

Crosslinguistic Influence of Topic and Subject Prominence Distinction on L2 Acquisition and Processing

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Abstract: The distinction between topic-prominent languages (TPL) and subject-prominent languages (SPL) was first proposed by Li and Thompson and has since been widely accepted by linguists as a typology to classify languages. The introduction of the notion of topic prominence into the research field of SLA triggered a wealth of studies. Empirical researches of crosslinguistic influence have been conducted from different directions (i. e., topic-prominence (TP) to subject-prominence (SP), or SP to TP) via behavioral or electrophysiological methods, with participants from various L1 backgrounds and language proficiency, but the findings on how the typological distinction functions in L2 acquisition and processing are inconsistent. This paper sorts out and compares the TP and SP features, reviews the previous researches on the transfer of TP and SP features, and comments on its research content and methods.

Keywords: topic prominent; subject prominent; second language acquisition; second language processing

1. Introduction

The distinction between topic-prominent languages (TPL) and subject-prominent languages (SPL) was first proposed by Li and Thompson [1] and has since been widely accepted by linguists as a typological difference to classify languages. Topic-prominent languages possess the following characteristics: the topic is coded on the surface, that is morphologically and/or syntactically; passive constructions either do not or only marginally exist or carry a special meaning; there are no dummy or empty subjects; double subject constructions are available; it is not the subject but the topic that controls coreferential constituent deletion; verb-final languages tend to be topic prominent; there are no constraints on what kind of constituent may be the topic; and topic-comment sentences are basic. Chinese is defined as a topic prominent language as it has numerous above-stated syntactic structures [1]. For example,

(1) Kāfēi wǒ xǐhuan. (object is moved to the topic)

Coffee, I like.

I like coffee.

(2) Qián (nǐ) dài le ma? (no subject but topic)

Money, did (you) bring?

Did you bring money?

(3) Kāfēi duōshǎo qián? (false passive)

Coffee, how much?

How much is the coffee?

Furthermore, several types of Chinese topic-comment structures have been theoretically discussed. For instance, Xu and Langendoen [2] systematically analyzed the form and main features of Chinese base-generated topic (BGT) sentences (e.g., fruit, I like banana most), where the topic cannot be moved into any position of the comment clause. Shi [3] specified several sub-types of Chinese BGT sentences, and discussed their properties. Pan and Hu [4] further investigated the syntactic and semantic relations between the topic and its related Noun Phrases (NP) in the Chinese BGT sentences. In contrast, in a subject-prominent language, such as English, subject is a must, and the subject-verb agreement is reflected morphologically. The contrast between TPL and SPL is one of the most distinguished typological differences, which may lead to the cross-linguistic influence in second language learning. Based on this, a wealth of applied linguistic studies were carried out from multiple perspectives, such as the research directions (i.e., TP to SP, SP to SP, and SP to TP), second language (L2) proficiency, background of mother language (L1) and different types of sentence constructions. Based on the SPL and TPL typological distinctions, this paper aims to sort out the previous researches from several perspectives and summarize the future direction of research in the field.

2. Transferability of Topic Prominence in L2 Acquisition

The introduction of the notion of topic prominence by Schachter & Rutherford [5] and Rutherford [6] into the research field of SLA has triggered quite a number of studies concerning this issue (e.g., [7–9]).

Some studies claimed that the early TP stage is evidence of typological transfer from L1 to L2. For instance, Schachter and Rutherford [5] argued that sentences that appeared to be malformed passives produced by English as a second language (ESL) learners of Chinese and Japanese were actually instances of a typological transfer from L1 discourse functions (i.e., TP constructions) to L2 syntactic forms. Huebner [9] adduced data from a Hmong speaker's English production, finding that the learner initially treated subject NPs in English as always definite, as if they were a syntactic topic. Rutherford [6] examined ESL written production by TP L1 speakers (Chinese, Japanese, and Korean) at different L2 proficiency levels and found overproduction of topic sentences by TP speakers, especially Chinese speakers. These results suggest a systematic transfer of TP features from L1 to L2. For Rutherford [6]'s study, the proficiency level was also an important influencing factor, providing research directions for later researches. Sasaki [10] examined interlanguage constructions of English existential locative sentences in written production by Japanese learners at four different proficiency levels through unstructured writing task. Results indicated a general shift from TP to SP constructions with learners' increasing L2 proficiency.

