

GPT and Language Research

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Abstract: This article describes the development process of GPT, analyzes the characteristics of generative pre-training models, explains the opportunities and challenges that GPT brings to foreign language teaching and language service industries. The article also compares Chomsky's theories about the nature, source, and use of

linguistic knowledge with GPT, highlighting GPT's lack of interpretability. Finally, it points out the potential risks associated with the lack of interpretability of GPT.

Key words: Artificial Intelligence; GPT; Pre-Trained Model; Large Language Model; Emergence; Interpretability

Large Language Models Enhanced ESL/EFL Teaching: 4 Cases

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Abstract: Large language models (LLMs) are neural networks with billions of parameters that have been trained on vast quantities of unlabelled text using self-supervised learning. These models have revolutionized natural language processing and enabled machines to understand and generate human-like language. As one of the most advanced LLMs to date, ChatGPT is an AI-based chatbot developed by OpenAI in 2022, making it capable of performing a wide range of tasks. Since the use of LLMs has profound impacts on language learning, it is necessary to highlight the pressing needs to harness the potential of ChatGPT in English language education.

This paper presents an analysis of how ChatGPT can be leveraged to enhance English language education. Specifically, this paper examines how ChatGPT can be used to foster teaching wisdom from the following four aspects: (1) ChatGPT can stimulate teachers' creativity in lesson plans and resources when they prepare for language classes. To help teachers get the best responses in ChatGPT, five principles of writing effective ChatGPT prompts are explained with examples. (2) ChatGPT can also facilitate personalized teaching through timely feedback. For instance, ChatGPT can correct grammar and pronunciation mistakes in a timely manner in oral practices and provide precise suggestions based on students' needs and interests, which can help them to improve language skills, lower learning anxiety and boost self-confidence. (3) High-order thinking skills can be cultivated in writing and reading activities through teachers' guidance of evaluating the responses given by ChatGPT. ChatGPT can serve as a teaching assistant to provide feedback to students' questions about lexical and grammatical errors, while teachers can play the role of a

facilitator, asking higher-order thinking questions about language and culture, and enabling students to communicate, collaborate, create and think critically. (4) With the assistance of ChatGPT, automatic evaluations can be made, thus reducing the burden of teachers and increasing efficiency. However, there is a growing concern that the application of ChatGPT may lead to cheating and plagiarism among university and school students without being detected.

Considering that ChatGPT brings both new opportunities and new complexity for English education, the authors offer specific recommendations for front-line English language educators seeking to utilize ChatGPT to enhance their teaching practices. Firstly, it is crucial to embrace the challenges and explore the productive uses of ChatGPT as its adoption offers enormous benefits for improving language learning experience. Secondly, teachers should be mindful of the limitations of ChatGPT as a teaching tool which will never replace teachers due to the irreplaceable human qualities, like innovation that teachers bring to the classroom. Thirdly, teachers need to develop information literacy, such as how to corroborate and distinguish useful information from the disinformation generated by ChatGPT. Finally, teachers should be aware of the ethical considerations and implications associated with ChatGPT use. And students should be taught skills about how to use the technology wisely and properly. Through the analysis and suggestions mentioned above, this paper aims to promote the wise application of ChatGPT integrated into language learning, thereby bringing transformations or changes for ESL/EFL teaching.

Key words: ChatGPT; Large Language Model; Artificial Intelligence; ESL/EFL Teaching

Using ChatGPT in English Academic Writing: Benefits and Issues

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Abstract: The present study first introduces the current situation of ChatGPT use, and then discusses its potential applications in academic writing practice and instruction and points out the possible issues related to the applications. ChatGPT can be applied in academic writing in five major ways. First, it can provide help in research trend identification, with bullet points, explanations, and examples for each trend. Second, ChatGPT can create an outline, which is conducive to the initial writing stage, especially for novice research writers. Third, this tool helps with thought and idea development. For instance, ChatGPT can elaborate on each point in the outline and provide targeted information in case of unclear ideas. Fourth, it can speed up the literature review by providing a summary of the literature, which helps to decide on what to read in detail. Fifth, ChatGPT can improve language for academic writing in various aspects, for example, spelling, word choice, grammar, organization, and register features. Besides its advantages in academic writing practice, ChatGPT can also help academic writing instructors. Firstly, it aids teachers in gaining an understanding of students' research areas, which facilitates teachers' understanding of and therefore scaffolding for students' writing. Secondly, this tool can assist teachers in providing prompt and explicit feedback on students' academic writing. ChatGPT feedback can include holistic evaluation, corrective feedback and metalinguistic explanation, and text revision. Thirdly, ChatGPT can be a great help in developing teaching materials. For example, teachers might develop course materials from ChatGPT feedback, encouraging students to explore the advantages and

