

On the Application of Syntactic Linearity Principle in English-Chinese Simultaneous Interpreting

Yang Ke, Hong Ye

Southwest Minzu University, Southwest Jiaotong University Hope College, Sichuan Province, 610041, China

ABSTRACT. *What techniques should be used in the process of simultaneous interpreting to ensure smooth output? Is it true that syntactic linearity, as the golden principle of simultaneous interpreting, can optimize interpreters' working memory, and then ensure the efficient and reasonable allocation of cognitive resources, so as to enhance the quality of interpretation during language processing and output? How to carry out simultaneous interpreting activity, teaching and training by putting syntactic linearity into practice? By analyzing the characteristics of English-Chinese simultaneous interpreting and the cognitive principles embodied in the application of syntactic linearity, the author tries to straighten out the above-mentioned questions, explores the cognitive principles embodied in syntactic linearity as well as the principle's application in interpretation training, so as to promote both the practice and the teaching of simultaneous interpreting.*

KEYWORDS: *Syntactic linearity, Cognitive load, English-chinese interpreting, Application study*

1. Introduction

Interpretation skills consist of different core dimensions, such as short-term memory, bilingual competence and the acquisition of background knowledge. Syntactic linearity techniques being the core dimension of bilingual transformation support the listening and identifying, analysis and forecast, associative compounds((to master the core meaning and function)), bilingual language processing, working memory, and the mastery of ear-voice span((a span between source language listened and interpretation output. Those every single interpretation skill interacts with other subsidiary skills. Starting with a cognitive model of interpretation, interpreting output is divided into hearing output and vision output, and the author straightened up that from cognitive level and application in teaching. To combine theory with practice, a relatively comprehensive sifting and analysis of syntactic linearity can be made from the application of it, which embodied in priority to attention principle and cognitive context auxiliary principle , and by

studying how to use it to relieve pressure of present interpreters and to promote the effect of simultaneous interpreting training, so as to discuss the application of syntactic linearity principle in the practice and the teaching of English-Chinese simultaneous interpreting.

2. The Cognitive Principle Embodied in the Application of Syntactic Linearity in English-Chinese Simultaneous Interpreting

In relation to the complicated cognitive process of simultaneous interpreting, its simultaneity and instantaneity require interpreters to process strong cognitive resource and relatively excel at resource allocation. Those cognitive activities, including listening and identifying, understanding and absorbing, assembling memory, and target language output are nearly carried out simultaneously, which is called extreme sports for human cognition. To improve quality and availability of the same information delivered and to reduce cognitive load with snowballing effect, interpreters usually make use of various corresponding strategies to flexibly handle source language at the process of information decoding and multiplication.

However, the golden principle, syntactic linearity is the most outstanding among all the interpreting corresponding strategies. The specific definition of it is that interpreters divide the whole sentence into sense-group units or information units in accordance with the sentence structure of source language as listened, then use conjunctions to naturally connect those units and ultimately interpret the whole meaning of the text. Syntactic linearity made work with less labor and time. Its unique advantages reasonably reduce load of cognitive pressure for resource allocation, improve allocation efficiency and ensure continuous and smooth information transmission. The author harkens previous theory and his own actual combat experience throughout the process, so as to conclude two cognitive principles.

2.1 Principle of Optimal Allocation of Attention

Attention is the main cognitive factor in simultaneous interpreting. Meanwhile priority to attention principle is the main principle in the process of interpreting techniques operations. Attention being everywhere is one of the most important and complicated functions of human brain. It is high-level central processing on the basis of cognitive image, so as to control nearly half of the mental activities. There are four kinds of attention in psychology, centralized attention, selective attention, sustained attention and joint attention, from which the joint attention is vital for simultaneous interpreting determined by simultaneity of its multiple activities.

The concept of the Effort Model was first put forward by Daniel Gile, a famous French linguist, who set from the angle of cognitive psychology. He thinks there are mainly four parts of efforts, which are $SI=L((\text{the Listening and Analysis Effort}))+M((\text{the Short Term Memory Effort}))+P((\text{the Speech Production Effort}))+C((\text{the Coordination Effort}))$. In the light of this theory, prompt information

