Translation Process Research in China(1992-2023): A Bibliometric Analysis

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Abstract

This paper makes a survey of the research advances on "translation process research" in China in recent three decades(1992-2023). A total of 296 related documents from CNKI core journals and CSSCI database in Chinese Mainland are obtained. This paper uses Excel and Citespace V 5.6.R5 (64bit) to visually analyze the retrieved documents in order to get the overall map, research trend, and current research focuses of translation process research in China. It is concluded that translation process research in China is multi-dimensional and multi-disciplinary. This paper holds that the future development of this field in China is to construct multidisciplinary guiding theory, integrate research methods, and further broaden the research object.

Keywords

Research Translation Process; Cognitive Science; A Bibliometric Analysis; Citespace V.

1. Introduction

In 1972, Holmes proposed three approaches to descriptive translation studies: "product-oriented research", "function-oriented research" and "process-oriented research". He argues that "process-oriented research" is concerned with the study of the act or process of translation, that is, what happens in the "little black box" of the translator's mind when a translation is created in another language[1]. Since then, researchers have carried out diversified studies under the common label of translation process studies, constantly improving the connotation of translation process studies, expanding the research content and broadening the research methods in this field. In this context, some scholars have reviewed and commented on the current situation of translation process studies within China and abroad. For example, the research results of static translation process in and outside China was reviewed, and the researcher concluded that the dynamic research of translation process is insufficient[2]. The methodological framework of empirical research on translation process in the west, particularly the introspection-based methodology for the empirical research and the integration of cognitive science and the empirical translation, was summarized[3, 4]. Researchers introduced the experimental method from the perspective of cognitive translatology and the existing problems[5, 6]. Yang and Li reviewed and anticipated the main tools and methods of process research, including thinking aloud, keystroke recording, eye tracking and neuroscience methods[7]. However, the drawback with Yang and Li's research is that these single-perspective comments can not reflect the overall picture of translation process research and its development and changes. Researchers also reviewed the development of Western translation process in the past 50 years from a theoretical, empirical and methodological perspective based on the core literature[8]. Unfortunately, there is not yet a systematic summary of the translation process researches carried out in China. Therefore, it is necessary to conduct a systematic and comprehensive review to find out the overall picture and the rules of development and change of translation process research in China, and to provide reference for the future development of this field in China based on these characteristics.

2. Research Questions and Research Methods

With the help of Microsoft Excel software and Citespace visual analysis tools, this paper mainly discusses the following questions: What is the overall development status of translation process research in China? What is the research trend and current research focus of translation process research in China?