disadvantages of ChatGPT-provided feedback and then make more rational revision responses. Despite the widespread usage of ChatGPT, the application of this tool may be tainted by plagiarism, inaccurate content, inadequate and improper citations and references, unstable performance, and a digital divide. Firstly, plagiarism is one of the major worries of educators and researchers about the usage of AI tools like ChatGPT. Students should compare their own texts with ChatGPT-generated texts and be responsible for their own texts. Secondly, inaccurate content might lead to serious issues, and it is necessary to carefully evaluate the quality of both the detail and the general idea of ChatGPT-generated information. Thirdly, inadequate or improper citations and references are misleading and may cause unintentional plagiarism. Fourthly, the same prompt can lead to different responses from ChatGPT. Users can try the same prompt several times, compare different responses, and collect the most useful information. Fifthly, ChatGPT might cause a digital divide in terms of tool accessibility, ability to use tools, and consequences of tool use. To address these issues, teachers and students need to have critical thinking when evaluating the quality of ChatGPT-provided information. In short, ChatGPT is neither boundlessly almighty nor dreadfully threatening. It can be employed to inspire and improve academic writing practice and to support academic writing instruction if students and teachers keep alert to its potential pitfalls and maintain academic honesty, integrity, and transparency in its application.

Key words: ChatGPT; Research Paper Writing; Writing Instruction; Artificial Intelligence Tools

Exploration of Foreign Language Education Methods in the Context of Human-Machine Symbiosis: A Case Study on ChatGPT

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Abstract: With the rapid development of language intelligence technology, the emergent ability of large-scale language model has brightened the hopes for achieving general artificial intelligence. The new type of human-machine symbiotic relationship, characterized by coexistence and collaboration, is becoming the trend of the future in the field of language teaching. This paper elaborated on the concept and basic elements of human-machine symbiosis in language education, including symbiotic goals and prerequisite, complementary advantages of human and machines, roles of human and machines, risk management and so on. The aim of human-machine symbiosis in foreign language education is to create a more efficient language learning system, make better use of various language resources, and provide more diversified learning experiences for learners. By combining human's ability of language understanding and creativity with the storage, computation, and processing capabilities of intelligent machines, the best symbiosis of human intelligence and artificial intelligence can be achieved, which means nurturing complementary strength of intelligence, sharing intelligence advantages, cooperating smoothly and naturally among human and machines, and coexisting in the scenarios of language teaching. With the advancement of artificial intelligence technology, people need to learn the concepts, methods, and skills of cooperating and coexisting with intelligent machines. However, potential risks in language learning with intelligent machines, such as bias, hate and unfairness, should be noticed. Intelligent machines cannot prove the authenticity of the information they generate,

which could lead learners to absorb incorrect information or adopt harmful biases. Therefore, not only should we build intelligent systems that are friendly to humans, i. e., machines that provide convenient and explainable services to humans, but we should also emphasize the viewpoint of treating machines as partners, i. e., regulating human behaviors in the symbiotic learning system.

We used the latest dialogue system ChatGPT as a case to explore and sketch the scene of human-machine symbiosis in foreign language learning. To demonstrate the process of collaborative learning in different stages, three examples were used, including the basic knowledge of English article words, practical inquires in the airport scenarios, and email writing in two different styles. Each round of dialog was followed by the analysis and comments. Although the current ChatGPT is not as perfect as anticipated, it can help learners complete the self-directed learning tasks to some extent. This preliminary study outlined the scene of human-machine symbiosis in foreign language learning, proposed the methods of human-machine collaborative learning, and discussed the potential issues. The research was an initial exploration of the human-machine symbiotic education path. Hopefully it could shed light on the study of human-machine cooperation in foreign language education. The importance and necessity of human-machine cooperation in future teaching should be taken seriously, with the possible risks being considered and avoided.

