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AIGC Words and the Lexical System in the Digital & Intelligent Era: From Language Shock to Language Planning

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ABSTRACT

This study uses a corpus generated by ChatGPT to apply cognitive linguistics, philosophy of technology, and sociolinguistics in analyzing how generative AI impacts the Chinese lexical system. Grounded in the "replication-variation-selection" model of language evolution, the research finds that abstract concepts created by AI mimic human conceptual systems via "algorithmic metaphors," yet lack experiential grounding. Platform algorithms restructure language dissemination, establishing a "digital register" communication hierarchy, while the technological framework leads to a vocabulary hollowing effect, necessitating a new "algorithm governance" dimension in language planning. The study offers a theoretical framework for human-machine language interaction, suggests AI language ethics policies, and redefines traditional language evolution models by proposing a three-stage process: "variation-algorithm screening-platform diffusion." It extends meme theory, identifying "technological memes" as engineering-driven replications. Practically, it provides strategies for language planning by advocating transparency, diversity, and morality as core algorithm planning principles, helping to address language alienation, maintain a dynamic balance between innovation and standardization, and support effective communication and the healthy evolution of language in the age of generative AI.

1. Introduction

1.1. Research Background

In recent years, generative AI technology has made breakthrough progress. Large - language models represented by ChatGPT have demonstrated powerful capabilities in the field of natural language processing. They can generate coherent and logical texts covering multiple fields such as news reporting, story creation, and marketing (Yue & Zhang, 2025). The texts generated by generative AI are gradually penetrating into the core level of language, having a profound impact on the innovation and evolution of vocabulary.

The impact of generative AI on Chinese abstract concept words is multifaceted. On the one hand, it provides new impetus and ways for language innovation. By learning and analyzing massive text data, AI

can excavate the potential semantic associations between words and create novel words, enriching the Chinese vocabulary. For example, the concept word "SynthoStratum" in the corpus is a brand - new abstract concept created by ChatGPT based on the integration of multiple technical concepts such as virtual reality, augmented reality, and blockchain. It is used to describe a digital space where virtual and real worlds are intertwined. ChatGPT believes that this concept word "breaks through the binary opposition framework of the traditional meta - universe, and constructs a hybrid reality ecosystem with self - evolving capabilities by introducing the digitalization of matter in quantum entanglement state, the value transformation mechanism constrained by thermodynamics, and the neuromorphic interaction interface".

On the other hand, the development of generative AI has also triggered a series of controversies regarding language norms and semantic understanding. Technological optimists believe that AI will promote language innovation and inject new vitality into the development of human language, achieving leaps in natural language generation tasks such as text summarization, machine translation, reading comprehension, and automatic question - answering(Liu et al., 2023). They point out that abstract concept words generated by AI can express complex ideas and concepts more accurately, expanding the boundaries of human cognition. However, some scholars have warned that AIGC - empowered language services may bring ethical risks such as integrity risks, data and algorithm risks(C. Wang & Sun, 2024). Since the words generated by AI lack the support of human life experiences and cultural backgrounds, the words they generate may have problems such as semantic ambiguity and concept confusion, affecting the accurate expression and effective communication of language. For example, some AI - generated abstract concept words such as "energy matrix", "consciousness spectrum", and "data aura" are too broad or ambiguous in semantics, making it difficult to accurately understand their meanings in practical contexts and prone to causing information transfer biases.

In this context, in - depth research on the innovation mechanism of generative AI on Chinese abstract concept words has important theoretical and practical significance. From a theoretical perspective, this study helps to deeply understand the interaction between language and technology, enriching and improving the language evolution theory in the AIGC era. From a practical perspective, this study plays an important guiding role in standardizing the language content generated by AI from the perspective of lexicology, maintaining the healthy development of language, and promoting effective communication between humans and machines.

1.2. Research Questions

1) In what sense does an AI - generated abstract word constitute "innovation"?

What are the differences between AI - generated abstract concept words and traditionally human - created words in terms of semantics, cognition, and culture? How do these differences affect our understanding of vocabulary innovation? For example, how is the semantic construction method of AI - generated abstract concept words such as "emotional folding" and "cognitive granularity" different from that of words created by humans based on life experiences and cognitive habits? Do they truly expand the human concept system, or are they merely a formal innovation?

2) How does technological mediation restructure the language communication ecosystem?

As a technological mediator, generative AI platforms represented by ChatGPT play what role in the dissemination process of abstract concept words? How do they change the dissemination path, speed, and scope of vocabulary? For example, specifically, what are the differences in the dissemination speed and influence of AI - generated abstract concept words on platforms such as Douyin and Weibo compared with traditional vocabulary? How does the recommendation mechanism of platform algorithms affect the dissemination and acceptance of these words?

3) How can language planning address the semantic crisis caused by AI?

In the face of problems such as semantic ambiguity and concept confusion that may be brought about by AI - generated abstract concept words, are traditional language planning theories and methods still applicable? How do we need to adjust and innovate language planning strategies to ensure the accuracy, standardization, and effectiveness of language?

2. Literature Review

Language innovation is one of the core topics in the field of linguistics and has long received extensive attention from scholars. With the rise of generative AI technology, the research perspective of language in-

novation has gradually shown a diversified trend. Currently, there are mainly two research perspectives: the anthropocentric paradigm and the technology - driven paradigm. They analyze language innovation from different dimensions, providing a rich theoretical basis for us to understand the mechanism and process of language innovation. However, existing studies, when exploring the impact of generative AI on language innovation, often regard AI as an auxiliary tool rather than an independent language - generating subject. To a certain extent, this ignores the remodeling ability of AI technology on the semantic system and fails to fully reveal the unique role and potential impact of AI - generated abstract concept words in language innovation (F.-Y. Wang, Miao, Li, Wang, & Lin, 2023).