3. Overall Review

The paper uses Excel to analyze the collected literature based on the year of publication. On the whole, the number of articles published on the topic of translation process in core journals presents a fluctuating increasing trend, see figure 1. The first turning point occurred in 1998, when the annual number of published papers exceeded 5; the second turning point began in 2003, when the annual number of published papers reached 10; after that, it entered an active period with annually published papers steadily exceeding 10. In 2005, the number of published papers reached 15; and in 2017, the number of published papers exceeded 20. From 2003 to 2019, the average annual publication of 13.4 papers indicates that this research has been in a hot position and presents a trend of rising year by year in a wavy manner. The annual growth rate reflects the trend of the numerical change of the annual number of published documents. Before 2006, the annual growth rate showed big fluctuation, indicating that the annual growth rate of the number of published documents was not fixed; Since 2006, the annual growth rate still has ups and downs, but the amplitude of the shake narrowed, and the downward decline was not more than 0.5 points. It can be inferred that since 2006, the annual publication volume of translation process research has tended to be stable, and the research of this topic in China has gradually become prosperous and developed.
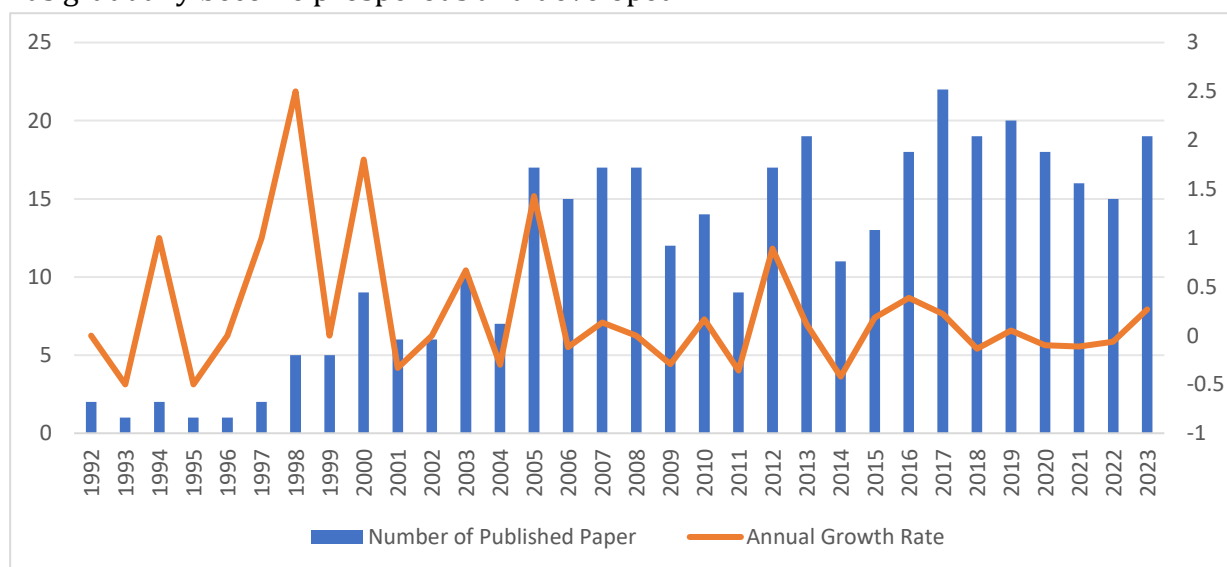
Figure 1：Annual Publication Number and Annual Growth Rate (from 1992-2023)

4. Result of the Bibliometric Analysis

4.1. Development Path

The Data of 296 articles were imported into Citespace software, and refworks data was converted into the format that the software could recognize and read by using the data function in citespace interface. The database time span was set to 1992-2023, with 1 year as time slicing and keywords as node types, and the top 50 highly cited keywords in each time slice were selected. A keyword collinear map composed of 585 nodes and 1077 connections can be

obtained by using the pathfinder in the software, and then a keyword clustering view can be obtained.

The key words reflect the core theme and main content of the text, so the analysis of the word frequency change of the key words can understand the research hotspot of translation process. The literature was analyzed by Citespace to obtain the collinear map of keywords. Then, the high-frequency keywords appearing in the literature were counted by year, and the list of high-frequency keywords in translation process research was listed (Table 1). The year refers to the year in which the keyword first appeared, and the frequency refers to the total number of citations of the keyword in the literature database. Centrality is an indicator of the importance of the keyword node in the whole network. Nodes with intermediate centrality exceeding 0.1 are called key nodes, and analysis of them can explain the mutation or transformation relationship between research hotspots. As can be seen from Table 1, the centrality of keywords is generally low, and only six keywords "translation process", "translator", "original text", "translation" and "translation process research" have centrality exceeding 0.1. Based on the year and centrality analysis of keywords in Table 1, translation process research in China can be roughly divided into the following four stages.

