

On Methodology of TAPs in Translation Process

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Abstract

In recent years, scholars have shifted from the study of translation products to the study of translation process, that is, to explore the psychological activities of translators in the process of translation in order to uncover how the human brain operates in the process of translation. In the research process, thinking-aloud protocols (TAPs) is widely used. The research on the translation process of TAPs is a part of the translation process of cognitive psychology. In the cognitive research on the translation process of TAPs, some translation researchers at home and abroad have conducted experiments. The research of TAPs translation process has its specific research object, research methods and data collection requirements. Data collection methods will directly affect the results of the research. Therefore, more scientific data collection methods and a reasonable number of subject should be considered in the research of TAPs translation process. In this paper, the translation strategies and translation unit and so on are analyzed. At the same time, the selection of subjects and data collection types are discussed in order to through the processing of experimental data, to analyze the translator's psychological processes. It's hoped the research can provide certain reference for real translation study.

Key words: TAPs; Translation process; Research content; Data collection

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INTRODUCTION

It is well known that the study of TAPs (thinking-aloud protocols) translation process is a part of the cognitive psychology translation process. In the cognitive research of translation process, some translation researchers at home and abroad have conducted experiments, and there have been successful cases of audio translation experiments, and proposed the “thinking-aloud protocols”. The research of “thinking-aloud protocols” (TAPS) translation process mainly includes four aspects: translation strategy, translation unit, translating statement and translation methods. Researchers usually analyze the changes of translators' mental processes, whether the translation comprehension process of the original conforms to a certain cognitive translation process model, and the frequency of the strategy use, such as interpretive repetition, association, and speculation in the translation process. The analysis is conducted according to the processing experimental data collected. Relevant data include the selection of subjects, experimental materials, experimental methods, and data processing.

In this process, the method of thinking aloud data collection is very important, because different methods will produce different effects. The more methods a researcher adopts, the more objective he may be in data analysis and the more accurate the research results will be. This paper discusses the methods of TAPS data collection in the translation process in order to provide some reference for researchers.

1. DATA COLLECTION OF TAPS IN THE TRANSLATION PROCESS

The empirical research on the process of thinking aloud translation has a history of more than thirty years. There have been many papers and works in this field at home and abroad. Domestic scholars, such as Li

Dechao, Miao Ju, Cai Hansong, Zheng Bingham and Wen Jun have published papers discussing the empirical research of using thinking aloud in translation process and summarizing the research of thinking aloud in other countries. TAPs is mainly used in the study of translation strategies, statements of translation, translation units and other aspects and has made some achievements in the study of translation process. However, due to various factors, this method still has some limitations.

Thinking-aloud protocols is an evaluation method used to collect data of thought process in psychology which has been applied to behavioral analysis of translation process for thirty years. The main criterion for evaluating a translation model is whether it is psychologically realistic or not, if it reflects the thinking process in the translator's brain during the translation process. Therefore, what happens in translator's brain in the translation process, what kind of working state the brain is in and how it works when solving translation problems can be grasped by using TAPs.

TAPs involves asking subjects to say as much as possible what is in their minds while performing a specific experimental task. TAPs in the study of translation process can roughly be summarized as follows: The researchers give subjects (usually foreign language learners or professional interpreters) the written translation work, require them to complete and submit the translation version within a certain period of time. And the subjects also need to express in words what the brain experiences in the all the thinking activity. The researchers recorded everything the subjects said in the experiment on a tape recorder or video recorder, and then converted it into textual data for further analysis. By analyzing these textual data, the researchers reconstructed the subjects' thought processes during translation and summarized the tendencies and characteristics displayed in the data. With the development of contemporary psychology, some research methods in the field of psychology have made the research prospect of translation appear.

1.1 Translation Units

Over the past 30 years, the research on TAPs translation has mainly included translation strategies, translation units, translation brief and translation methods. In addition, the research on TAPs includes the influence of the translator's psychological factors in the translation process, the study of the automaticity in the translation process, and the influence of the use of dictionaries in the translation process. The following is a brief introduction of translation units, translation methods, translation strategies and translation brief.

