

Original Paper

A Review of Research Paradigms of Cognitive Translatology in China

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Abstract

After twenty years of development after cognitive translatology was introduced to China from the West, research on cognitive translatology has achieved fruitful results. Cognitive science has updated the research methods and paradigms of cognitive translatology and promoted the research and progress of cognitive translatology. In terms of the research methods of cognitive translation studies, domestic scholars draw more from the research of western scholars, and on this basis, they continue to explore the innovation of paradigms and promote the research of cognitive translatology at a deeper level.

Keywords

cognitive translatology, cognitive science, cognitive paradigm, empirical research, situational paradigm

1. Introduction

Since Halverson (2010) first proposed “cognitive translation studies”, more and more researchers have devoted themselves to studying translation behavior within the framework of cognitive translation studies. Combined with the continuous progress of cognitive science, the integration of cognitive science and translation studies is increasingly emerging, and extraordinary results have been achieved. The content of the researcher’s research no longer just stops at the analysis of the translated text, but turns to the psychological study of the translator. The research paradigm is also constantly improving, which is of great significance to deciphering the secrets of the “black box” of the brain.

2. Cognitive Science and Cognitive Translatology

Social development has promoted the deepening of human cognition. Since the occurrence of the cognitive revolution in 1950s and 1960s, cognitive science, which explores the working mechanism of human brain and mind, has been developing continuously, and it has gradually become a landmark

research discipline jointly established by scholars all over the world. Cognitive translatology refers to translation research based on cognitive science, especially the theories of cognitive psychology and cognitive linguistics. Researchers use the theories and methods of cognitive science to explain translation phenomena and reveal the differences between oral and written translation. Cognitive process—including the translator’s psychological process, thereby revealing the nature and laws of translation. It can be seen from this that cognitive translatology is not so much an emerging discipline as a new approach and new paradigm in translation studies (Lu & Wang, 2013, p. 607).

3. Theoretical Basis of Cognitive Translatology

Cognitive science is the source of the research methodology of cognitive translation. Cognition is the process and activity that brain and nervous system produce mind, and it is a science that takes cognitive process and its laws as the research object. In 1975, due to the investment of the famous Sloan Foundation in the United States, American scholars integrated six disciplines, namely philosophy, psychology, linguistics, anthropology, computer science and neuroscience, to study “how information is transmitted in the process of cognition”. As a result of this research plan, a new discipline—cognitive science was born. Closely related to the study of cognitive translation is the branch of cognitive science, mainly cognitive psychology and cognitive linguistics.

Cognitive psychology is psychology with information processing as its core. In 1950s, the first generation of cognitive psychology with computer as metaphor was born. The core proposition of cognitive psychologists in this period is to compare the human brain to a computer, emphasizing that the human brain is an information processing system and that the brain is a central processing unit. It compares learners to active information processors. Wu and Wang (2004) hold that “because the translation process is completed in the ‘black box’ of the brain, ‘it involves the operation of this black box’, so fundamentally speaking, the study of translation process is a psychological problem.” Their metaphor confirmed the correctness of the above statement. From this, we could see that the main theoretical framework of cognitive psychology is the information processing model to explore what happens in different stages of human beings receiving information, storing information, extracting and using information through their senses. So cognitive psychology is often called “information processing psychology”.

Cognitive linguistics is a school of linguistics. Tan (2021) believes that cognitive translatology is most closely related to cognitive linguistics. The understanding of the nature of translation is inseparable from the understanding of the nature of language. Cognitive linguistics believes that human beings’ interactive experience in the world and the cognitive system formed on the basis of it are the root of language formation (Wang, 2005, p. 15). Translation is a special language use activity of human beings, which is naturally closely related to human understanding. Wang Yin believes that we can use the core principles of CL through interactive experience, conceptualization, correlation and other cognitive methods to compare the differences between languages, discover the cognitive differences behind them,

and deepen the cognitive translation process of translation studies.

4. Research Paradigm of Cognitive Translation Studies

After decades of development, cognitive translology has now formed a huge interdisciplinary research system. The research content of cognitive translology is constantly expanding and the research methods are becoming more and more perfect. Lu and Wang (2013) believe that the ultimate goal of theoretical research on cognitive translology is to construct a universally accepted or practical description model of translation process, so as to explain the translation process and its related elements more reasonably. Generally speaking, the research on cognitive translation process mainly adopts experimental paradigm and situational paradigm.

4.1 Experimental Paradigm

The experimental paradigm focuses on the psychological process and cognitive mechanism of language conversion in the process of translation, and objectively describes the translator's thinking activities (Lu & Zheng, 2022, p. 20). To explore the translator's mental activities, processing mechanism and translation strategies in the process of translation by means of experimental demonstration.

Since the 1960s, translation researchers have tried to establish a theoretical model of translation process through empirical speculation, but it has only a certain explanatory power and is not suitable for explaining the individualized or individualized cognitive psychology in the actual translation operation (Deng, 2012, p. 89). Since 1980s, researchers have paid more attention to the empirical study of translation studies.