Table 1 List of High Frequency Keywords in Translation Process Studies

Year	hotword	fre.	centrality	hotword	fre.	centrality	hotword	fre.	centrality
1992 - 1997	translation process	88	0.47	translator	19	0.08	source text	10	0.13
	literary translation	7	0.02	target text	6	0.01	translation methods	4	0.02
	translation	39	0.26	translation theory	4	0.02	translation practice	3	0.01
1998 - 2003	think-aloud	14	0.04	translation theorist	2	0.02	recognition	8	0.02
	subjective awareness	3	0.02	meta recognition	2	0.01	interpretation	6	0.03
	translation studies	3	0.02	cultural intervention	3	0.01	C to E translation	8	0.04
	Gestalt image	2	0	social semiotics	1	0	deduction	1	0.03
2004 - 2010	translation process research	24	0.12	methodology	4	0.01	empirical research	18	0.09
	translation unit	6	0.02	modern western translation theories	2	0.01	psychology space	2	0.01
	subjectivity	3	0.02	descriptive translation studies	3	0.02	triangulation	3	0.01
	translation teaching	9	0.04	coding	3	0.01	translation strategy	3	0.01
2011 - 2023	cognitive science	4	0	eye-tracking technique	10	0.02	decision making process	2	0.01
	conceptual integration	3	0.02	simultaneous interpretation	2	0.02	Howard Goldblatt	2	0.02
	machine translation	3	0	translation recognition	8	0.03	situational recognition	2	0.01

	James Legge	2	0	directionality	2	0	humanistic perspective	1	0.01
	corpus -based translation studies	2	0	theory	2	0.01	tools	2	0.01

In the first stage (1992-1997), the high-frequency keywords are: translator, translation, original text, translation process, translation, translation method. In this stage, researchers pay attention to the whole and macro discussion of the communicative channel of source text, translator, target reader. The focus of the discussion is on the overall model of information transfer based on linguistics, and an overview of the translator's thinking activities of information - semantic - conceptual transformation in the process of information transfer. The research in this stage is mainly based on Nida's model of language conversion, which holds that meaning is preexisting, and the translation process is the encoding of meaning by the original author, the decoding and re-encoding of meaning by the translator, and the final decoding of meaning by the target reader. The research method is mainly a framework model derived from the accumulation of experience in translation practice.

The second stage (1998-2003) begins with a review of Bell's psychological model of translation process [9]. The key words of this stage are think-aloud, subject consciousness, metacognition, Chinese-English translation, deduction, cultural intervention, Gestalt imagery, social semiotics, translation theorists, etc., which shows that the study of translation process at this stage not only involves the linguistic transformation process, but also involves the social and cultural factors of translation behavior, showing a broader research horizon. During this period, scholars used cultural intervention, psychological interference, literary aesthetics, pragmatic view, relevance theory, philosophical perspective, communication perspective, cognitive psychology, textual linguistics, communication, phenomenology and other perspectives to explain the translation process. In the process of explaining theories, they mostly took literary texts as references, especially Chinese-English translated texts. The research at this stage is more concerned with how various external factors such as social, cultural, psychological, literary and artistic aesthetics play a role through the translator or other participants in the translation process, that is, the cognitive participation of the subject in the interactive context [10]. In the second stage, scholars use multi-field and multidisciplinary theories to explain the translation process, but these models and theories use prescriptive or static description methods, which are idealized and unreal, not based on the mental thinking process of individual translators, but on the "perfect" thinking process of the most idealized and successful translators.

In the third stage (2004-2010), the high-frequency keywords are translation process studies, translation units, empirical research, methodology, translation strategies, contemporary Western translation theories, descriptive translation studies, and triangulation. This indicates that the research in this stage, besides the deepening in the theoretical level, began to turn to the empirical research. Researchers try to use more inclusive and integrated theories to explain translation process, recognizing that the translation process is a non-linear and dynamic selection process, and integrating closely related factors such as translators, culture, poetics and readers into a dynamic translation process framework. In addition, at this stage, a number of studies focused on the analysis and application of empirical methods [11, 12, 13, 14], and on the analysis of translation process from perspective of cognitive psychology [15, 16], as well as from the pragmatic perspective [17, 18]. At this stage, scholars went deep into the level of psychological cognition, extracted the operation process of "black box" by using the research methods adopted by psycholinguistics and experimental psychology, carried out research by

the method of descriptive translation, and further built theoretical models. Empirical research and cognitive research have gradually become the focus of translation process research.