Conversely, other studies claimed that the process of L2 acquisition is actually characterized by an early universal topic-prominent stage, independent of learners' native language. Topic prominence seems to be an unmarked linguistic phenomenon in universal grammar. Fuller and Gundel [7] compared the acquisition of English from both TPL and SPL backgrounds. They examined oral narratives in both English native language and English interlanguage and found that there was no difference in topic-prominence usages between the speakers of topic-prominent and subject-prominent languages in their English interlanguage narratives. This finding suggests that TP/SP is not a transferable typology and L2 learners of different language backgrounds may go through a similar stage of universal TP. However, the students recruited in their study were in high L2 proficiency and there is possibility that the L1 effect has been effaced. Hendriks [11]'s study included two types of learners (child L1 [Chinese, French] and adult L2 [Chinese learning French]), and data consist of narratives based on picture sequences, produced in absence of mutual knowledge. Results show that French children have to acquire the discourse functions related to dislocations, but the adult learners quite often use forms that deviate from the dislocated form found in target language French. This shows the importance of exposure age of learning in TP acquisition. Gao & Dai [12] suggests that learners have clear L1 and L2 boundaries and that L2 acquisition is not simply a transfer of native language features.

In the specific domain of Chinese learners' acquisition of English, Yip and Matthews [13] examined a sample of 27 English essays written by 1st-year Hong Kong university students, and a highly systematic use of two interlanguage structures (pseudo passives and periphrastic topic constructions), which instantiate transfer

from L1 to L2 form, was noted. Further studies have been conducted on the effects of TP and SP differences between English and Chinese on learners (e.g., [14–17]). These studies have proved that Chinese students transfer the topic prominence of their first language to their interlanguage in the process of acquiring English. Due to the transfer of Chinese topic-prominent features, Chinese English learners may use pseudo passive sentences in English (e.g., [5,6, 13, 16, 18–24]) and zero-subject sentences in English (e.g., [13, 15,16, 25, 26]). In addition, Rutherford [6], Cai [27, 28] and Chen [29] found that Chinese English learners would overuse topic-comment structure, but with the improvement of English proficiency, they would gradually reduce the overproduction of the ungrammatical structure. Chang et al. [30] found that L1-Chinese English learners gradually learned the SP features and unlearned the TP features.

Studies above were based on learners' data concerning English as the second language, and no consensus were drawn as to whether the topic-prominence is a universal L2 early stage, and influential factors include L2 proficiency and exposure age. To further explore this question, it is necessary to examine the L2 interlanguage from a reverse direction, that is, from the direction of SP to TP learning (e.g., English to Chinese).

3. Bidirectional Transferability of Subject Prominence in L2 Acquisition

The transfer effect of TP or SP typology in second language acquisition cannot be validated unless studies in the direction of SP to TP are also carried out. Therefore, Jin [31] examined the Chinese interlanguage of English learners through three production tasks. Chinese topic structures concerned in this study include null elements, specificity marking, and double nominative constructions. The study suggested that English-speaking learners demonstrated a process of systematically transferring SP English features to Chinese. It indicates that not only topic prominence, but also subject prominence, is transferable. Jin's findings contribute to SLA theory in that the data from English native speakers' L2 Chinese did not support Fuller & Gundel [7]'s proposition of a universal topic-comment stage during L2 learners' early acquisition of the language.

Since Jin [31]'s study, the issue of typological influence from the direction of SP to TP was given much attention. Mu [32] collected the grammatical judgment data of native English speakers on topic structure and found that learners' proficiency was an important factor in their performance, i.e., learners in the third years did significantly better than learners in the second year. This result, however, was not further confirmed in later studies. Yuan [33] investigated the acquisition of base-generated topic structures in Mandarin Chinese by British university students via acceptability judgment tests, and found that as learners' L2 proficiency improved, there was little corresponding improvement in the acceptability of the base-generated topic. Yuan's study did not explore whether there was an early universal topic-prominent stage, but his findings seem to confirm Jin [31]'s conclusions on the other hand. In contrast, using a grammaticality judgment task, Liu [34] found that L1-English L2-Chinese learners with lower proficiency can acquire Chinese BGT sentences at an early stage. Cao et al. [35] compared the acquisition of Chinese by three groups of learners with different native languages (English, Japanese, and Korean) via test materials and free composition materials. It was found that the learners did not go through a generalized topic-prominent stage, and the features of topic prominence in native languages could positively transfer to the TP target language learning.