storage and adjustments for words and word order can be achieved by syntactic linearity principle leading to the way with the least labor and time. With interpreting cognitive model, interpreting output can be divided into hearing output and vision output. When source language is input into brain by hearing, English-Chinese simultaneous interpreters absorb at first, cut connected speech according to their own understanding and obtain information units of different scale and diverse levels. Then use the target language corresponded with listeners' cognitive habits to reorganize sense groups and chunks, fan out from point to area, and outline the whole. Nevertheless, just information receiving from hearing needs large amount of effort at the starting edge. Sometimes additional attention has to be allocated on listening and identifying, or rapidly switch attention between different activities to complete simultaneous interpreting tasks. The key to receiving context information for interpreters is vision input, usually in the forms of statement, PPT, live VCR, papers in hand in specific simultaneous interpreting scenes with hearing input at the same time. If interpreters have low efficiency on allocating their own attention, understanding, judgement, and other cognitive resources can be influenced. Interpreters can gradually be reasonable to allocate attention by repeated training, which leads to high automation of mental activities and less additional effort. For example, bicycle beginners often have high nerve tensions. They hold handles tight and will not let go one hand unless absolutely necessary. All cognitive resources urgently arise to concentrate on balance. But professionals do not need to balance on purpose, attention can be distributed to other places. They can ride bicycles as they carry umbrellas, sing or say something. They have a complete command of surrounding situations. So do simultaneous interpreting. Through repeated cognitive practice and separated mind training, constantly improve proficiency of applying syntactic linearity, and expand the volume of working memory meanwhile enhance coordination ability of working memory resource, so as to do practical work with skill and ease.

2.2 Cognitive Context Auxiliary Principle

There are three pragmatic categories of cognitive context in simultaneous interpreting. They are specific scenes of simultaneous interpreting tasks, discourse structure and context knowledge stored in working memory, and encyclopedic information and simultaneous interpreting skills stored in long-term memory.

First, working memory has a great influence on simultaneous interpreting, as one of the most complicated cognitive activities. In accordance with cognitive psychology, working memory as the special branch of short-term memory, is responsible for information storage and processing at the same time. The relation between working memory and simultaneous interpreting is paid the most attention to in interpreting memory study, because characteristics of working memory have close relationship with activity nature of listening and identifying information of source language with target language output. However, the volume and endurance of working memory is limited, usually the statistics of which are 7 ± 2 information units, 20 seconds' duration. So with information stored, if information processing is not

carried in time, memory storage will gradually fade just like the coast receding. Interpreters utilize immediate memory to identify source language information, transfer information to working memory and activate background knowledge needed to interpret in long-term memory then also transfer to working memory. Those two processing can fulfill interpreting tasks successfully.

Second, simultaneous interpreting environment is relatively special. Communicative activities are carried in one way, and interpreters play the role of medium basically under the condition of passive receiving. Timely interpreting bring huge pressure, which means they need to interpret right after they heard discourse leading to receiving limited information. So they have to be constantly conscious of receiving information from surrounding situations and make full use of cognitive context and reasoning mechanism to help understand and deliver speakers' intentions. Simultaneity is the core of simultaneous interpreting in its process. Interpreters being prepared before interpreting can help them familiar with vision input in interpreting scenes((such as communicative activities, exhibition PPT, videos or statement with notes)), understanding memory, information processing and other key tasks, so as to reduce resource investment in real interpreting scenes. In the light of specific interpreting scenes, flexible application of discourse structure and context knowledge stored in working memory is needed. Make bold but reasonable pre-judgement on interpreted contents with flexible adjustment and proper encyclopedia knowledge and simultaneous interpreting skills stored in long-term memory. And use syntactic linearity strategy based on coordination ability of working memory. Interpreters can distinctly shorten the time on reorganizing word order, skillfully use cohesive words and interlanguage, and output language information relatively corresponded with communicative habits of target language.

3. Application of Syntactic Linearity in Simultaneous Interpreting Training

Interpreting is in accordance with contexts of phonetic forms, especially for simultaneous interpreting. Its instantaneity and irreversibility are the biggest weakness, which requires interpreters to carry interpreting output with an interval of speech interaction. Interpreters do not have enough time to go through or space to think just like translators have during this process. On the one hand, they have to constantly guess the expressing thoughts of paragraph and discourse from simple sentence or sentence group. On the other hand, they are supposed to master the interpretation of specific sentence to sentence group and paragraph from predicting the whole thought, so as to have an overall grasp of speakers' central ideas. Therefore, to follow cognitive principles and to master flexible application of relative skills are needed for skilled English-Chinese simultaneous interpreting. According to author's practical and teaching experience, two sets of effective training method supporting syntactic linearity are concluded as below.