The discussion of translation units has always been a hot topic in translation studies. The previous definition of translation unit is mostly from the perspective of linguistics, for example, it is defined as the unit of the target language text that can be compared with the unit

of the source language text. In the past 30 years, TAPs scholars have also explored the translation unit from the perspective of process orientation. A translation unit is the part of the source text that the translator focuses on with the aim of reproducing it as a whole in the target language. Compared with the traditional studies of translation units, the TAPs study presents a new perspective in translation units. At the same time, the results of the TAPs experiment show that the translator does not always follow the preconceived translation unit. In fact, the translation unit that translators use to translate is a dynamic language entity rather than a static one. In the translation process, translators often make corresponding adjustments to the translation units according to specific situations.

1.2 Translation Brief and Translation Method

In the study of TAPs translation, the translation brief refers to the specific instructions and requirements given to the subjects before the TAPs experiment. The research on TAPs proves that the translation summary has a great influence on the translation process, including the determination of translation strategies and translation steps. In the translation process, the translator's use of translation brief to some extent reflects the translator's translation level or proficiency in translation work.

In terms of the research on translation methods, TAPs can be carried out in two different ways: single translation or collaborative translation. Usually the subject can express his thought alone without interference. However, his performance would be unnatural. Therefore, the experts questioned the authenticity of the thought aloud information obtained and proposed the collaborative translation. As no definitive conclusion has been reached on which of the two forms of TAPs translation is superior or inferior, both methods are still used in the study of TAPs translation.

1.3 Translation Strategies

The study of translation strategies has been the focus of TAPs translation research for more than 30 years. The concept of "strategy" is originally derived from military science which originally refers to "the overall planning of a war, including the consideration of all military or non-military factors" (Lörscher, Wolfgang, 1991, p.68). Many disciplines today, such as economics, psychology, and political science, introduce the term figuratively rather than in its original sense.

In translation studies, translation strategies refer to the steps taken by the translator in transforming the source language text into the target language text, which may, but may not, lead to the best translation. The translation method refers to the steps that have been applied and tested repeatedly. If the translator systematically applies these steps, the translation quality will be improved. The study of TAPs takes a process-oriented and descriptive approach to the study of translation strategies. Based on

the psycholinguistic definition of strategy, translation strategy is defined as a conscious process in which translators solve problems when translating a paragraph from one language to another (Lörscher, 1991, p.76). This definition emphasizes the “problem orientation” of translation strategies, that is, translation strategies are triggered to solve the problems encountered in translation. At the same time, this definition emphasizes the role of the translator’s consciousness in determining translation problems, that is, only the problems that the translator is aware of in the translation process can be considered as translation problems which are also the objects that the translator’s translation strategies need to solve. The translation process is composed of a series of arbitrarily combinable translation strategies, and each translation strategy includes a series of core elements that are also arbitrarily combinable.

The strategy as a process associated with goal-oriented and subjective optimality rather than a process of problem solving. In other words, translation strategy is the best way for the translator to realize the set goal in translation practice. Translation strategies are divided into general strategies and local strategies. The former refers to the strategies applied to the whole translation task, such as the consideration of translation style, the assumption of reader group, etc., while the latter focuses on the specific operations in translation, such as finding the appropriate words, etc. In the translation process, translators use the following five translation strategies to solve problems: First, strategies of comprehension, mainly reflected in the translator’s reasoning on the meaning and the use of reference books; strategies of equivalent retrieval, mainly refers to the translator’s recall of equivalent words or synonyms between the two languages. Strategies of equivalent monitoring that is, the translator considers the suitability of certain words in the translation. Fourth, strategies of decision-making, which refers to the translator’s choice between the two solutions with both advantages and disadvantages. Fifth, strategies of reduction, which refers to the reduction of the original content, especially the figurative text, by the translator in order to make the translated text more acceptable to the target language culture.

Some translation theorists divide translation strategies into seven categories: problem confirmation, language analysis, storage and extraction, comprehensive search and selection, text reasoning and argument, text contextualization and task monitoring. The interpersonal strategies of professional translators (including the relationship between translators and the correction of errors on the other side, etc.) are distinguished. Search strategies (search for specific words or sentence structures); Inferring strategies (inferring strategies, referring to the translator’s inferences about the specific meaning of the original text) and monitoring strategies (referring to the translator’s comparison between the

original text and the translation, etc.) (Séguinot, Candace, 1999).