In the anthropocentric paradigm, language innovation is regarded as the product of human cognitive experience and social interaction. Cognitive linguistics believes that language is the external manifestation of human cognition, and language innovation stems from human cognitive expansion and concept reconstruction of the world. The conceptual metaphor theory proposed by Lakoff and Johnson points out that metaphor is an important way for humans to understand the world. By mapping the concepts of the source domain to the target domain, people can create new concepts and language expressions(Lakoff & Johnson, 2008). For example, the metaphorical expression "love is a journey" maps concepts such as starting point, end point, direction, and obstacles in "journey" to the abstract concept of "love", enabling people to understand and talk about love from the specific experience of a journey, thus enriching the understanding and expression of love. This metaphorical mechanism based on cognitive experience plays a key role in language innovation, enabling language to continuously adapt to new human understandings of the world.

Sociolinguistics emphasizes the importance of social interaction in language innovation. Factors such as different groups, classes, and regions in society lead to differences in language use. These differences collide and integrate during the process of social interaction, thus promoting language innovation. Labov's research shows that language change often first appears in specific social groups and then spreads to other groups through social networks. For example, young people, as the most dynamic and innovative group in society, often create and use new words, grammatical structures, and expressions. These language innovations spread rapidly through social media, popular culture, and other channels, influencing the language use of the entire society. In addition, external factors such as social and cultural changes and technological development also trigger language innovation. In the process of globalization, the exchange between different cultures is becoming more and more frequent. Foreign words and cultural concepts are constantly pouring in, prompting the local language to innovate and integrate to meet the needs of multicultural communication (Labov, 2011).

With the rapid development of artificial intelligence technology, the technology - driven paradigm has gradually become an important perspective in language innovation research. In this paradigm, AI is regarded as a new source of power for language innovation. It has a profound impact on language innovation through methods such as algorithm generation and data training. Some scholars point out that large - language models can capture semantic patterns and rules in language by learning massive text data, thus generating novel language expressions (McShane & Nirenburg, 2021). For example, ChatGPT can generate coherent and logical texts based on user input, including many abstract concept words and expressions that have never appeared in traditional language. These language contents generated by AI not only enrich the forms of language expression but also provide new ideas and directions for language innovation(Pawlicka, Pawlicki, Kozik, Andrychowicz-Trojanowska, & Choraś, 2024).

The role of AI in language innovation also lies in its ability to accelerate the dissemination and diffusion of language. Technical tools such as social media platforms and search engines enable the language content generated by AI to spread rapidly around the world, breaking through the time - and - space limitations of traditional language dissemination. Some AI - generated hot words and popular phrases can spread widely in a short time and become the daily language of the public, thus promoting the rapid evolution of language. However, language innovation in the technology - driven paradigm also faces many problems. Due to the lack of human life experiences and emotional cognition, the language content generated by AI may have problems such as semantic ambiguity and illogicality. AI - generated abstract concept words may lack clear definitions and connotations in semantics, causing confusion when people understand and use them, thus affecting the accuracy and effectiveness of language.

3. Theoretical Framework for Studying AIGC Words: Cognition—Technology— Society

3.1. Cognitive Dimension: Conceptual Metaphor Theory

Lakoff and Johnson proposed the conceptual metaphor theory in *Metaphors we live by*, believing that metaphor is not only a language rhetorical device but also a way of thinking and cognition (Lakoff & Johnson, 2008). The essence of metaphor is conceptual, which is a systematic mapping from a specific concept domain (source domain) to an abstract concept domain (target domain). For example, in the metaphorical expression "time is money", "money", as the source domain, has characteristics such as value, measurability, and expendability. These characteristics are mapped onto the target domain of "time", enabling us to understand and talk about time from the perspective of economic value, such as "waste time" and "save time". This mapping follows the invariance principle, that is, the cognitive structure of the source domain will be projected onto the target domain in a systematic way, and the use of conceptual metaphors is often subconscious, which profoundly affects our thinking and language expression.

The conceptual metaphor theory plays an important role in analyzing the algorithmic nature of AI - generated metaphors. The conceptual metaphor theory provides the knowledge basis for artificial intelligence to process metaphors. If artificial intelligence itself cannot process metaphors, it will become an obstacle to its development (Barnden, 2008). Generative AI can capture the semantic associations between words through learning a large amount of text data and generate metaphorical expressions based on these associations. However, different from metaphors generated by humans based on life experiences and cognitive habits, AI's metaphor generation depends more on statistical laws and pattern recognition in data, resulting in metaphorical expressions such as "emotional folding", "sadness rust", "melancholy thorns", and "confidence is a solid shield on the battlefield". For example, in the word "emotional folding", AI maps the cognitive process to the spatial operation of "folding". From the perspective of conceptual metaphor, this is a cross - domain mapping. However, AI lacks the embodied experiences of "folding paper" and "folding clothes" in real life. Its understanding of the concept of "folding" is only based on language descriptions and semantic relationships in data. The essence of this metaphor is still a combination based on frequency. Therefore, this metaphorical mapping lacks a real experiential foundation and is more of a symbolic operation.

3.2. Technological Dimension: the Critique of Heidegger's and Marx's Philosophy of Technology

Heidegger's philosophy of technology believes that technology is not only a tool and means but also a way of revealing. The essence of modern technology is "Gestell". Gestell means a kind of gathering that confines people within the framework of technology, making people view the world only from a technological perspective and leading to the concealment of the essence of things(Heidegger & von Herrmann, 1977). In the field of lexicology in the digital and intelligent era, the development of AI technology makes the generation, use, and development of vocabulary affected by algorithms, giving AIGC words the characteristic of "vocabulary hollowing - out".

