

# Integrated Research in the Field of Cognitive Translation Studies—Introduction and Review of *New Empirical Perspectives on Translation and Interpreting*

Shao Hong<sup>1,a,\*</sup>, Zhang Mengmeng<sup>1,b</sup>

<sup>1</sup>School of Foreign Studies, Guilin University of Electronic Technology, Guilin, 541004, China

<sup>a</sup>sh0321@guet.edu.cn, <sup>b</sup>2470625475@qq.com

\*Corresponding author

**Abstract:** *Integrated research in the field of cognitive translation studies is the developing trend of translation studies in the future. New Empirical Perspectives on Translation and Interpreting, published by Routledge at the end of 2020, is mainly divided into such four sections as research on the translation process focusing on the target text, research on the translation process focusing on the source text, research on the translators and interpreters in the translating and interpreting process, and research on the prospect of empirical studies in translation and interpretation. This collection of papers provides direction and enlightenment for cognitive translation studies in the two aspects of "what to study" and "how to study".*

**Keywords:** *Cognitive translation studies, Integrated research, Translation process, Translation, Interpreting, Translator, Interpreter*

## 1. Introduction

*New Empirical Perspectives on Translation and Interpreting* ① (hereinafter referred to as “*New Perspectives*”) was published by Routledge at the end of 2020 and is one book in the series of *Routledge Advances in Translation and Interpreting Studies*. This book collection showcases the achievements of numerous outstanding scholars and academic newcomers in the field of interpreting and translation research, critically reflecting on the methodology and translation practice in the current field of interpreting and translation research, with the aim of strengthening the exchange and cooperation between theoretical and empirical research fields. In the past few decades, advances in methodology and technology have driven rapid development in the field of translation and interpretation research. However, the use of advanced technological means such as eye tracking and keyboard recording, as well as their research results, have been limited to their respective research fields and have not received interdisciplinary exchanges. This collection of papers aims to explore theoretical and empirical research problems in the field of interpreting and translation research, as well as methodologies for problem-solving. This collection of papers focuses on the universality of interpreting and translation research, aiming to establish an integrated empirical research theory of interpreting and translation. The key questions to be answered include: how does translation and interpretation relate? How can technological advancements in the field of oral and written translation drive the translation process and research on translated texts? What is the integrated empirical theory of oral and written translation research like? In summary, this book presents various possibilities for in-depth communication in methodology and practice in translation and interpretation studies [1].

## 2. The contents of the book

The book *New Empirical Perspectives on Translation and Interpreting* is mainly divided into four parts and consists of fourteen chapters. The first chapter serves as the preface, introducing the theme of this book: the integration research of translation and interpretation, two sister disciplines; The first part includes Chapters 2 to 7, which explore the research on the translation process of the target language text; The second part includes Chapters 8 to 9, which explore the translation process research focusing on the source language text; The third part includes Chapters 10 to 12, which focus on the study of the

translator's or the interpreter's translation process; The fourth part includes chapters 13 to 14, exploring the prospects of empirical research on translation and interpretation.

### ***2.1. The foundation of integrated research on translation and interpretation***

The first chapter of "*New Perspectives*" indicates that there is a complex correlation between translation research and interpretation research, but for a long time, they have each embarked on different paths of disciplinary development. Translation research draws nourishment from philosophy, literature, discourse theory, and research techniques, while interpretation research seeks theoretical support from psychology, sociology, and conversation analysis. The focus of translation research has always been on translation outcomes, while interpretation research has long focused on the translation process. The history of translation research is longer than that of interpretation research, so translation research has received more attention from interpretation research [2]. In 1997, Danks et al. [3] first proposed the theory of cognitive processes in translation and interpretation, which drew the attention of translation and interpretation researchers to psycholinguistic theory and cognitive science theory. In 1999, Padilla et al. [4] formally proposed the Cognitive Theory of Translation and Interpretation in translation and interpretation research. This theory is based on cognitive psychology and combines the psychological mechanisms of language understanding with the research path of translation and interpretation that emphasizes attention and memory. From then on, translation studies gradually initiated a cognitive shift and made significant progress in both theoretical and empirical research. Translation researchers rarely mention the cognitive research path in interpretation, but interpretation researchers are constantly moving towards the direction of translation research, such as incorporating pragmatic and functional perspectives into interpretation research [5].