2. PERSPECTIVES ON THE TRANSLATION PROCESS OF TAPS

The question of whether it can truly reflect the translation process or the thought process has been accompanied by the development of TAPs translation research for decades. Whereas Erickson and Simon saw the human mind process as a kind of information processing that takes place primarily in the brain’s working memory, TAPs is a reflection of the thought process because ideas stored in working memory can be expressed through words. The second view of translation process is presented by, Ericsson and Simo who further distinguish between the similarities between the TAPs data and thought process in three ways. That is, Firstly, if the subjects are performing a verbal task that requires a series of steps, the TAPs data are highly corresponding to the thought process in the brain. Secondly, if the task is performed by a highly automated (or conditioned) brain process, the intermediate stages of the process are not stored in the subjects’ short-term memory, the automated thought process yields little or no TAPs data. Thirdly, if the brain, when performing a task of experience, is a kind of thought process automation and relies on visual encoding information (for example, in the form of graphics or images), rather than the oral information, then, the thought process TAPs acquired data is incomplete, with their subjects within the thought process exists only part of the corresponding relationship (Ericsson & Simon, 1984, pp.78-107).

Up to now, of all the options available for studying thought processes, including translation, TAPs has come to be seen by most researchers as the closest approach to thought processes. In psychological research, the TAPs affects thought processes in three main ways. First, if a person is speaking directly about information they already know, the TAPs does not change the order or structure of cognitive processes or slow them down. Second, while TAPs may have extended the time required to perform tasks that required visually encoded rather than oral information, the speed and structure of thought processes remained the same. Third, when subjects are not only asked to dictate the content of their thoughts, but also to provide the specific information requested by the researchers, subjects have a greater influence on the tasks performed in order to meet the latter requirement (Ericsson & Simon, 1984, pp.78-107). The findings do dispel some doubts about the effect of TAPS on the brain’s progress.

3. DATA COLLECTION

Thinking aloud is a method of data collection in cognitive psychology experimental research. It requires subjects

to speak out what they are thinking aloud as they solve one or more difficult problems. Researchers videotape or record the subjects' words and then convert them into written text that can be analyzed. Its theoretical basis is the memory theory of cognitive psychology. The translation researchers with cognitive view believe that only the immediate vocal thinking can reflect in detail the mental state of the subjects when performing a relative task. Task execution is problem solving. Problem solving is a cognitive process. The most common way to do this is to think aloud. Using thinking aloud in the study of translation process can help researchers better understand the level, step and unit of information processing in the translation process, the interaction between source language and target language, the procedural quantity, the starting point, approach and time of search process, etc.

Experimental research method has two inherent characteristics: one is the controllability of variables; Another is the repeatability of the experiment. These are two essential elements of experimental science. It goes against the spirit of experimental science to neglect the effective control of various variables in TAPs translation. At present, there are three main variables influencing the TAPs translation research: the type of TAPs data, the number of subjects, and the degree of external interference.

3.1 Types of TAPs Data

TAPs is essentially a method of collecting data, and when it comes to TAPs to study the translation process, two tasks should be involved data collection and the data classification and analysis, and summarizing some rules of the translation process according to the tendency and characteristics of the data. However, most of the current TAPs translation studies do not further classify the preliminary data collected, but directly convert them into written texts that can be directly analyzed, and then draw conclusions based on the analysis of the texts. The problem here is that not all TAPs' primary data are created equal.

All of the data collected through the verbal reporting method (including TAPs) can be classified as reflecting different characteristics of brain activity based on how long it takes for the data to be spoken or how much it is reprocessed by the brain. According to Cohen (1984), TAPs data can be divided into "self-report", "self-observation", and "self-revelation".