In the fourth stage (2011-2023), the keywords are directionality, decision process, key points, situational cognition, simultaneous interpretation, psycholinguistics, and translation cognitive process. The empirical research turned to multi-methods and multi-dimensions, and the research points were more detailed. Researchers are now focusing on the impact of certain features of the test subjects on the interpretation process, such as how their interpretation experiences and their expertise influence their interpretation process[19, 20], or on the discussion of an indicator of translation process, such as cognitive load research [6]. Researchers have also noticed new approaches and paradigms in process research. In addition to experimental-empirical studies, translators' manuscripts and translators' and authors' interactive translation archives are also new paradigms and new methods for the study of translation process [21, 22]. At the same time, the researchers believe that in addition to paying attention to the psychological cognitive mechanism in translation, we should strengthen the study of the context of translation, and include the social dimension and historical dimension into the scope of translation process research, complementing the previous single-dimension cognitive dimension and avoiding simplifying the complex manual translation process. [23, 24].

J.C. Wang et al. [8] believe that western translation process studies have undergone three transitions from theoretical rationale to empirical research, from qualitative research to mixed research, and from product orientation to cognitive process orientation. From the perspective of overall development, translation process studies in China develops basically in a synchronized way with that of the western translation process studies. From the perspective of research methods, translation studies in China change from induction, that is, from the translation product to the translation process, to the empirical description method, that is, using empirical data to describe and explain the phenomena in the process of translation, and then the comprehensive method combining empirical methods and research methods of humanities and social sciences. From the perspective of guiding theory, translation process research in China has been adhering to the multi-disciplinary guiding ideology, and recently cognitive science has gradually occupied the core guiding position in translation process research.

4.2. Important Research Areas

Through keyword clustering, a total of 12 clusters were derived and a list of clusters was obtained as follows (Table 2). The clusters are sorted according to their size (i.e., how many keywords they contain). The smaller the cluster number, the more number of keywords the cluster contains. The proximity value (Sihoutte) indicates the homogeneity of the clustered clusters, the larger the value, the higher the internal consistency of the cluster. Through clustering analysis and high-frequency keyword analysis, research on the process of translation in Chinese Mainland focuses on seven core topics. The first category of topic is about the guiding principles and methodology of the translation process, including such keywords as "translation process", "interdisciplinary research", "tools", "theory". The second category of topic centers on the interactions between different subjects involved in the process and the exertion of the translator's subject consciousness. Important keywords are "translator", "subjective consciousness", "subject", "object", "original text", "translation", "equivalent language". The third category of topic is the empirical research which uses psychological cognitive science theory and technology to collect process data. The typical keywords are "cognition", "translation process research", "methodology", "empirical research", "cognitive research". The fourth category of topic is the discussion of the translation process of literary works. The fifth category of topic is translation teaching. Process-oriented translation teaching model and the effect of implementation are discussed. The sixth category of topic is the interpretation of the

translation process from the perspective of related disciplines or other branches of translation. Related keywords are "unequal communication", "creativity", "realism" and "cultural school", "translation school", "translation discipline", "translation theory community", "translation studies" and "postcolonial translation theory". The seventh category of topic is difficult points encountered in the translation process such as culturally loaded words, idioms, and special sentence patterns.