Take the word "empowerment" as an example. In texts generated by AI, the collocational diversity of "empowerment" has dropped significantly, and it has even become a universal label, frequently appearing in expressions such as "cultural empowerment" and "educational empowerment". From the perspective of Heidegger's philosophy of technology, this is because the algorithm, as a technological Gestell, limits the semantic richness and diversity of vocabulary. When generating texts, AI mechanically selects and combines words according to the algorithm settings and data patterns, making the words lose their rich connotations and unique meanings in specific contexts and merely becoming formal symbols to fill the text structure. Another example is that in the actual context, "digital transformation" is a complex and rich - connoted concept, covering in - depth changes and adjustments in many aspects such as enterprise or organization strategy, business processes, technology applications, organizational structure, and personnel capabilities. It is a customized development process according to the specific situations of different industries and enterprises(Zeng, Cai, & Ouyang, 2021). However, in texts generated by AI, "digital transformation" is often used simply and mechanically. Based on algorithms and the learned data patterns, AI widely applies it to various text scenarios. In the corpus, there are expressions such as "digital transformation in manufacturing", "digital transformation in retail", and "digital transformation in the medical industry". These expressions seem to have diverse colloca-

tions, but often only formally mention "digital transformation" without deeply elaborating on its real connotations, unique challenges, specific transformation paths, and expected goals in different industries.

From the perspective of Heidegger's philosophy of technology, this is exactly the result of the "technological Gestell" of the algorithm. The algorithm confines the word "digital transformation" within a specific framework, making AI unable to truly understand the rich meaning of this word in different industries and specific contexts when generating texts. It just treats it as a common label and pastes it randomly to meet the formal requirements of the text. This leads to the loss of the depth and breadth of the word in practical applications, reducing it to an empty symbol. This phenomenon of vocabulary hollowing - out not only makes language expressions superficial and monotonous, unable to accurately convey complex industry information, but also reflects the alienation of language by technology. When people come into contact with these texts, it is difficult for them to truly grasp the essence of "digital transformation".

Marx also pointed out that in capitalist society, the development of technology leads to the alienation of people(Guan, 2011). In the process of text generation by AI technology, the vocabulary hollowing - out of "digital transformation" is a phenomenon of language alienation caused by the use of algorithms. The text generation dominated by AI algorithms makes words such as "digital transformation" and "empowerment" lose their rich connotations that they should carry and become labels without substantial content. After frequent exposure to these empty expressions, users' understanding of related words will become superficial, mechanical, and one - sided, making it difficult to truly grasp their essence. Technology should serve human expression and understanding, but in current language applications, it causes alienation in people's language use and knowledge acquisition, deviating from the pursuit of the true meaning of things. With the development of science and technology and the advancement of industrialization, people's life rhythm has accelerated, and the demand for information has greatly increased. A large number of texts quickly produced using AI technology are likely to cause vocabulary to gradually lose depth and connotation in this production mode and become empty symbols.

Algorithms, as a kind of technology, have a profound impact on language and human thinking. On the one hand, the efficiency and accuracy of algorithms make the generation and dissemination of language faster and more extensive, providing convenience for people to obtain information and communicate. On the other hand, the dominant position of algorithms may also lead to the simplification and standardization of language, restricting the diversity and creativity of human thinking. Since algorithms operate based on data and rules, they tend to select common words and expressions that conform to patterns while ignoring the diversity and individuality of language. Long - term exposure to language content generated by algorithms may make human thinking gradually adapt to this patterned language, thus weakening the flexibility and innovation of human thinking. The phenomenon of vocabulary hollowing - out not only affects the accuracy and richness of language expression but also reflects the alienation of language by technology.

3.3. Social Dimension: the Variation of the Language Diffusion Model

Labov's language diffusion model studies the manifestations of language change under the influence of factors such as socioeconomic class, community, ethnicity, and gender, believing that language change is driven by social factors and spreads gradually in society through interpersonal networks(Labov, 2011). However, in the generative AI era, platform algorithms have become another important driving force for language dissemination, having a significant impact on the traditional language diffusion path.

Social media platforms represented by Douyin and Weibo have strong dissemination capabilities and a wide user base, becoming new and important fields for language dissemination and development. AI - generated abstract concept words can spread rapidly on these platforms, and their dissemination speed far exceeds the traditional language dissemination model. For example, the AI - generated word "cognitive granularity"can reach a large number of users in a short time through the recommendation of platform algorithms. Many respondents first encountered this word through algorithmic recommendations rather than traditional acquaintance - based social channels. Platform algorithms conduct personalized recommendations based on users' interests, behavioral data, etc., enabling AI - generated words that match the interests of specific user groups to be accurately disseminated to the target audience, breaking through the traditional circle limitations. Different social media platforms often have their own characteristics and user attributes, which also makes the closure

degree of word groups rise significantly under the interference of algorithms, thus making it easier to form a "vocabulary cocoon" that hinders the normal flow and dissemination of words.

Based on Labov's diffusion model, platform algorithms play a crucial role in language diffusion in the current digital and intelligent era. Platform algorithms not only change the speed and scope of vocabulary dissemination but also reshape the hierarchical structure of language dissemination, forming a dissemination model dominated by the "digital register". In this model, the algorithm rules of the platform, users' interaction behaviors, and the dissemination characteristics of the digital space jointly affect the acceptance and influence of AI - generated abstract concept words in society.