The empirical research on translation and interpretation has similar key research methods. Both use experimental methods, such as keyboard recording and eye tracking. Interpretation research has a longer history in experimental research than translation research, but it lags far behind translation research in corpus research methods. It is in the field of corpus research that translation and interpretation studies have conducted integrated comparative studies under the same theoretical and methodological background [6]. Translation and interpretation research have similar technological application environments. The development and application of computer-aided translation tools (CAT tools) are advancing rapidly, and the interaction between translators and computer-aided tools has become a focus of translation studies. Among them, post editing after machine translation has received much attention from translation studies. The development of interpreting assistance technology is relatively slow, and the interaction between interpreters and new technologies has just received attention in translation studies [7]. The current research on cognitive translation lacks a collaborative and consistent research framework. Translation and interpretation research each have their own characteristics, and their research themes and methodologies are not completely consistent. But there is still room for integration and development between the two.

### ***2.2. Cognitive Translation Research Focusing on the Target Texts***

The second and third chapters of "*New Perspectives*" focus on the target texts in cognitive translation studies, exploring the results obtained from the comparison between translated text corpora and non-translated text corpora. Both chapters explore the use of optional grammar items and the cognitive influencing factors behind them. Chapter Four focuses on the study of simultaneous interpretation. The study introduced in this chapter explores the lexical collocation tendencies in Russian-English simultaneous interpretation English corpus and non-interpreting English oral corpus from the perspective of lexical collocation chains in different parts of speech. The results show that interpreters often use a special lexical collocation chain, which can only be attributed to the compensatory measures often taken by interpreters based on the characteristics of the source language, to reduce the characteristics of excessive colloquialism or excessive written language in the source language [8]. Chapter 5 explores the cognitive difficulties that translators and post editors may encounter during the translation process. The research reported in Chapter 6 still uses keyboard recording data to compare cognitive issues related to the use of conjunctions in interlingual translation between Polish and English and intralingual translation in Polish. Chapter 7 analyzes the impact of language service providers' standards and requirements for post editing quality on translators and translation quality.

### **2.3. Cognitive Translation Research Focusing on the Source Texts**

The two studies reported in Chapter 8 and Chapter 9 of *"New Perspectives"* focus on the issue of word order in source language (German) texts and its cognitive impact on the interpretation or translation process. The research results indicate that the differences in syntactic structures between the source language and the target language can affect the processing time required for interpretation, while translators require longer time to process inconsistent syntactic structures.

These two studies both take the source language as the research starting point and share some common theoretical and methodological characteristics, demonstrating the necessity of continuously strengthening collaborative research in the fields of translation and interpretation. Both studies used regression models in statistical analysis, such as anchor effect models and linear mixed regression models; They all borrowed concepts from psychological research, such as the probability effect of predicting translation processing performance, as well as conditional and automatic processing; They have all focused on the universal issues of translation, such as literal translation and visualization.

### **2.4. Cognitive Translation Studies Focusing on Translators (Interpreters and Translators)**

The third part of *"New Perspectives"* focuses on various studies related to interpreters and translators, such as translator experience, interpretation training, and translator gender. The research in Chapter 10 mainly explores the differences between expert translators and novice translators. This study is based on Halliday's systemic functional grammar theory and systematically explores the differences in translation abilities exhibited by expert translators and novice translators at the discourse level of the translated text. Chapters 11 and 12 focus on the performance of simultaneous interpreters and explore two different perspectives on the interaction process between interpreters and interpreting activities. The study in Chapter 11 explores the impact of interpreter training on interpreter thinking. The study in Chapter 12 explores the impact of interpreter gender on their fluency in interpreting.

### **2.5. Prospects of Cognitive Oral and Translation Research**

The fourth part of *"New Perspectives"* focuses on the prospects of cognitive interpreting and translation research. The research reported in Chapters 13 and 14 of *"New Perspectives"* was completed by leading figures in the field of interpreting and translation research. Two studies present a literature review of empirical research on interpreting and written translation, as well as translation studies around two dimensions: translation products and translation processes. Both studies emphasize the integration of the fields of interpreting and translation research and look forward to future research trends. Although interpreting and translation research has various research characteristics, their close cooperation in theory, methodology, and technology will greatly benefit both parties in many research fields. The various research results collected in this book also highlight some potential interrelated and difficult issues. These challenges require the development and deepening of dialogue between the two sister disciplines of translation and interpretation in order to achieve a win-win situation.