Key words: Artificial Intelligence; Human-Machine Symbiosis; Foreign Language Education; ChatGPT

A Qualitative Study on College English Online Classroom Interaction in the Universities of Western China

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Abstract: Online classrooms are communities of practice with unique cultural patterns consisting of verbal and non-verbal communication between teachers and students. With graphic symbols as the main carrier and computer network technology as the mediating tool, online classroom interaction is a dynamic process in which teachers and students construct knowledge and negotiate meaning. In order to facilitate online interaction to achieve “substantial equivalence” to face-to-face interaction, great effort needs to give to the in-depth exploration of the dynamic process of continuous negotiation among interactive subjects, online technology and the social environment. This study aims to explore the features of interactive processes during college English online teaching and learning in the universities of western China, which are more likely to be influenced by the social, economic and cultural factors. A qualitative research approach was adopted to collect data from 16-week participant observation, in-depth interviews, and document analysis with 5 teachers and 216 students in a university in the west of China. Frequency analysis was first carried out to explore the general patterns of online classroom interaction, followed by critical incident analysis to identify the characteristics of the interactive processes. Interview data was transcribed and analyzed to clarify the factors influencing the formation of interaction characteristics. This study was conducted in a naturalistic setting, following the ethical principles of voluntary participation, privacy protection and anonymous

reporting. The credibility and validity of the study was ensured by the triangulation of multiple sources of data, member check and reflexivity.

The findings indicated that EFL online classroom interaction in the researched area was mainly characterized by text-based interaction in the online chat box and questioning-answering in the Rain Classroom (a teaching and learning APP), with “silent textual interaction” and instant feedback combined with delayed feedback. It was also found that a space of effective interactions among multi-agents was created, which broke the traditional “one-to-one” interaction mode and encouraged effective interaction among multiple subjects who expressed themselves freely at the same time. The construction of this unique space was a result of the agency-driven learning environment. The influential factors included learning environment and learner differences in terms of English proficiency, diverse characters of individual students and their multiple identities, which first restricted but later facilitated teacher-student interaction in online classroom.

This study suggested that greater attention need to be given to the interactive design of online teaching and learning to promote classroom innovation. The findings led to a deeper understanding of EFL online classroom interaction in the universities of western China and provided a reference for future research in this area.

Key words: Online Classroom; Classroom Interaction; English Teaching and Learning; Qualitative Study

Construction of English Smart Classroom Ecology in the Context of the New-Era Intelligent Education

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Abstract: Currently, smart classroom has become a new form of the new-era intelligent education, while foreign language is confronted with challenges from AI technology like ChatGPT. How to maintain the smart classroom ecology is a big concern of all foreign language teachers. The present paper discusses the definitions and connotations of the smart classroom, and analyzes its components and their interrelationship. Given the

challenges posed by smart classroom for foreign language education, the paper proposes the practice paradigm for constructing the new ecology of English smart classroom. Hopefully, it will provide reference for how to develop foreign language education theory and practice with Chinese characteristics in the new era.

Key words: English Smart Classroom; Educational Ecology; Intelligent Education; Socio-Cultural Theory

A Scoping Review of Studies into Technology-Empowered Collaborative Foreign Language Learning

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Abstract: Using the scoping review method, the article first retrieved and selected a total of 38 SSCI and CSSCI journal articles on technology-empowered collaborative foreign language learning, and then analyzed them in four dimensions including theoretical perspectives, research themes, research designs, and educational technologies and their empowering effects, summarizing the current state of the field and pointing out the research gaps. The results show that: (1) although multiple theoretical perspectives have been adopted by the studies, their results are not sufficiently integrated with the theoretical frameworks; (2) compared with collaborative writing and reading for foreign language learners, their speaking, vocabulary and listening development is under-

researched; (3) the subjects of the studies are mostly English learners in Chinese universities, with a serious lack of attention to learners from other regions, of other target languages and education levels; mixed-methods designs are mainly employed though showing severe homogeneity in terms of the data collection and analysis approaches, lacking in-depth and comprehensive qualitative inquiry; (4) the empowering effect of educational technology on cooperative foreign language learning is significant, but it is mediated to some extent by learners' individual differences and various environmental factors.