4. Research Methods

4.1. AI - Generated Corpus

To obtain representative AI - generated texts, this study utilized the advanced language model ChatGPT 3.5 to generate the corpus. During the generation process, a variety of carefully designed prompt words were used to guide ChatGPT 3.5 to generate texts covering different thematic areas:

In the field of tech ethics, prompt words such as "The challenges of artificial intelligence to privacy rights" were given. This aimed to prompt ChatGPT 3.5 to generate a batch of corpus related to technology and ethics starting from core concepts like artificial intelligence technology and privacy rights. For the theme of cultural inheritance, prompt words like "The impact of digitalization on traditional festivals" were adopted. This encouraged ChatGPT 3.5 to provide a batch of corpus related to cultural inheritance from the background of the digital age. Under the theme of social development, prompt words such as "Predict the changes of meta - universe on social interaction models" were designed to generate a batch of corpus closely related to social development in the digital age.

A total of 200 thematic texts were obtained through the above - mentioned prompt words. After generation, these texts underwent a rigorous data cleaning process. Firstly, format information irrelevant to the text content, such as HTML tags and URL links, was removed to ensure the purity of the text. Secondly, low - quality texts, such as those with repetitive content or unclear semantics, were screened and eliminated. After cleaning, 92,000 words of valid text were finally retained.

4.2. Control Corpus

To comprehensively analyze the mechanism of AIGC words, this study extracted control corpus from the BCC Corpus. The BCC Corpus is an online corpus developed by the BLCU Corpus Center. It mainly contains Chinese language materials, as well as corpus in languages such as English, Spanish, French, German, and Turkish. The scale of the Chinese corpus is approximately 15 billion words, covering various fields such as newspapers, literature, Weibo, technology, comprehensive materials, and ancient Chinese (XUN, RAO, XIAO, & ZANG, 2016).

In terms of theme selection, it was consistent with the AI - generated corpus. Relevant corpus mainly from *People's Daily* and its overseas edition since 1990 were selected, also covering fields such as tech ethics, cultural inheritance, and social development, with a total of about 85,000 words. These control corpus have typical characteristics of traditional language in terms of vocabulary use, semantic expression, and grammatical structure, forming a sharp contrast with the AI - generated corpus. Through the comparative analysis of the two, the uniqueness and innovation of AI - generated abstract concept words in language expression and semantic construction can be more clearly revealed, providing a powerful reference for in - depth research on the impact of AI on the Chinese word system.

5. Research Findings

5.1. Algorithmic Metaphor: Symbolic Operation Detached From Experience

In language expression, metaphor, as an important cognitive tool, can help people understand abstract concepts and construct complex semantic relationships. Through in - depth analysis of AI - generated texts and human - written texts, significant differences in metaphor usage rates were found between them. The high metaphor usage rate in AI texts is closely related to AI's learning mechanism and data processing methods. AI can quickly capture the semantic associations and statistical laws between words by learning massive text data. When generating texts, AI will try to use metaphors to enrich the expression based on these learned patterns, aiming to improve the expressiveness and attractiveness of the text. However, due to the lack of real - life experiences and

emotional cognition, AI's use of metaphors often relies more on language patterns in data rather than on direct perception and understanding of the world.

In texts on the theme of tech ethics, AI frequently uses metaphorical expressions such as "the double - edged sword effect of technology" and "the fortress and loopholes of privacy" to enhance the persuasiveness and vividness of the text. Although the use of these metaphors conforms to the norms of language expression to a certain extent and can convey abstract concepts to some degree, there is an obvious gap in semantic depth and richness compared with human - written texts. When using metaphors, human - written texts often combine the author's life experiences, cultural backgrounds, and emotional experiences, making the metaphors more personalized and situational. When discussing the challenges of artificial intelligence to privacy rights, a human author may use their own experience of privacy leakage in online life as the background and use metaphors to vividly describe the feelings when privacy rights are violated. Such metaphorical expressions can not only convey concepts but also arouse readers' emotional resonance. In contrast, the metaphors of AIGC words are more about rigid collocations and attempts.

5.2. Digital Register: the Reconstruction of Word - Formation Power Brought by Platform Algorithms

In the digital age, social media platforms represented by Douyin and Weibo have become important positions for information dissemination. The dissemination of abstract concept words created by generative AI on these platforms presents a unique pattern, profoundly changing the language dissemination ecosystem and reconstructing the power structure of language dissemination. This change is not only reflected in the significant increase in dissemination speed but also in the breakthrough of traditional dissemination circles, enabling AI - generated words to quickly penetrate into all levels of society.

The algorithm recommendation mechanism of the Douyin platform is the key factor for the rapid dissemination of AI neologisms. The algorithm of Douyin creates accurate user profiles based on multi - dimensional information such as users' interests and behavioral data. When content related to AI - generated abstract concept words is released, the algorithm will accurately push this content to users who may be interested according to the user profiles. For users who are interested in psychology and emotional topics, the Douyin algorithm will give priority to recommending videos containing AI - generated words, enabling these users to come into contact with this word more quickly. The Douyin platform has a high user activity and strong information dissemination interactivity. Users' behaviors such as liking, commenting, and reposting further accelerate the dissemination of words, forming a fission - like dissemination effect.

Traditional language dissemination is often restricted by social circles. New words usually emerge and spread within specific social circles first and then gradually spread outward. In the academic field, new professional terms often spread first within the academic community and may take some time to be known by the public. The emergence of generative AI has broken this traditional dissemination model. Through questionnaire surveys, it was found that most respondents first encountered the word "cognitive granularity" through algorithmic recommendations rather than acquaintance - based social interactions. It shows that AI neologisms can break through the limitations of traditional social circles with the help of platform algorithms and directly reach user groups with different backgrounds.