To sum up, from the direction of SP to TP learning, it seems to deny the general topic-prominence early stage in L2 acquisition. Instead, the SP can be transferrable in the early stage of TP learning, and the TP background can positively facilitate the study of another TP L2. However, as to whether the TP usage performance can be improved with the L2 proficiency, there was no consistent conclusions. These empirical researches contribute to the general theoretical debate on how much the L1 influences the L2 acquisition, and the relevant hypothesis in the field of crosslinguistic influence.

4. Crosslinguistic Influence on L2 Processing

Similarities or differences in syntactic structures between the L1 and L2 may lead to the transfer from the L1 to L2, and affect the representation of linguistic subcategory information such as pragmatics, semantics, syntax, morphology, and phonology [36]. Crosslinguistic influence discusses how the L1 influences the L2 learning, and

to what extent. It can be either positive or negative, and the influence is likely both on L2 acquisition and on L2 processing. Relevant theories, such as the Unified Competition Model (UCM) proposes that similarity in language structure could facilitate L2 processing [37], while the Shallow Structure Hypothesis (SSH) [38], argues that L2 learners may involve partial computation of syntactic structures and rely more on semantic and pragmatic knowledge.

In recent years, there have been some empirical studies on the processing of Chinese topic structures, and research methods shift from offline to online tasks. For instance, Yuan [39] used a self-paced reading task to examine the processing of Chinese base-generated-topic sentences by high-proficiency native English speakers and found that learners were able to perform syntactic reanalysis to distinguish topics from subjects using syntactic information, and that they were more sensitive to semantic violations of topic sentences. This study indicates that adult L2 learners are able to use syntactic and semantic information to process L2, which is inconsistent with the Shallow Structure Hypothesis that L2 learners cannot fully utilize syntactic information when processing L2. Based on Yuan [39]'s experimental design, Song and Chang [40] added language materials and examined Korean intermediate and advanced Chinese learners using an eye-movement experiment. The results showed that both intermediate and advanced L2 learners had syntactic reanalysis when distinguishing the subject and topic of Chinese BGT sentences, which implies their sensitivity to syntactic information in the processing of L2 sentences. Advanced learners showed sensitivity to semantic constraints when processing Chinese BGT sentences. Zeng et al. [41] investigated intermediate and advanced L1-Vietnamese L2-Chinese speakers' processing of Chinese BGT sentences with a self-paced reading task and found that both groups were sensitive to the semantic constraints and performed in a native-like way in identifying the topic and the subject.

Studies on L2 processing indicates that the distinction between TPL and SPL does not seem to be an obstacle in syntactic analysis, as learners from both SPL and TPL background showed sensitivity to the subject and topic of Chinese BGT sentences and behaved native-like. However, it does not mean that L2 learners have exactly the same processing patterns in other types of topic-prominent structures as the above section mentioned that the TPL features in its implicit reflections, such as there are no dummy or empty subjects; double subject constructions are available; it is not the subject but the topic that controls coreferential constituent deletion and etc. Therefore, even though so far as we know, studies proved L2 learners' reanalysis or sensitivity to the morphologically obvious topic-comment structures, there is still a long way in determining how much the TPL and SPL influences the L2 real-time processing. In general, the recent L2 processing researches provide insight in crosslinguistic influence of TPL and SPL distinctions by giving empirical evidence in L2 learners processing of Chinese BGT sentences, and robust supplement in the argument that L2 learners can successfully learn or unlearn topic-prominent features. Studies in both acquisition and processing perspectives contribute to the in-depth understanding of second language learning theoretically and have pedagogical implications.

5. Conclusions

The contrast between the TPL and SPL is one of the most distinguished typological differences. A variety of previous studies have explored this typological difference from various directions, mainly including TP-L1 to SP-L2 and SP-L1 to TP-L2 acquisition, but few studies can fully demonstrate the crosslinguistic influence. Controversial findings have been drawn, including the existence of an early universal topic-prominent stage and typological transfer from the L1 to L2, as well as the inability of second language learners' native-like syntactic processing. Besides, previous researches did not fully consider the developmental stages of L2 learners, so as to the changes in the acquisition patterns of TP/SP structures are not yet clear. Furthermore, while most of the researches have been conducted at the sentential level, few noticed the crosslinguistic influence from discourse level.

With the focus shifting from production to real-time processing, offline paradigms, such as grammaticality judgment tasks, composition tasks and translation tasks should be further supplemented by online tasks including behavioral experiments or neurophysiological methods. The recent studies investigating Chinese BGT sentence processing provided useful evidences in this field, but it is still limited to one type of topic-comment features. Further investigations to a variety of implicit TP features and diversified research methods are needed

in future studies.

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