Key words: Collaborative Foreign Language Learning; Educational Technology; Empowering Effect; Scoping Review

Research on Multi-Feature Intelligent Assessment of Spoken English

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Abstract: In practical teaching, it has been found that English learners are increasingly focusing on improving their spoken English, so it is particularly important to effectively, comprehensively, and timely assess students' oral proficiency. The assessment of spoken English in Chinese universities is mostly done manually. Due to the differences in such factors as evaluators' cognition, preferences, energy and time, it is difficult to form unified and consistent oral assessment criteria. The result is that the assessment process is time-consuming and inefficient, and the reliability and validity of the assessment results are insufficient to effectively promote teaching and learning. With the development of computer technology, especially the rapid development and application of Automatic Speech Recognition (ASR), intelligent assessment has gradually been introduced into college English oral assessment, which overcomes the drawbacks of the traditional assessment to a certain extent, such as being able to objectively and timely assess students' oral English. However, there are still problems in single-feature assessment, which focuses on the textual accuracy and fluency and ignores the emotional factors in spoken English, and which cannot objectively and comprehensively assess students' oral English proficiency. This paper proposes a multi-feature intelligent assessment method to solve the problems of manual assessment and single feature assessment. The method of multi-feature fusion is used to score. The assessment of similarity features, syntactic features and speech features of speech recognition text is fused by multiple linear regression model. The method of fusion of sample entropy (SE) and Mel frequency cepstrum coefficient (MFCC) is

used to introduce spoken English emotion recognition, and the emotional probability is fused by adding rule and multiplication rule.

The model training set was constructed with 46 English major students from a university in Hefei participating in the experiment. After reading 5 English short articles, students will retell and record them separately, and then number them. Six college English teachers will grade each retell according to the grading standards and file them according to the number. Using iFlytek's speech recognition engine and combining it with C++ language for text conversion and algorithm processing, multiple linear regression is conducted. The experimental results indicate that the method of using similarity features, syntactic features, and speech features for assessment is reliable and can be used to construct similarity models. The highest recognition rate for male speech samples using SE as a feature parameter is 64.5%. After the fusion of SE and MFCC, the feature recognition rate significantly improved, with a feature recognition rate of up to 68.8% using multiplication rule fusion. The recognition rate of simultaneous recognition of six emotions is the best, with an average recognition rate rising to 66.3%. The spoken English recognition algorithm proposed in the paper has significant performance improvements in many indicators. The research results provide a reference for the development of spoken English intelligent assessment method, and provide algorithm support for the design and development of related software or systems.

Key words: Intelligent Assessment of Spoken English; Feature Extraction; Multi-Feature Fusion; Emotion Recognition

Lexical Bundles in English Academic Discourse by Chinese and Native English Writers: A Corpus-Driven Approach

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Abstract: The study adopted a corpus-driven approach to explore the features of 4-word lexical bundles in English doctoral dissertations written by L1-Chinese writers as compared to those in parallel texts by native English writers. Based on this assumption, a 1,491,477-word corpus of English doctoral dissertations was built to compare the variations of lexical bundle usage between native English and L1-Chinese academic writers. The results show that L1-Chinese writers used a significantly higher number of and less diversity of lexical bundles than their native counterparts in academic writing. Structurally, the academic texts by native writers were highly information-intensified, while the texts by L1-Chinese writers were low information-intensified. L1-Chinese writers, as compared to native ones, employed a significantly higher number of clausal bundles but a lower number of phrasal bundles. Statistically significant differences were also found in NP-related, VP-related, and Clause-related constructions between the two groups of academic writers. Native academic writers used significantly more lexical bundle tokens in the subcategories of other NP fragments, while L1-Chinese academic writers employed more in the subcategories of PP with of-phrase, other PP fragment, passive verb structure, anticipatory-*it* pattern, active verb, to-fragment, as-fragment, and that-fragment. Of note is that the native group used more NP bundles embedded in relative clauses with slight variations, whereas a small number of such bundles were found in the Chinese texts. One possible explanation is the influence of typological differences in relative clauses in the Chinese and English languages. In addition, Chinese writers overused the passive voice in fragments such as “can be + passive verb + preposition”, which may be explained by the influence of Chinese culture wherein people prefer to adopt a conciliatory and non-interventionist stance. Another possible reason lies in the materials taught in writing