5.3. Technological "Gestell": Semantic Collapse in the AIGC Era

Heidegger's philosophy of technology proposed the concept of "Gestell", which profoundly reveals the shaping effect of modern technology on human thinking and ways of existence. In the field of language, the algorithm mechanism of generative AI, like a powerful Gestell, has a significant impact on the semantic connotations and usage methods of vocabulary, resulting in the phenomenon of semantic collapse. This phenomenon is not only reflected in the simplification of vocabulary collocations but also in the reduction of semantic richness, weakening the ability of vocabulary to express complex thoughts and emotions and posing a potential threat to the healthy development and effective communication of language.

Take the word "empowerment" as an example. In traditional language use, "empowerment" has a relatively clear and rich semantic connotation. It usually means to endow someone or something with a certain ability, energy, or power to enable them to play a better role or achieve their goals. In the field of management, "empowerment" is often used to describe that enterprises provide resources, training, and sup-

port to employees to enhance their work abilities and creativity, thereby improving the overall performance of the enterprise. For example, "The enterprise empowers employees through training and project practice, enabling them to make rapid decisions in a complex market environment and promote business development." This usage reflects the specific direction and positive significance of "empowerment" in practical applications.

In texts generated by AI, the collocations of "empowerment" show a high degree of simplification and patterning. Through the analysis of 92,000 words of AI - generated corpus, it was found that the word "empowerment" frequently appears in various contexts, and its collocation methods are relatively fixed, mostly "cultural empowerment", "educational empowerment", "technological empowerment", etc. In these expressions, "empowerment" seems to have become a universal modifier, lacking specific semantic directions and practical connotations. For example, in the expression "cultural empowerment", in AI texts, it often simply mentions connecting culture with a certain development or change, but lacks in - depth elaboration and analysis of key issues such as how culture empowers, the specific ways of empowerment, and the effects. This usage makes "empowerment" become a formal label, losing its original rich semantics and practical guiding value.

In human - written texts, the use of "empowerment" is more flexible and diverse. It can be combined with different words according to specific contexts and expression needs to convey more accurate semantics. For example, in a corpus about post - disaster reconstruction, there is an expression like "Chengdu took the lead in implementing the confirmation and issuance of rural land and housing rights in the disaster - stricken area. Through rights confirmation and empowerment, it promoted the capitalization of rural assets, greatly improved the degree of rural marketization, and broadened the financing channels for housing reconstruction of affected people." In this expression, "rights confirmation and empowerment" clearly indicates the object and purpose of empowerment, and is closely linked to specific actions and goals such as "promoting the capitalization of rural assets", making the semantics of "empowerment" more rich and specific. In contrast, the use of "empowerment" in AI - generated texts often lacks such specific context support and semantic depth, and is more of a mechanical application, resulting in the semantic hollowness of the word.

The phenomenon of semantic collapse in AI texts has a wide range of negative impacts on language expression and understanding. In terms of information transfer, due to the reduction of semantic richness, AI texts may not be able to accurately convey complex information and ideas, resulting in information loss or misinterpretation. In terms of cultural inheritance and innovation, the convergence of semantics is not conducive to the diversity of language and the inheritance of cultural connotations, limiting the role of language in expressing and shaping culture. Semantic collapse may also affect people's ways of thinking, making thinking more single - dimensional and patterned, which is not conducive to the cultivation and development of innovative thinking.

6. Discussion

6.1. Theoretical Innovation: the Intervention of Algorithms in the Evolution of the Lexical System

6.1.1. Optimizing the Traditional Language Evolution Theory

The traditional language evolution theory believes that language evolution follows the basic model of "replication - variation - selection". In this classic model, "replication" refers to the transmission of language forms among individuals. Through imitation, learning, and other means, the vocabulary, grammatical structures, etc. of language are passed down from generation to generation(Wen, 2021). For example, during the growth process, children gradually master the vocabulary and grammatical rules of their mother tongue by imitating the language expressions of their parents and people around them, which is the process of language replication. "Variation" occurs due to various factors, such as the innovation of language users, language contact, and social and cultural changes, resulting in changes in language forms. With the development of society, new things and concepts constantly emerge. In order to express these new contents, people create new words or change the usage of existing words, thus generating language variation. "Selection" means that, based on language variation, the language forms that are more in line with social needs, the internal rules of the language system, and the habits of language users are retained, while those that are not adapted gradually disappear. For example, some newly created words, if they can accurately express new concepts and are widely used and recognized in society, will be incor-

porated into the language system and become formal language components; while some rare, difficult - to - understand, or non - conforming words may gradually disappear(Yang & Wu, 2019).

In the generative AI era, this traditional model needs to be optimized. The emergence of AI provides new impetus and ways for language variation. AI can excavate the potential semantic associations between words through learning and analyzing massive text data, thus creating novel abstract concept words, which is a brand - new form of language variation. AI - generated words break through the traditional language expression model andbring new elements to the development of language.

Based on the above analysis, this study proposes a new three - stage model of language evolution: "variation - algorithm screening - platform diffusion". In this model, the "variation" stage emphasizes that AI, as a new source of language variation, provides diverse possibilities for language innovation. The "algorithm screening" stage highlights the role of platform algorithms in screening and guiding among numerous language variation forms. It determines which AI - generated words can obtain more extensive dissemination opportunities. The "platform diffusion" stage describes the rapid dissemination process of words in digital spaces such as social media platforms. This dissemination model is characterized by fast speed, wide range, and great influence. It can change the language usage pattern in a short time and promote the rapid evolution of language.