Self-report Data

Self-descriptive data is the description of what the subjects have done in the experiment, which is characterized by that the subjects often use relatively general statements to explain the thinking process (Jääskeläine, 2002). For example, in the TAPs translation experiment, subjects might say, 'I translated this article mostly literally.' These are self-descriptive data that directly summarize the translation process. Subjects with self-descriptive data

would label themselves, that is, identify themselves or their behavior as a certain type. In fact, self-descriptive data is the general attitude or view of the subjects to the type of task being performed, not the view of the specific task being performed in the experiment.

Self-observation Data

In contrast to self-report data, self-observation data refers to the subjects' evaluation of their own specific language behavior. In the TAPs study, self-evaluative data showed the subjects' perception of the specific translation task in progress. There are two kinds of self-observation data. One is that the information in the short-term memory of the subjects still exists. The second is the subjects trace back information about brain activity after the task is finished after 20 seconds. Comparatively speaking, introspective self-observation data can better reflect subjects' thinking activities than retrospective data, because it excludes the possibility of subjects' further processing of data in the retrospective process.

Self-revelation Data

The self-revelation data refers to the stream of consciousness that the subjects speak out by TAPs to reveal their thought process during the experiment, without any post-processing. Compared with the first two kinds of data, self-revelation data looks a little messy and disordered. Because this data is not further edited by the subjects, it is the truest reflection of what is going on in their brains.

Of these three types of data, only introspective self-observation data and self-revelation data are the main sources of data for TAPs. Other types of data can only supplement the thought process of the subjects at most, but they cannot be used as the main object of analysis. Unfortunately, most current TAPs translation studies fail to categorize the TAPs data collected; instead the data is transcribed into text for analysis. This inevitably raises doubts about the authenticity and representativeness of the results, since conclusions may be drawn from self-report and self-observation data quite differently from those drawn from introspective self-revelation data. Therefore, data classification should be one of the primary and important problems to be solved in TAPs translation research. Therefore, the collected data should be classified and the self-report data should be eliminated to ensure the reliability and authenticity of the data.

3.2 Number of Subjects and Degree of External Interference

Translation researchers believe that the number of subjects is a prominent problem in the current TAPs translation research. In TAPs translation, how many subjects is needed to make the results representative? It's a statistical sample size problem. In theory, the larger the sample, the more representative. So what size does the sample has to be for the study to be statistically significant? There is no definite answer to this question. In previous experiments,

the number of subjects is from one to 52. Most of the studies range from 1 to 12 subjects (Jääskeläine, 1998, p.268). There is a consensus among researchers that 30 is the minimum limit of the sample, because less than that would require technical processing to be statistically significant. Less than 30 subjects, the collected data cannot form a normal distribution.

The degree of external interference may affect the oral thought process of the subjects. As far as TAPs translation is concerned, the external factors that may affect the thinking process of translation include the experimental environment, the use of dictionaries, and the psychological characteristics of the subjects and the summary of translation.

CONCLUSION

The research on the TAPs translation process is the only experimental study in the field of translation introducing the theory of cognitive psychology which began in the 1980s. By the beginning of the 21st century, translation studies by domestic and foreign scholars had entered a new research field -- cognitive science. Apparently born in the late 1960s, the influence of cognitive science (cognitive psychology) has entered the field of

translation. Translation researchers use the TAPs to do the psychological research on translators in the translation process to improve the quality of the translators' translation and translator training which is meaningful and important to a certain extent. The use of TAPs also has effects on the result of the research, so the method of data collection in the study should attach importance to it.

REFERENCES

- Cohen, A. (1984). Studying second-language learning strategies: How do we get the information? *Applied Linguistics*, (2), 102.
- Ericsson, K. A., & Simon, H. A. (1984). *Protocol analysis: Verbal report as data*. Cambridge: The MIT Press.
- Jääskeläine, R. (1998). *Think-aloud protocols*. In M. Baker (Ed.), *Routledge Encyclopedian of Translation Studies*. London & New York: Routledge.
- Jääskeläine, R. (2002). Think-aloud protocol studies into translation: An annotated bibliography, *Target*, (1), 102.
- Lörscher, W. (1991). *Translation performance, Translation process, and translation strategies: A psycholinguistic investigation*. Tübingen: Gunter Narr.
- Séguinot, C. (1996). Some thoughts about think-aloud protocols. *Target*, 75-79.