## **3. Brief Review**

In the 1980s, experimental psychology methods began to be applied to the study of translation processes, marking the beginning of empirical translation research. In the 1990s, empirical research on translation began to adopt research methods from computer technology, cognitive science, and neuroscience, and empirical translation research further developed. The rise of corpus translation studies has expanded empirical translation research to the fields of translation products and functions, and a preliminary methodology for empirical translation research has been established [9]. Empirical translation research emphasizes the scientific nature of translation research, adopts scientific research methods, strengthens the descriptive and explanatory power of translation theory, and determines the disciplinary nature of descriptive rather than prescriptive and interdisciplinary research [10]. The importance of empirical research on translation for the development of translation studies is self-evident. From the research content and methods that *"New Perspectives"* reports, empirical research presents the following characteristics.

Firstly, the integration research of interpreting and written translation has been put on the agenda. *"New Perspectives"* proposes a research framework based on cognitive translation research, covering the three core elements of translation studies (source language, target language, and translator). The first

chapter of "New Perspectives" provides a clear exploration of the theoretical foundation and feasible research methods for the integration of interpreting and translation studies. In previous studies, Zhang Jing [11] pointed out in her paper "A New Direction of Empirical Research on Translation Process: Exploring CRITT TPR-DB" that translation research papers at that time were all based on the translation process, and interpretation process research was often "absent", which caused regret for empirical translation researchers. Therefore, the integration research of interpreting and written translation advocated by "New Perspectives" can make up for such shortcomings. This collection of papers suggests that by comparing the data produced in interpreting and written translation research, the integration of interpreting and written translation research can reveal the general rules of translation practice, thereby providing more macro guidance for interpreters and written language translators.

The discourse analysis approach of interpreting and written translation and the interdisciplinary interaction in translation research can bring empirical new paths for describing translation research [12-13]. The integration of interpreting and translation studies can form a joint force based on discourse analysis, jointly constructing a macro image and contributing to the field of external communication. The integrated research on the neural operation mechanism of interpreting and written translation can help translation researchers make full use of the brain neural basis to explore language form/semantic effects, translation direction effects, source language unit effects, and translator ability effects in the translation process, thereby understanding the general essential attributes of the translation process [14]. By studying the roles of cognitive factors such as inductive reasoning, working memory, and rapid naming in interpreting and written translation, researchers can discover general patterns of cognitive factors affecting the translation process and patterns of cognitive differences among translators [15]. The research conclusions obtained through the integration of interpreting and written translation are often more universal and have a stronger guiding effect on translation practice and training.

Secondly, focusing on empirical research has enhanced the systematicity of cognitive translation research and expanded the field of empirical translation research. Researchers Xiao Kairong and Wen Xu [16] pointed out in their paper in 2012 that there is still a lack of systematic theoretical models in the study of cognitive translation processes during this period, with insufficient methodological research, limited resource sharing, and overly vague division of research objects and professional fields; And point out that the above issues will become the future development direction of this field. Yang Fan and Li Defeng [17] also summarized the main problems in translation process research over the past thirty years, such as the reliability of verbal reporting when using the think-aloud method in empirical research, the indirectness of data collection using keyboard recording method, and the pertinence of eye tracking method in collecting data (i.e. the inability of researchers to distinguish the allocation of translator cognition in text comprehension, translation strategy selection, and translation conversion through these eye tracking data), as well as the ecological validity of neuroscience methods such as functional magnetic resonance imaging (fMRI), positron emission tomography (PET), and electroencephalography (EEG) in translation; At the same time, it is pointed out that future research should focus on constructing a comprehensive translation cognitive theory, innovating the use of research methods and tools, and combining translation process research with translation product research. The cognitive translation research reported in "New Perspectives" conducts an integrated study of interpreting and written translation within the framework of the three elements of source language, target language, and translator, aiming to enhance the systematicity of cognitive translation research and the universality of cognitive translation theory. The "New Perspectives" advocates for the sharing of interpreting and written translation resources, providing diverse empirical data for the construction of cognitive translation theory. "New Perspectives" is dedicated to combining translation process research with translation product research, emphasizing both the descriptive nature of empirical research methods and their interpretive and predictive nature. Such empirical research can undoubtedly provide guidance for theoretical research and practical research in translation. The "New Perspectives" has expanded the field of empirical research, refined its research objects and professional fields. In addition to reporting on the process and product research in conventional interpreting and written translation, "New Perspectives" also adds a study on the process and product research of post editing in Chapter 7, as well as a study on the impact of foreign interventions proposed by language service providers on post editing quality and translation quality. This study involves the impact of the pressure and emotions experienced by translators on translation. It is precisely because translators engage in translation practices in such stressful ecological environments that this study has important practical and enlightening significance for translation practice. In Chapter 12, "New Perspectives" added a study on the relationship between the gender of interpreters and their fluency in interpreting. This study expands the empirical research field to background factors that can affect translator cognitive activities, such as gender factors. The study of "New Perspectives" provides direction and inspiration for what cognitive translation studies need to study.