3.1 Combined Method of Syntactic Linearity and Shadowing Practice

For the first time, use the same language as source language to shadow the

corpus nearly simultaneously or delay a few seconds. The corpus for practice can be congress lectures, hosts' scripts, news broadcasting, interviews and talk shows and need to be relatively rich, accessible and bilingual with accents in some degrees to enhance language sense and cultivate skills of listening and speaking simultaneously. Due to some degrees of cognitive foundation and usage of sense group for the first time, syntactic linearity is the principle of shadowing for the second time. With Reference to the delayed time for the first time, the time can be delayed relatively longer for the second time by using punctuation, ellipsis, supplement, summary and other syntactic derivation strategies, so as to retell the corpus of hearing output irrelevant to source language. For the third time, the trainees are relatively familiar with original contents and collocations expressions in relation to previous shadowing and retelling. Interference can be set then. Prepare the notes and then listen and speak, drawing information module and structure according to sense groups, so as to present mind map. Listening, thinking, speaking, and writing are carried out simultaneously to cultivate the skills of handling multiple tasks and allocating cognitive resources. Finally, stop to test memory and to consolidate practice of memory preservation. Transfer listening input to vision input and respectively summary practiced corpus in source language and target language in the light of the mind map written on the notes and one's own memory. Also loose control of perfect sentence structure and conclude the core essence of information. Further Strengthen capacity for multi-tasking, and obtain the transition of real simultaneous interpreting practice mode step by step.

3.2 Sight Translation Training with the Application of Syntactic Linearity

In relation to relatively great difference of syntactic structure and logical order between English and Chinese, if the approaches are taken as written translation, consecutive interpretation or other forms of interpreting, making influential adjustments after hearing or vision input, it will have huge effect on cognitive load of interpreters' mind and hinder the smooth development of simultaneous interpreting. Therefore, syntactic linearity principle is needed. Mainly follow the order of writing in source language with timely punctuation, proper repetition, reasonable adding or deleting words, lexical conversion in accordance with grammar and context. Interpreters can have less pressure of information storage in mind, so as to have effort to efficiently comprehend and deliver source language information.

Starting the specific sight translation training, first, collect English-Chinese lectures, then listen to the audio and read the lecture to carry out simultaneous reading. Second, not using lectures, just put punctuation among simple sentences and sense groups one by one in a whole discourse. To ensure every chunks being interpreted reasonably, faithfully, and logically, and also to make sure rapid understanding, reasonable conjecture, and system output of words, simple sentences, sentence groups, mood of paragraphs and other corpus, various interpreting strategies of syntactic linearity principle can be taken, such as lexical conversion, deleting redundant information, adding modal particles to highlight

primary-secondary information, which strengthen rapid language organization and emergency ability. Third, following the audio of oral narration of interpreted corpus, record the single practical application of different strategies of syntactic linearity principles, also with parts of mistranslation, blind translation, misinterpretation, and analysis of its specific causes.

4. Conclusion

For English-Chinese simultaneous interpreting, in accordance with working memory principle and cognitive load theory, followed by cognitive context aided principle and priority to attention principle, flexibly absorbing hearing and vision information in specific simultaneous interpreting scenes, reasonably utilizing discourse structure and context knowledge stored in working memory, making timely pre-judgement and proper adjustment on interpreted contents, encyclopedic knowledge and interpreting skills arising from long-term memory, on the basis of derivation strategies of syntactic linearity principle, interpreters can largely shorten the time of reconstruction of word order and naturally use Chinese idiomatic expressions to interpret source language. Based on feasibility, practicality and plasticity of syntactic linearity, simultaneous interpreting training and interpreting teaching can employ innovative training program combined with syntactic linearity, shadowing practice and sight translation, to enhance joint attention and efficiency of allocating cognitive resources, and to improve interpreting quality.

Acknowledgments

Fund Project: Supported by the Fundamental Research Funds for the Central Universities the Fundamental Research Funds for the Central Universities”, Southwest Minzu University (Grant Number: 2020SYB16).

Project Name: A Study on the Interaction Mechanism for the Core Interpreting Dimensions from the Perspective of Syntactic Linearity Technique.

References

- [1] Zhong Weihe (2001). Skills and training of English Chinese simultaneous interpretation [J]. Chinese Translators Journal, no.5, pp.40-44.
- [2] Gile, Dnaiel (1995). Basic Concepts and Models for Interpretation and Translation Training [M]. Amsterdam /Philadelphia: John Benjamins Publishing Company, pp.169.
- [3] Zhang Wei, Wang Kefei (2007). Interpretation and Working Memory [J]. Foreign Languages and Their Teaching, no.1, pp. 43-47.