classrooms telling that passive devices of impersonality serve to bolster the objectivity of their English academic writing. Functionally, L1-Chinese writers focused more on text organization and logical construction, whereas native writers focused more on information transmission. For native writers, the category of research-oriented bundles is the largest; with the category of text-oriented bundles the close second and the category of participant-oriented bundles a distant third. In the Chinese corpus, the text-oriented bundles account for the largest category, followed by research-oriented bundles and participant-oriented bundles in close second and third places. In terms of functional subcategories, L1-Chinese writers employed more bundles for inferential, structuring, framing, causative, and objective functions respectively, and more bundles for addition, procedure, stance, engagement, and comparison and contrast, while their native counterparts used more bundles for location, quantification, and description. Furthermore, an intensive structure-function interaction is confirmed in both Chinese and native English corpora; NP-related and PP-related structures were the major grammatical devices for research-oriented function, PP-related structures for text-oriented function, and clause-related fragments for participant-oriented function. However, differences have also been found, especially in the use of clause-related bundles in research-oriented function. The findings demonstrated significant variations in doctoral dissertations between the L1-Chinese academic writers and native academic writers. Most of the variations are affected by the distinctive practices of Chinese and Western cultures. The weak awareness of genre and academic register and the limited writing lexicon may also be significant factors.

Key words: Corpus-Driven Approach; Lexical Bundles; Academic Discourse; Doctoral Dissertations; Variation

The Investigation and Analysis of Multi-Category Lexemes in Modern English

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Abstract: The grammatical multifunctionality of lexemes is ubiquitous in Modern English, but there is a lack of comprehensive survey and in-depth theoretical analysis. Based on our DIY Word Class Labelling Information Database in *Oxford Advanced Learner's Dictionary* (9th edn., *OALD-9*), a comprehensive survey of heterosemous lexemes is conducted from the perspective of the Two-Level Lexical Categorization Theory, with a focus on the theoretical significance of the results.

It is found that: (1) There are as many as 4843 multi-category lexemes in Modern English; (2) There are 82 types of multi-category lexemes in Modern English; (3) A lexeme in Modern English can belong to as many as 6 word-classes, among which two-category lexemes are the majority; (4) Multiple class membership is a common feature of human languages, in that lexemes belonging both to nouns and verbs are the most prominent in Modern English.

This investigation has theoretical significance as follows: (1) The previous assumption that a large number of heterosemous words exist in modern English is confirmed; (2) The assumption of the exclusive model of word classes in Indo-European languages is falsified;

(3) The assumption that words are precategoryal or underspecified in Modern English is falsified, because even heterosemy of multicategory lexemes can be specified as indicated in *OALD-9*; (4) It is proved that adding new categories is not workable and that the heterosemy strategy is superior to treating multi-category lexemes as homographs; (5) The ubiquitous heterosemy in Modern English is attributed to the loss of inflections in diachronic change and the competing motivations between iconicity and economy.

The cognitive biases about heterosemy in Modern English are further explored from the transdisciplinary methodology. Specifically, such cognitive biases about word classes are resulted from scientific linguistics originating in Newtonian thinking, which is applicable only to local or spatiotemporal entities like word tokens in language. However, word types or lexemes like headwords in dictionaries are nonlocal abstract objects (Wetzel, 2009), and they obviously involve heterosemy or the superposition of word classes, which can only be explained by quantum thinking.

Key words: English; Heterosemy; Two-Level Lexical Categorization Theory; Newtonian Thinking; Quantum Thinking

Word Vector and the Structure of Chinese: Explorations in “N 的 V” Combination —A Comparison with the “N の V” Structure in Japanese

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Abstract: The “N 的 V” structure in modern Mandarin Chinese has garnered significant attention from the academic community, with scholars focusing on the nature of the individual elements within the structure and the overall structure itself. Questions such as whether “V” is a noun or a verb, what the function of “的” is, whether the “N 的 V” construction belongs to the modifier-noun or subject-predicate structure class, and why modal components cannot enter the structure, remain unanswered. Word vectors are mathematical representations of language extracted from large datasets, which can project words onto high-dimensional spaces based on different meanings, providing an effective tool for analyzing the semantics and functionality of words through mathematical methods. Taking as a case the 10 most commonly used verbs in the “N 的 V” structure in Chinese newspapers, that is, “投入、发展、支持、重视、提高、了解、完善、结合、建立、推动”, and constructing actual language environments, we analyzed the word vectors of the typical verbs and nouns that can enter similar contexts of the structure. We found that the “V” in the “N 的 V” structure and the “V” used as predicate verb have similar properties, while the difference between the word vectors of typical nouns in similar contexts is relatively large. Therefore, it can be considered that “N 的 V” is a verb rather than a noun. The “N の V” structure in Japanese is also a commonly observed language phenomenon similar to the “N 的 V” structure in Chinese. Japanese morphology is relatively advanced, and