The early research on the translation process mainly adopted the "Think Aloud Protocol (TAP)", that is, the subjects reports all their thoughts while translating, and the researchers records the whole translation process, and then analyzed the translator's cognitive thinking activities by transcribing the data. However, this method has great defects, which will slow down the translation speed and even affect the translator's thinking process. Later, in order to avoid the shortcomings of the above methods, researchers introduced "Key Logging" and "Eye Tracking" techniques into the study of translation process. The former can record the input, pause, deletion, modification and other behaviors of the subjects in the translation process, while the latter can track the subjects' eye movements, fixation points, fixation duration and so on. The data generated by these two research methods can help infer the translator's attention distribution, cognitive load, processing mode, etc. in the translation process, and at the same time, it will not interfere and affect the translation process. In addition, researchers Lu Fengmei and Yuan Zhen proposed to explore the cognitive process of translation by using functional magnetic resonance imaging (fMRI). Even more, some translation process researchers and scholars in the field of neurocognition have jointly proposed to explore the reasoning behavior of combining context in translation process by using the experimental design of fMRI and eye tracker, combined with relevance theory, in order to contribute to the exploration of translation process in the brain (Lang & Hou, 2019, p. 90). In the new development stage, researchers have adopted some techniques, such as

event-related potentials (ERP), electroencephalography (EEG), functional magnetic resonance imaging (fMRI) and functional near-infrared continuous waveform mapping (fNIRS), to study the brain waves of translators in the translation process, which has led to some hot issues in the translation process.

4.2 Situational Paradigm

The new viewpoint of situational cognition in cognitive science brings inspiration to the field of translation, and accordingly, the translation field puts forward the situational paradigm of cognitive translation process research. The study of translation process under the guidance of situational cognition emphasizes the dependence of translation cognition on the situation, and regards cognition as an interactive process between thinking activities and individual experiences, external environment and other individuals (Risku, 2010, 2014). Ma (2017) believes that the “brain” in translation can’t accomplish the translation task independently from the external environment, and researchers need to re-examine the relationship between thinking and cognition. Brain activity is only a part of cognitive activities. In real translation scenes, there are obviously other factors that affect translation cognition. Other factors, including the workplace, the translator’s team, the technical network and the translator’s personal feelings and experiences, are the research objects of situational paradigm. Under the influence of situational cognitive paradigm, cognitive linguistics regards translation as the use and transformation of language, and brings pragmatic, personal and cultural factors into the cognitive content, and deeply explores the subjective cognitive process of translation based on the central position of experience. Categorization, conceptual metaphor, conceptual metonymy, polysemy, iconicity, subjectivity, framework, epistemological solution and conceptual integration under the framework of cognitive linguistics are integrated into translation studies, and the concepts involved, such as construal, attention, prominence, perspective, schema, metaphor, metonymy and reference point, become cognitive ways to explain and explain the translation process, phenomenon and essence, thus revealing the cognitive mechanism and mental activities of translation, greatly (Luo & Tang, 2022, p. 116). Subsequent researchers gradually realized the importance of social dimension in the process of language use, and Wen Xu even thought it was a “social turn” in cognitive linguistics, which helped to further explore the social factors in the translation process.

Cognitive translation research under the social-situational research paradigm mainly adopts qualitative research methods such as ethnography, participatory observation and follow-up. Researchers go deep into the translator’s work site, observe the scene environment, interview the translator, and observe the translator’s cognitive translation activities in the real scene. From the perspective of embodied cognition, this paper examines the effects of the translator’s physical and psychological conditions on translation behavior and output, and from the perspective of interactivity, examines the interactive relationship among multiple participants in translation activities. Tan (2020) believes that situational paradigm is a new paradigm of cognitive translation studies, and combining process research with product research is most likely to promote the understanding and understanding of the cognitive process of translation.

5. Future Prospects of Cognitive Translatology

In recent years, due to the rapid development of cognitive science, cognitive translation has also made great progress, attracting more researchers to join it, and showing a booming trend. However, at present, the research on cognitive translation paradigm is still limited. It is in the preliminary exploration stage and the research methods need to be further improved.

5.1 Strengthen Interdisciplinary and Integration

Cognitive translatology is a dynamic science with multi-disciplinary and inter-disciplinary nature. The development of cognitive translation studies draws on theoretical models and research methods from cognitive science, especially cognitive linguistics, cognitive psychology, psycholinguistics, cognitive neuroscience, computer science and other disciplines, and its interdisciplinary features are very obvious (Wen & Zhang, 2023, p. 10). The complex research on the human brain in cognitive translatology cannot be achieved through a certain discipline. Only with the help of the development of computer technology and psychology can we study the process of cognitive translation more comprehensively.

5.2 Experimental Paradigm and Situational Paradigm Complement and Learn from Each Other

In the process of scientific development, natural observation is often the main feature in the early stage, and experiment is gradually the main feature in the later stage. Cognitive translatology also follows this rule. Through analysis and inductive reasoning, the perceptual data obtained through qualitative research methods such as observation and follow-up can not only answer exploratory research questions, but also provide new knowledge or hypotheses for the experimental paradigm to further simulate real translation work scenarios and procedures. The experimental paradigm can be based on the new knowledge and hypothesis provided by the situational paradigm as the starting point of the theory, collect and analyze the data by means of learning, and let us see the translation process in a more direct way, and try to summarize and predict the law of the translation process (Lu & Zheng, 202, p. 26). The two paradigms cooperate with each other to jointly reveal the operation law of the brain's "black box".

6. Summary

In recent years, the research on cognitive translatology has increased exponentially, and the research results are also increasing. This review of translation process studies is limited to cognitive translation paradigms and excludes translation theory studies. Finally, the author believes that domestic scholars should consider how to achieve the "integrity" and "innovation" of cognitive translatology in interdisciplinary research, and how to better combine experimental paradigm and situational paradigm to promote the progress of cognitive translation studies.

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