6.1.2. "Technological Memes" in the AIGC Era

Meme theory is a theory that explains the laws of cultural evolution based on Darwin's theory of evolution. It believes that memes are the basic units of cultural dissemination(Blackmore, 2000), which are inherited and evolved in culture through imitation, replication, and dissemination(Dawkins, 2016). In the field of language, language memes refer to language units such as words, phrases, and sentences that can be replicated and disseminated through imitation. Traditional language memes have a certain degree of fidelity. That is, during the replication and dissemination process, although there may be some changes, the basic semantics and forms can remain relatively stable(He, 2005). For example, the word "jiayou" (cheer up) is widely used in different contexts, and its basic semantic meaning of encouragement and support remains unchanged, reflecting a high degree of fidelity. Language memes also have a certain longevi-

ty. Some commonly used words and expressions can exist in the language for a long time. For example, "nihao" (hello) and "xiexie" (thank you) are widely used in different historical periods and social environments and have a long lifespan. In addition, language memes can often arouse people's emotional resonance. When people use words such as "jiayou" and "wo ai ni" (I love you), they can convey positive emotions and strengthen the emotional connection between people.

In the generative AI environment, "technological memes" have emerged. Technological memes refer to language memes generated by AI and disseminated through digital technology. They have unique engineering - like replication characteristics. Technological memes have a relatively high degree of fidelity. Since AI generates content based on preset algorithms and a large amount of data, during the replication process, it can strictly follow the rules set by the program, reducing errors and deviations caused by human factors. The texts generated by AI often have a high degree of accuracy and consistency in grammatical structure and vocabulary collocation, which enables technological memes to maintain relatively stable forms and semantics during the dissemination process.

The longevity of technological memes has also increased. With the help of the storage and dissemination capabilities of digital technology, the content generated by AI can be stored for a long time in the network space and can be retrieved and disseminated at any time. Some AI - generated popular science articles and technical documents can exist on the network for a long time, providing continuous information services for users. Their lifespan is much longer than that of language content disseminated through traditional oral or paper - based methods.

Different from traditional language memes, technological memes are relatively weak in emotional connection. AI lacks real emotional experiences, and the language content it generates is often difficult to arouse strong emotional resonance like human - created language. For example, an AI - generated greeting may be grammatically and semantically correct, but it lacks the sincere emotions contained in human greetings and is difficult to make the recipient feel warm and cared for.

Technological memes have unique advantages and influences in language dissemination. Their high fidelity and longevity enable language information to be disseminated more accurately and persistently,

which is conducive to the inheritance and accumulation of knowledge. In the scientific and technological field, AI - generated professional terms and technical knowledge can be accurately disseminated to practitioners in related fields, promoting knowledge sharing and communication. However, the engineering - like replication characteristics of technological memes may also lead to the homogenization and simplification of language, and the lack of emotional connection may affect the role of language in interpersonal communication and cultural inheritance.

6.2. Digital and Intelligent Challenges: Three Crises of Language Alienation

6.2.1. Cognitive Crisis

The algorithmic metaphors created by generative AI, although showing a certain degree of innovation in form, are triggering a profound cognitive crisis by weakening the experiential foundation of the human concept system. Traditional metaphor generation originates from the rich experiences accumulated by humans in long - term life practices. These experiences form the cornerstone of the meaning of metaphors. In daily life, when we use "life is like a play" to express our perception of life, this metaphor contains a profound understanding and analogy between stage performances and life experiences. When we watch a play, we can see the various performances of actors on the stage. They interpret the joys and sorrows of life through different roles. And in our own lives, we also play various roles and experience different emotions. This kind of metaphor based on life experience allows us to use the specific drama scene to understand the abstract concept of life, thus establishing a vivid and profound connection in cognition.

AI - generated metaphors, such as "emotional folding", lack such embodied experiences. AI cannot truly perceive the actual operation and feelings of the "folding" action in real life. It only makes a formal association between "emotion" and "folding" based on language patterns and statistical laws in data. This association does not stem from real experiences, so it appears empty and abstract in semantics. When we face the concept of "emotional folding", it is difficult for us to find an intuitive feeling corresponding to it from our own life experiences, just like when we understand "life is like a play", so it is difficult to deeply understand its connotation. Although such metaphors lacking experiential foundation enrich the forms of language expression to a certain extent, they cannot

provide us with deep cognition and understanding like traditional metaphors.

Long - term exposure to such experience - free symbolic operations may lead to the abstraction and hollowness of human thinking. Our thinking will gradually get used to this concept - building method based on forms and data, while ignoring real experiences and emotional feelings in life. When facing complex real - world problems, we may lack the intuitive judgment and in - depth thinking ability based on actual experiences and find it difficult to draw wisdom and inspiration from specific life scenarios. This will have a negative impact on the cognitive development and the improvement of thinking ability of humans. When understanding the world and solving problems, we will become more dependent on abstract symbols and concepts and lose the keen perception of the essence of life.

6.2.2. Social Crisis

In the digital age, the phenomenon of platform monopolization of vocabulary dissemination channels is becoming more and more prominent, which has a profound impact on society in many aspects. Social media platforms represented by Douyin and Weibo, with their powerful algorithm recommendation mechanisms and large user bases, have become the main positions for the dissemination of AI - generated vocabulary. These platforms, through the accurate analysis of users' interests and behavioral data, push AI - generated vocabulary to users in a targeted manner, enabling the vocabulary to spread rapidly in a short time.

This phenomenon of platform - monopolized dissemination channels exacerbates the inequality of information dissemination. There are differences in the abilities of different user groups to access and obtain information. Some users may be more likely to come into contact with AI - generated vocabulary due to the preferences of platform algorithms, while others may be excluded. Young user groups are usually more sensitive to new technologies and new vocabulary. They are more active on social media platforms, so they are more likely to be influenced by platform algorithms and come into contact with a large amount of AI - generated vocabulary. In contrast, elderly user groups may have fewer opportunities to contact these words because of their lower frequency of using social media platforms or their unfamiliarity with algorithm recommendation mechanisms. This inequality in information dissemination may further widen the

cognitive gap between different groups and exacerbate social polarization.