Thirdly, research methods are diverse, such as keyboard recording, eye tracking, corpus methods, experimental methods, comparative methods, and higher-order mathematical statistics. The "multivariate data validation" is adopted to solve the problem of "how to study" in cognitive translation studies. The third to fourth chapters of *"New Perspectives"* use corpus methods and mathematical statistics to describe and analyze translation products, and then explore the motivations behind their translation process and behavior. Chapters 5 and 6 use keyboard-recording and mathematical statistical methods to describe and analyze the prominent features in translation products, and explore the reasons behind this translation behavior and process. Chapter 7 employs experimental and statistical methods to explore the causal relationship between external factors of translation and translation performance. Chapters 8 and 9 adopted comparative methods, keyboard recording methods, eye tracking methods, and higher-order mathematical statistical methods to explore some common issues in interpreting and written translation, aiming to obtain patterns and predictive effects of translation behaviors and processes. Chapters 10 to 12 use comparative, statistical, experimental, and corpus methods to explore the cognitive translation process and performance of translators, aiming to explore the effects of translator experience, training, and gender on their interpreting and written translation performance. Each study adopted two or more research methods, emphasizing the co-validation of multivariate data and the explanatory and predictive power of its research conclusions.

Fourthly, the research presented in the *"New Perspectives"* reports has a clear practical orientation, with research results orienting towards translation teaching and training, as well as translation practice. The research results from Chapters 2 to 7 have a good enlightening effect on translation teaching and training. These achievements can help translator trainees understand some common translation performance tendencies, thereby helping them avoid some bad translation behaviors and performances, improve their translation quality, and other translation-related emotional management abilities. The explanatory power and predictive ability of the research results in Chapters 5, 8, and 9 can help translation trainers accurately predict the translation difficulties that translation learners may encounter, thereby helping them better design translation teaching activities. The research results in Chapters 10 to 12 are directly related to the cultivation of translators. Based on the impact of translator training on the translation process and performance, translation trainers can optimize translation training contents and provide targeted assistance to translation learners of different genders to improve their translation abilities and performance, so as to help them continuously develop into expert translators.

#### **4. Conclusions**

The *"New Perspectives"* has further expanded the scope of cognitive translation research, which has also been further standardized in empirical research. The integration of oral and written translation researches advocated by the *"New Perspectives"* has pointed out new directions for the development of cognitive translation studies. Translation practice and research cannot be separated from the social ecological environment. The perspective of ecological translation [18-19] should not be excluded from the cognitive scope of translators. This new perspective can help translators adapt to selective activities in the ecological environment, make adaptive choices from the three dimensions such as language, culture, and communication, and place the original text in a language ecological environment for translation, making the translation easier to understand and accept. Therefore, future cognitive translation research should incorporate the social ecological factors of translation into the scope of empirical research, so as to better direct theoretical interpreting and translation research and more effectively guide interpreting and translation practice.

#### **Annotations**

1) The author's book review is based on an e-book published in 2020: ISBN 978-0-367-14125-7 (hbk) (eBook).

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