOVA reveals that there is no interaction between proficiency and syntactic types ($p > .05$), i.e., both groups demonstrate a similar pattern of error rates in the four syntactic categories. The main effect of proficiency level is not significant ($p > .05$), indicating proficiency does not play a major role. It is not surprising since the proficiency level of these two groups is not very different, though it would be worthy of future investigation to add the advanced level group. The main effect of syntactic features is significant ($p < .05$). That means, subjects respond to different types of syntactic structures in significantly different ways: with 'topic comment' the highest in error rate, 'pro-drop' the

second, ‘inverted order’ the third, and ‘canonical order’ the lowest. The pattern shows a tendency that subjects have more difficulty in acquiring the ‘topic comment’ and the ‘pro-drop’ sentence types, but much less difficulty in ‘locative inversion’ and ‘canonical SVO order’ sentence types (see Fig. I & Fig. II). Planned comparisons reveal there is no significant difference between topic-comment sentences and pro-drop sentences, and no significant difference between the locative inversion and SVO sentences either.

Fig. I. Mean of error rates in chart

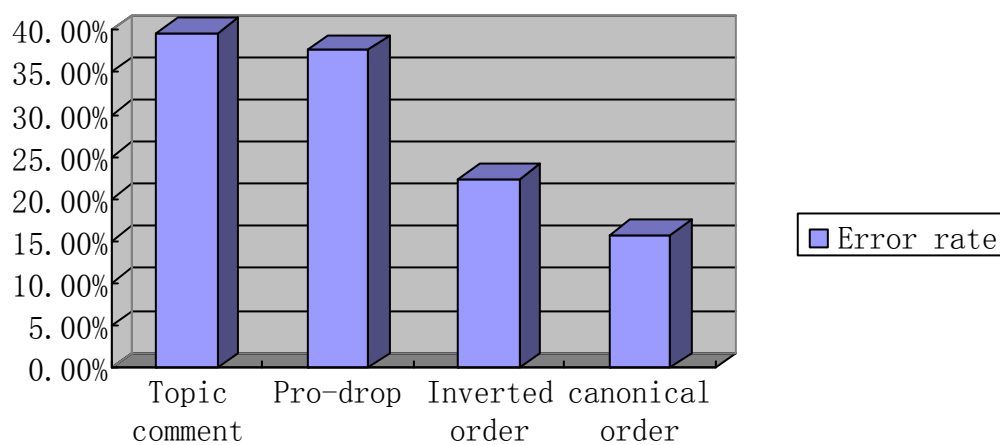
Error rate	Novice (%) (n=9)	Intermediate (%) (n=8)	Average (%)	(%)
1.Pro-drop	31.48	43.75	37.62	Average of 1,2 38.7
2.Topic comment	33.33	45.83	39.58	
3.Inverted order	26.11	18.75	22.41	Average of 3,4 19.08
4.Canonical order	14.81	16.67	15.74	

Fig. II. Mean of error rates in graph



Since there is no significant difference in error rates between the two groups, we can merge the two groups together and see the overall tendency as follows (Fig.III).

Fig. III. Mean of error rates in graph (both groups merged)



Planned comparisons reveal no significant differences between topic-comment sentences and pro-drop sentences which are both more marked in English and to English Chinese learners and no significant differences between inverted order (locative inversion) sentences and the SVO sentences, which are both not more or less marked to English Chinese learners. The results support the hypotheses made according to the typological markedness relations, i.e., the degree of learning difficult is correlated with the degree of markedness relations. However, if we adopt the CA (Contrastive Analysis) Hypothesis, only the difficulty caused by pro-drop sentences will be predicted since English does not have such a syntactic feature. i.e., the structural differences will lead to learner difficulty; however, the difficulty of English speakers' learning topic-comment sentences cannot be explained since both L1 and L2 have a similar structure. The difficulty in this case is caused by the different distribution of this feature in the two languages, i.e., the typological markedness relations. The results indicate that L1-L2 relationship matters in second language acquisition, according to the markedness relations, it is supported that the English Chinese learners have more difficulty in acquiring the Chinese topic-comment structure because the feature is less common in subjects' L1 (i.e., English). Though it is not tested in the current study, we can predict that Chinese English learners will not have so much difficulty in acquiring the English topic-comment sentences because it is less marked in Chinese than in English.

4. Conclusion and Implications

The current study aims to trigger more discussions in this field instead of making generalizations since it is based on a small sample size. Though limited in generalizability, the findings have practical significance because both groups demonstrate a consistent pattern and they warrant further research. Future studies in second language acquisition of Chinese word order could include structural forms that are less marked for

in L1 since both structures in this study (topic comment and pro-drop) are more marked in English (L1) in order to achieve better comparison results. The findings call for instructional awareness and efforts in positive input to acquire a typologically marked form. Another indication in the current study is that it includes both correct and incorrect sentences for each category, and these incorrect sentences may have influenced the test results though it can be neutralized since each category has the same number of correct sentences and incorrect sentences. However, subjects present more accuracy in judging the wrong sentences in one category (e.g. SVO) and demonstrate less accuracy in judging the incorrect sentences in another category (such as pro-drop sentences). Future studies may consider using all correct sentences mixed with filler items for more accurate results. Finally, due to the inherent limitation of grammaticality judgment tasks and translation tasks, it is worth investigating a better task type or combining with a second task type for second language word order studies.

REFERENCES

- Bates, Elizabeth. & Brian MacWhinney. 1982. Functionalist approaches to grammar. In Wanner, Eric and Lila R. Gleitman eds. *Language Acquisition: The State of Art*. Cambridge: Cambridge University Press, 173-218.
- Battistella, Edwin. L.1990. *Markedness- The Evaluative Superstructure of Language*. State university of New York press.
- Eckman, Fred R. 1977. Markedness and the Contrastive Analysis Hypothesis. *Language Learning* 27 (2). 315-330.
- Greenberg, Joseph H. 1966. *Language Universals*. The Hague: Mouton.
- Hu, Mingliang. 1992. Word order, discourse and language learning. *Journal of the Chinese Language Teachers Association* 27(1-2). 71-84.
- Lado, Robert. 1957. *Linguistics Across Cultures*. Ann Arbor, Michigan: The University of Michigan Press.
- Li, Charles & Thompson, Sandra 1981. *Mandarin Chinese, a Functional Reference Grammar*. Berkeley and Los Angeles: University of California Press.
- Li, Wendan. 1996. Second language acquisition of topic-comment structure in Mandarin Chinese. Ph.D. dissertation, University of Alberta.
- Li, Wendan. 1999. Second language acquisition of discourse- and pragmatically-governed word order in Mandarin Chinese. *Journal of the Chinese Language Teachers Association* 34 (2). 37-70.
- Pan, Haihua. 1996. Imperfective aspect *Zhe*, agent deletion, and locative inversion in Mandarin Chinese. *Natural Language and Linguistic Theory* 14. 409-432.
- Song, Zhiyi 2005. A comparative study of subject pro-drop in old Chinese and Modern Chinese. *Working Papers in Linguistics* 10(2). 233-242.

- Tsao, F-F. 1990. *Sentence and Clause Structure in Chinese: a Functional Perspective*. Taiwan: Student Book.
- White, Lydia. 1986. Markedness and parameter setting: some implications for a theory of adult second language acquisition. In Eckman, Moravcsik, & Wirth (Eds.). *Markedness*, 309-327, Plenum Press, New York.
- Xie, Tian-Wei. 1992. An examination of the topic-prominence of Chinese language learners' interlanguage. Ph.D. Dissertation. University of Pittsburgh.