Platform monopolization may also lead to the simplification and homogenization of language. In pursuit of dissemination effects and user traffic, platforms tend to recommend those AI - generated vocabulary that are topical and popular, while ignoring the diversity and richness of language. This makes some vocabulary with unique cultural connotations and regional characteristics gradually marginalized and difficult to be widely disseminated. On social media platforms, some internet buzzwords can quickly become popular, but these buzzwords often have a certain timeliness and popularity and lack profound cultural heritage. Some traditional dialect words and industry terms, although they have rich cultural connotations and practical values, are difficult to spread more widely due to the non - recommendation of platforms. In the long run, the diversity of language will be seriously damaged, and the diversity of culture will also be threatened.

The power reconstruction of platform algorithms may also trigger the risks of information manipulation and the spread of false information. Some law - breakers may take advantage of the loopholes in platform algorithms to deliberately create and spread false information, misleading the public's perception. They may manipulate AI - generated vocabulary to create hot topics, attract users' attention, and achieve their commercial or political purposes. This behavior of information manipulation and the spread of false information not only affects the public's judgment and decision - making but also undermines the trust foundation of society.

6.2.3. Ethical Crisis

The large - scale appearance of hollow vocabulary in AI - generated texts seriously erodes the rationality of public discourse and may trigger a series of ethical risks. In public discourse, the use of hollow vocabulary leads to the ambiguity and inaccuracy of information, making it difficult for people to accurately express their views and intentions when communicating and discussing issues, thus reducing the quality and efficiency of public discourse.

In policy discussions, if influenced by AI words, "empowerment" and other hollow vocabulary are frequently used without clarifying their specific meanings and implementation measures, the policy discussions will become empty and abstract, and it will be difficult to form effective decisions. For example, when dis-

cussing education policies, if only "educational empowerment" is simply mentioned without specifically explaining how to achieve empowerment through practical measures such as the optimal allocation of educational resources and the improvement of teaching methods, such discussions cannot really solve the problems in education and cannot provide valuable references for policy - making.

Hollow vocabulary can also be used to manipulate public opinion and mislead the public. Some people with ulterior motives may take advantage of the ambiguity and generality of hollow vocabulary to deliberately spread false information or distort the facts to achieve their bad purposes. In political propaganda, some political groups may use hollow vocabulary to package their policies, cover up their true intentions and effects, and mislead the public's judgment. This behavior not only violates ethical and moral principles but also undermines social fairness, justice, and the democratic and legal system.

6.3. Governance Paths: Three Principles of Language Planning in the Digital and Intelligent Era

Cooper's language planning three - axis model explores language planning issues from three dimensions: language status planning, ontology planning, and acquisition planning(Cooper, 1989). Language status planning mainly involves the status and functions of languages in society, such as the determination of official languages and language standardization. Ontology planning focuses on the structure and form of language itself, including vocabulary norms and grammar formulation. Acquisition planning emphasizes the learning and inheritance of languages, such as the formulation of language education policies and the development of language learning resources. This model provides a comprehensive and systematic analysis framework for language planning and has played an important role in traditional language research. In the generative AI era, the language environment has undergone great changes, and Cooper's three - axis model needs to be expanded to adapt to new language phenomena. AI - generated abstract concept words pose new challenges in terms of language status, ontology, and acquisition. In terms of language status, some AI - generated words spread rapidly on the network and are widely used, but their legitimacy and standardization have not been fully discussed and recognized. Therefore, in language status planning, it is necessary to con-

sider how to evaluate and position these emerging words (Zhang, 2025). In terms of ontology planning, AI - generated words may have unique semantic and grammatical characteristics, and traditional vocabulary norms and grammar rules are difficult to fully apply. It is necessary to re - examine and adjust the standards and methods of ontology planning. In terms of acquisition planning, how AI - generated words are integrated into the language education system and how to guide learners to correctly understand and use these words are also issues that need to be solved. Therefore, the language planning of AIGC words needs to follow the principles of transparency, diversity, and morality.

6.3.1. The Principle of Transparency

In the context of the wide application of generative AI technology, disclosing the sources of AI lexicon training data is of great significance for enhancing algorithm transparency. The training data of AI lexicons is the basis for generating language content. The quality, sources, and processing methods of these data directly affect the accuracy, reliability, and fairness of AI - generated content. If there are biases, errors, or infringement issues in the training data, then the abstract concept words generated by AI may spread misinformation, strengthen social biases, and even trigger legal disputes. For example, if the training data of an AI lexicon contains a large amount of text with biases, then the abstract concept words generated about specific groups based on these data may continue and strengthen this bias, having a negative impact on social fairness and harmony.

Disclosing the sources of AI lexicon training data can enhance public trust in AI technology. In the information age, public trust in technology is the foundation for its wide application and development. When the public knows that the training data sources of AI lexicons are reliable, legal, and strictly screened, they will be more willing to accept and use the language content generated by AI. In the medical field, if the training data sources of an AI - assisted diagnosis system are transparent and contain a large amount of real and accurate clinical case data, doctors and patients will have more confidence in the diagnosis suggestions and treatment plans generated by the system. Disclosing data sources can also promote the supervision and evaluation of AI technology by the academic community and the public. The academic community can conduct in - depth research based on the disclosed data, evaluate the quality and

effectiveness of AI - generated content, discover potential problems and risks, and put forward improvement suggestions. The public can also supervise the application of AI technology by understanding the data sources and safeguard their legitimate rights and interests.