the “V” in the “N の V” structure retains various forms of Japanese verbs. Evidence provided by Japanese verb morphology suggests that the “V” in the “N の V” structure is a verb, which indirectly illustrates the nature of the “V” in the “N 的 V” structure in Chinese. Since the “V” in the “N の V” structure in Japanese is a typical verb, and the particle “の” in this structure can be replaced by case particles such as “が”, the structure in Japanese is not a modifier-noun structure but rather a case structure. By comparing and analyzing the “N の V” structure in Japanese and the particle “の”, it can be inferred that the “N 的 V” structure in Chinese is not a modifier-noun structure but a structure with a special case marker between “N” and “V”. The modal theory holds that a sentence consists of 2 indispensable components, i. e. proposition and modality. The appearance of a modal component usually indicates the establishment of a sentence. However, in the Chinese language, the fact is that the “N 的 V” structure can only serve as a constituent of a sentence, not as a sentence itself. If a modal component enters this structure, the structure will satisfy the condition for a sentence to be established and cannot serve as a constituent of other sentences, which is inconsistent with the linguistic reality of Chinese. Therefore, modal components cannot enter the “N 的 V” structure in Chinese.

Key words: N 的 V; Word Vector; Case Marker; Modality; N の V

On Translators' Subjectivity from the Perspective of Transknowletology

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Abstract: The changing identities of translators throughout history show that the subjectivity of translators has always been influenced by theoretical and practical demands. Transknowletology proposes to treat knowledge as the ontology of translation, inspiring us to reconceptualize the subjectivity of translators. Translators, as the recipients, re-producers and disseminators of knowledge, actively play their own initiative in the entire process of knowledge transformation from local knowledge to global knowledge. As recipients of knowledge, the translators are the first to come into contact with new knowledge and are the first to open their eyes to other worlds; as knowledge re-producers, translators create new knowledge within the existing knowledge structure, and their translation results affect the acceptance and even direction of the native culture towards foreign cultures; as disseminators of knowledge, translators seek a balance between preserving heterogeneity and enhancing the acceptability of knowledge.

“Seeking knowledge with truth, determining theme with kindness, and writing with aesthetic feeling”—The translation criteria of transknowletology puts forward three requirements for the scientific exertion of translator's

subjectivity in knowledge translation from three aspects: translator's competence, translator's ethics and translator's aesthetics. Translators should take the dissemination of knowledge as their responsibility, pursue true knowledge with an equal and open attitude, and attach importance to preserving the aesthetic value of the original text and creating new aesthetic values in the process of knowledge transformation.

At present, the emergence of the latest natural language processing model, represented by ChatGPT, has had a profound impact on translation theory and practice. Only by following the wave of changes in the way of knowledge production and constantly exploring the laws of knowledge translation, can translators be expected to give play to their subjective initiative, better innovate knowledge, and better contribute to the global production of knowledge. This paper focuses on the role of translation in knowledge transformation and provides a new theoretical perspective for the study of translators' subjectivity based on transknowletology theory.

Key words: Translator Subjectivity; Knowledge Translation; Knowledge Locality

Translator's Subjectivity in the Representation of Semantic Orientation in Chinese Translations of Shakespeare by Xu Yuanchong

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Abstract: Based on a self-built parallel corpus of multiple translations of Shakespeare's four great tragedies and a customized sentiment word list, this study combined sentiment analysis and corpus research methods to explore the semantic orientation of Xu's translations, summarized the main characteristics of translator's subjectivity embodied in his use of sentiment words, and attempted to explain the causes of such characteristics. The study found that Xu's translations of the four great tragedies are rich in sentiment words, with an overall negative polarity and a higher degree of intensity of sentiment than the reference translation. Xu's translations are prominent in some highly distinctive characteristics of the translator's subjectivity, such as the imprint of the specific era through which Xu had lived, the flexible management of Chinese four-character structures, the outstanding tendency to intensify emotions, and the application of creative rhetorical devices. The formation of these characteristics is not only influenced by the socio-historical environment in which Xu lived, but also a result of the translator's cultural outlook and translation principles guiding his translation practice. On the one hand, in terms of the socio-historical environment in which the translator lived, Xu had witnessed the rapid development of China and the revolutionary changes in social thinking over the past century. During his time at National South-West Associated University, he was mentored by a number of famous teachers, and he also studied in France. Therefore, Xu's translations are a testament to his heritage of the Chinese school of literature and art, and to his innovative spirit of keeping up with the times. As a result, his translations of Shakespeare's plays are not only characterized by new