Table 2 Major Clusters and the High-frequency Keywords within Each Cluster

cluster	Sihoutte	High-frequency keywords within the cluster
translation process	0.963	cognition, metacognition, representation, archetypal thinking, creative translation, interdisciplinary research, tools, theory
translation	0.934	translation process, creativity, realism, modernism, target language, Chinese literary images, comprehension, literary reproduction
empirical research	0.883	methodology, directionality, translation phenomena, NIR functional brain imaging techniques, corpus-based Translation Studies, translating texts, cognitive processes of translation, translator's psychology, empirical research on translation processes, descriptive research, eye-tracker, descriptive pathways
cognitive research	0.948	interpreting, translation subject, extemporaneous translation, translation theory, procedural systems, cognitive science, symbols, untranslatable, translatology, neuroimaging techniques, translation process, Xu Jun, translation process research, translation process, cognitive translation studies
source text	0.95	readers, Lin Shu, aesthetic studies, retranslation, exotic cultures, preservation of truth, receptivity, truth-seeking, local culture
literary translation	0.92	translation Units, image transformation, frame semantics, Gestalt Image reinvention
translation theorists	0.934	cultural school, translation discipline, translation theory community, translation studies, deconstructionism, Bassnett
Chinese to English translation	0.93	reference translation, culturally loaded words, cultural deficit, re-lexicalization
translation teaching	0.93	process teaching approach, commentary translation, student translation skills, peer assessment
translation methods	0.983	Chinese-English maxims, core content, on translation, Liu Zong, translation career, linguistic symbols, relevance theory
subjectivity	0.954	equivalence, translation variants, feminist translation studies, decision-making processes, ideology, case studies

Utilizing the timeline view function of citespace software, a timeline view from 1992 to 2023 is derived. The timeline view focuses on outlining the relationship between clusters and the historical span of literature in a particular cluster, making it easy to see the time span of a particular research topic. From the timeline, it can be seen that the initial focus of translation process research is the macro subject-object relationship and subject consciousness of each node in the translation process, as well as the idealized translation method deduced from it. Secondly, it gradually shifted to the theories of discourse function, social signification and cultural school of thought to explain the translation process and construct a model of the

translation process. More recently, there has been a shift toward empirical research and the cognitive process of translation. In terms of direction, Chinese-English translation has become the focus of attention recently because a large number of Chinese canonical books and contemporary Chinese novels have been translated into English under the "One Belt, One Road" cultural construction and the advocacy of Chinese culture "going out". In addition, the teaching of translation is also a focus of recent research. Scholars have applied the methods and tools of process research to the translation classroom to train students and translators. The timeline also indicates that the genres of translation research in China in the early and middle periods are mostly literary genres, and not enough attention is paid to non-literary issues. Translation process research in China, as a branch of translation, is intertwined with various branches in translation studies, which indicates that translation process research in China is an interdisciplinary and multi-faceted exploration.

4.3.   Research Frontiers

The so-called mutated terms refer to the sudden and obvious increase in the frequency of use, or the sudden appearance of words in a relatively short period of time. Based on the time distribution and change trend of word frequency, mutated terms extracted from a large number of keywords can help to analyze and understand the research frontier areas and development trend of a certain discipline more clearly. The paper uses Citespace V to extract mutated terms from the 296 articles and gets a list of 5 mutated terms and their mutating years as listed in table 3. 2006-2007 saw the emergence of "translation" as a mutated term, indicating that the translation process research interacted with other branches of translation research at this stage with high frequency, which proves the multidimensional and multidisciplinary perspectives of the translation process research. The mutation of "translation process research" in 2011-2021 indicates that the recent hotspot of translation process research in China is on the ontological issues of guiding theories, tools and methods of translation process research, which shows that the ontology, guiding disciplines, methods and tools of this field are always being updated and expanded. 2017-2023 saw "cognitive process of translation" as the most important term in the field of translation research. The mutation of "cognitive process of translation" in 2017-2021 and "eye-tracking" in 2016-2020 suggests that the close integration of the study of the translation process with the study of cognitive sciences assisted by technological means is a current turn. "Translator" has always been a high-frequency keyword in translation process research, and the mutation of "translator" in 2013-2015 is due to the emergence of several articles on interviews or archival studies of translators.