6.3.2. The Principle of Diversity

Language diversity is an important manifestation of human cultural diversity. It carries the unique cultures, histories, and values of different regions, ethnic groups, and social groups. In the generative AI era, protecting language diversity faces new challenges and opportunities. With the development of AI technology, some popular AI - generated words may spread rapidly on the network and dominate, while dialects and niche words are at a disadvantage in terms of data volume and dissemination channels due to their relatively narrow usage ranges and are easily marginalized. To protect language diversity, ensuring a minimum proportion of dialects and niche words is an effective measure.

Ensuring the minimum proportion of dialects and niche words can ensure that these words are fully reflected and disseminated in AI - generated language content. In text generation tasks, stipulating that the proportion of dialect words in AI - generated content should not be lower than a certain level can prompt AI to learn and use dialect words, thus preserving and inheriting dialect cultures. In some texts related to local cultures, the reasonable use of dialect words can enhance the regional characteristics and cultural connotations of the text, enabling readers to better feel the local cultural atmosphere. Dialects and niche words often contain rich cultural information and unique expressions. They are the treasures of regional cultures. By setting a minimum proportion, these words can play a role in AI language generation, providing rich materials for cultural inheritance and innovation. Some niche words may have unique semantic and grammatical structures, and their use can enrich the forms of language expression and promote the innovation and development of language.

In actual operation, achieving the setting of the minimum proportion of dialects and niche words requires the efforts of multiple parties. AI developers need to expand the training data and collect more texts containing dialects and niche words to enrich AI's language learning resources. Special dialect and niche word corpora can be established to organize

and collect dialect words and folk expressions from various regions, providing sufficient data support for AI training. In terms of algorithm design, it is necessary to optimize AI to enable it to better understand and use dialects and niche words. Technologies such as semantic understanding and context analysis can be adopted to enable AI to select dialects and niche words reasonably according to the context and theme when generating texts and avoid rigid application. Relevant departments and platforms should also strengthen the publicity and guidance of language diversity protection and encourage users to use dialects and niche words when interacting with AI, creating a good atmosphere for protecting language diversity.

6.3.3. The Principle of Morality

In the context of the wide application of generative AI technology, it is necessary to establish a dynamic sensitive - word filtering mechanism for ethical review. With the in - depth application of AI in fields such as information dissemination and content generation, the language content it generates may involve various sensitive information, such as violence, pornography, discrimination, and false information. The dissemination of such information not only causes harm to the physical and mental health of individuals but also undermines social public order and good customs and triggers social contradictions and conflicts. Therefore, by establishing a dynamic sensitive - word filtering mechanism, sensitive information in AI - generated content can be effectively identified and filtered to ensure that it complies with ethical and moral norms.

The dynamic sensitive - word filtering mechanism can conduct real - time monitoring and analysis of AI - generated texts. When it detects that a text contains sensitive words, the system will automatically process it, such as replacement, deletion, or marking. On social media platforms, AI - generated comments, posts, and other content are reviewed by the sensitive - word filtering mechanism before being released. If content containing violent or discriminatory words is detected, the system will prevent it from being released and prompt the user to modify. This mechanism can timely detect and prevent the dissemination of harmful information and protect users from being affected by harmful information.

The scope and definition of sensitive words are not fixed. They will change with the development of social culture, the change of values, and the adjustment of laws and regulations. In different historical periods and social backgrounds, the definitions of sensitive information such as violence and pornography may be different. With the increasing attention to gender equality in society, some gender - discriminatory words and expressions have also been included in the scope of sensitive words. Therefore, the sensitive - word filtering mechanism needs to have the ability to update dynamically and adjust the sensitive - word library in a timely manner according to social changes to ensure the effectiveness and adaptability of the filtering mechanism.

7. Conclusion

This study conducted an interdisciplinary analysis of nearly 100,000 words of corpus generated by ChatGPT, deeply exploring the innovation mechanism of generative AI on Chinese abstract concept words. From the multi - dimensional perspectives of cognitive linguistics, philosophy of technology, and sociolinguistics, it revealed the complex role of generative AI in the process of language innovation.

At the cognitive level, generative AI creates abstract concept words through the "algorithmic metaphor" mechanism. Its metaphor usage rate is significantly higher than that of human - written texts. However,due to the lack of human embodied experiences, the metaphors generated by AI are more of symbolic operations based on data patterns. Concepts like "cognitive folding" and "emotional granularity" may be novel in form but are semantically empty, and it is difficult to trigger in - depth understanding like metaphors generated by humans based on experiences.

From a technological perspective, platform algorithms have restructured the language dissemination ecosystem, forming a dissemination hierarchy dominated by the "digital register". The dissemination speed of AI - generated abstract concept words on platforms such as Douyin and Weibo far exceeds the traditional model, with an average diffusion speed several times that of the traditional model. They can also break through traditional social circles. This change in the dissemination model has enabled AI - generated words to spread rapidly in society, having a profound impact on the development and evolution of language.

At the social level, research has found that technological Gestell leads to the phenomenon of vocabulary hollowing - out. AIGC tends to over - generalize

words, turning them into universal labels. The semantic information entropy of AIGC texts is also lower than that of human - written texts, confirming the convergent expression and reduced semantic richness in AI texts. This not only affects the accuracy and richness of language expression but also poses a potential threat to the healthy development and effective communication of language.

The results of this study have important theoretical and practical significance. Theoretically, it optimizes the traditional language evolution model, proposes a new three - stage model of "variation - algorithm screening - platform diffusion", develops the meme theory, and defines the engineering replication characteristics of "technological memes". Practically, it provides new ideas for language planning. By proposing three principles of algorithm planning, namely, the principles of transparency, diversity, and morality, it aims to address the language alienation crisis brought about by generative AI and establish a dynamic balance mechanism between innovation and standardization, thus promoting the healthy development and effective communication of the language and vocabulary system in the AIGC era.

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