elements in line with contemporary linguistic and cultural features, but also by the historical imprint of the specific era through which he had lived. On the other hand, in terms of the translator's cultural outlook and translation principles, Xu had formed a unique and richly connoted system of translation theories based on his years of literary translation practice. Xu's translation thoughts all reflect the importance he attaches to the translator's subjectivity. For example, his "Optimisation Theory" holds that the translator needs to actively exert his or her subjectivity and exploit the advantages of the target language in order to optimize the translation; the "Competition Theory" holds that literary translation is a competition between two languages and two cultures, and that it is not only a competition between several translations, but also a competition between the translation and the original text; and the "Creation Theory" states that the translator should be creative and the translation should often give new meaning to the original text. According to Xu, different languages have their own strengths and weaknesses, so literary translation requires translators to give full play to the strengths and avoid the weaknesses of the target language. To enable contemporary readers to understand Shakespeare more profoundly and to realize the aim of "knowing, loving and enjoying", Xu manages the sentiment words in a highly flexible way, applying creative rhetorical devices and intensifying emotions. All the translation principles and procedures above account for the characteristics of the translator's subjectivity found in this study.

Key words: Xu Yuanchong; Translations of Shakespeare; Semantic Orientation; Translator's Subjectivity; Translator Studies

Machine Translation Based on Attention Mechanism and Bidirectional Long Short-Term Memory

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Abstract: In recent years, with the development of deep learning, using neural network for machine translation has gradually become the mainstream method in industry and academia. The existing Chinese-English machine translation models generally adopt the structure of deep neural network based on attention mechanism. However, modeling long and short sequences at the same time is still a challenging problem, especially for the translation of traditional Chinese medicine (TCM) words. The correlation between terminology and words also greatly affects the effect of machine translation. Therefore, this paper proposed a bidirectional long short-term memory (LSTM) machine translation model with integrated attention mechanism. Firstly, the word vector was used as the input data of the machine translation model, and the language symbols used in the translation process were processed mathematically. Secondly, two

kinds of attention mechanisms were designed: local attention mechanism and global attention mechanism. The local attention mechanism was mainly used to learn which words or phrases in the input sequence are more important for modeling, while the global attention mechanism was used to learn which expression vectors in the input sequence are more critical. The bidirectional LSTM model could better integrate the feature information in the input sequence, while the bidirectional LSTM model with attention mechanism could model both short and long sequences. The experimental results showed that compared with the existing translation models, the bidirectional short-term memory model based on attention mechanism could effectively improve the quality of TCM word machine translation.

Key words: Machine Translation; Attention Mechanism; Long Short-Term Memory; TCM Words

Constructing Strategies for International Communication and Translation of Chinese Culture—Comments on *From “Translating the World” to “Translating China”*: *An Anthology of International Communication and Translation Practice* by Huang Youyi

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Abstract: It is urgent and important to construct effective international communication and translation strategies for disseminating Chinese culture, and many experts have released or are releasing significant research results from different perspectives, one of which is *From “Translating the World” to “Translating China”*: *An Anthology of International Communication and Translation Practice* by Huang Youyi. It is based on more than 40 years of national translation practice and has presented many vivid cases for telling Chinese stories and making Chinese voices heard. Based on an in-depth historical overview of translation, publishing, communication and other intercultural activities, it provides a new strategy and wise guidance for international communication and

translation of Chinese culture. It upholds a systematic and holistic approach in Chinese culture dissemination and translation, by expanding the global vision and strengthening the audience awareness to improve the communicative effect. As a result, it strongly suggests that we should actively educate Chinese-English translators of high capability and outstanding international communicators through the joint efforts of the government, industry, academia, and research, and via the interdisciplinary educational mode.

Key words: Translating China; Translating the World; International Communication; Translator Education; Audience Awareness