Table 3 The top 5 Mutated Terms

Keywords	Beginning year	Ending year
Translation	2006	2007
Translation Process Research	2011	2021
Translator	2013	2015
Eye-tracking	2016	2020
Translation Cognitive Process	2017	2023

5. Conclusion

Through the analysis of the overall development process, the following conclusions can be drawn:

(1)From the perspective of overall development, the annual publication volume of translation process research in China has kept at a high level, which means the research field is in an active period. The literature in this field updated quickly, and new methods, theories and guidance disciplines are constantly enriched and promoted the development of this discipline in China.

However, given the low citation frequency and low centrality of high-frequency keywords, the development of the research in this topic has been promoted by the introduction of and comment on relevant foreign literature. With not enough amount of innovative work from within the country, the depth and the influence of the topic research in China is still insufficient.

(2)In the past 30 years, translation process studies in China have followed the international trend, and the overall trend has been from the initial theoretical deduction method to empirical research, from qualitative method to a mixed research method. In terms of theoretical research, the theoretical construction has gone through the transformation model based on linguistics, to multi-perspective and interdisciplinary interpretation, and then to cognitive science as the core guiding ideology. The method of empirical research has changed from thinking-aloud at the beginning, to the comprehensive use of multiple technologies, and then to the complementation of combing humanistic social methods and empirical research methods. In short, the research method turns to the integration of multi-methods and multi-dimensions, and the research points are more detailed and in-depth.

Combined with the development trend of this field and the latest keywords, this paper makes the following predictions and prospects for translation process research in China:

(1)Integration of research methods. In this field, the integration of research methods should be further strengthened. Firstly, the existing experimental and empirical methods should be further widely applied in different experiment settings. Secondly, The integration of humanistic and empirical methods should be advocated in the study of translation process. For example, the combination of the process data, the translator's background data (through questionnaire and interview methods) and the product data (through quality assessment of the translation and its revised version), can generate new insights about the relationship between the translator's personal background, the translation process and the translated product, and get a clearer and more intuitive understanding of the influence of the translator's subjectivity in the process translation. It is also a trend to integrate text analysis into process research by using the advantages of corpus linguistics. In addition, translation archives, manuscripts and personal documents of translators, including all public and non-public manuscripts, documents and materials produced by translators in the process of translation, are effective methods of process research in addition to the experimental-empirical paradigm.

(2)Widening of research objects. At present, the main research object of cognition is the translator's process of information extraction, processing, memory and judgment, which belong to translation behavior. Cognitive studies of translation processes should not only involve translation behaviors, but also translation events and translation practices [25]. Scholars in China have noted the complexity and sociability of the translation process, and hold that the translator's activities cannot be separated from the social context and culture of the target language, and are restricted by various power relations such as sponsors and ideologies. However, limited to the construction and elaboration of theories, empirical research on translation events and cognitive behavior in translation practice is rarely involved. In terms of translation events, follow-up interviews with active translators or translators can be deepened to observe the relationship between participants in translation behavior, the relationship between participants and the text, translation changes at different stages and their causal relationship analysis. At the same time, the academic community can pay attention to the post-translation editing of the translation by the translator and the cognitive processing of the translation by the recipient. At the level of translation practice, the study of the evolution of translation activities in the context of changing norms and trends of thought can be emphasized as well. Scholars can give full play to China's advantages in literary translation research, and uses corpus and other means to explore the cognitive trajectory of translation of a translator, a nation, or even a certain historical period, based on existing translation works, translator's commentary works or written records, translation theories, translation reviews, translation

history and other documentary materials. At the same time, the academic community can pay attention to the longitudinal research on tracking translators' translation ability or professional skill development.

(3)Interdisciplinary integration of guiding theories. It can be seen from the summary that recently cognitive science has gradually occupied a core guiding position in the study of translation process. In the West, Cognitive Translatology is a construct that integrates theoretical achievements in the fields of linguistics, psychology, neuroscience, cognitive science, writing, reading, and language technology [26]. However, cognitive translatology is still in the stage of conceptual construction, and scholars in China need also contribute to the development and interpretation of the new theory by integrating diverse related mature disciplines.

Acknowledgments

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