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Does Artificial Intelligence Have Subjectivity?

—An Exploration of the Focus of Disagreement on the Cognition of Human-AI Relationship

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Abstract

With the improvement of the autonomy level of intelligent technology and the increasingly close interaction between humans and artificial intelligence (AI), AI has been embedded in human production and life with unprecedented depth and breadth. Related research on human-AI relationship has been springing up. However, the research question of "what is human-AI relationship" has always been controversial in the academia, resulting in the inability of subsequent studies to provide scientific methodological guidance for human-AI collaboration and human-AI symbiosis based on a clear cognition of human-AI relationship. This study focuses on the root causes of the divergence in the cognition of human-AI relationship. Firstly, from the perspective of epistemology, we sort out and compare the multiple judgments of existing studies on the self-consciousness of AI, and objectively analyze the development level of AI at this stage. By discriminating the "authenticity" of AIGC, the essential attributes of AI are clarified and the human-machine relationship is clarified. Secondly, based on the multidisciplinary perspective and the Perception of Practical Truth, the human-AI relationship is clarified as the dialectical unity of subjective human-AI relationship cognition and objective human-AI relationship reality. According to the AIGC cognitive differentiation caused by individual human capital differences, it is argued that there are differences between subjective human-AI relationship cognition and objective human-AI relationship reality, as well as subjective cognition of human-machine relationship by different subjects. By analyzing the "authenticity" of AIGC, the essential attributes of AI are clarified and the human-computer relationship is clarified. Finally, a three-dimensional conceptual model of human-AI collaboration value creation in the primary stage of the intelligent era is proposed to characterize the integrated role of artificial intelligence capability, human intelligence capability and human-AI relationship cognition on value creation. This paper clarifies the focus and root causes of the divergence of human-AI

relationship cognition, and clears the fog for the in-depth study of human-computer relationship. It promotes cognition to better guide practice and science to better serve people.

Keywords

The Cognition of Human-AI Relationship, Self-Consciousness, Subjectivity and Objectivity, The Perception of Practical Truth, Human-AI Collaboration Value Creation, The "Authenticity" of AIGC

1. Introduction

Artificial intelligence (AI) is an important driving force for the new round of scientific and technological revolution and industrial change. Driven by new theories and new technologies such as Internet, big data, supercomputing, sensor network, and brain science, AI has gradually mastered the more advanced and complex thinking paradigm and logic of human beings. It presents the technical characteristics of deep learning, cross-border integration, human-AI cooperation, open group intelligence, autonomous manipulation and so on (Li, 2019; Pan, 2023). It has demonstrated attributes and abilities beyond human beings in specific areas (He, 2018). With AI promoting the transformation and upgrading of traditional industries and the rise of strategic emerging industries, the industrialization of AI and the intelligence of traditional industries show blowout development (Liu & Li, 2022), and a large number of human employees are squeezed out of the production process. To a certain extent, they lose their unique work fields, labor functions and value creation rights (He & Zhu, 2023). Zheng et al. (2023) profoundly influenced the traditional mode of production and management (Zhao, 2019), resulting in a tide of "technical unemployment" caused by large-scale adjustments in industrial structure and employment structure (Sun, 2020).

Human-AI relationship refers to the inevitable connection between human beings and AI machines and technologies by constantly transforming nature and human beings in the process of labor (Cheng et al., 2022). It is a legitimate social relationship that implies emotion, instrumentality and reciprocity. In the frontier research of AI, two kinds of diametrically opposite cognition of human-AI relationship have been developed. The mainstream view in the management circle is that AI has gone beyond the scope of traditional ancillary tools and is gradually becoming a new labor subject equal to human beings (Myllymaki, 2021; Rahwan, Cebrain et al., 2019; Seeber et al., 2020; He & Zhu, 2023; Wang et al., 2021), the identity of the traditional management subject and object of human resources management has undergone essential changes (Zhang et al., 2022). The traditional unitary division of labor system with human as the main body has been extended to the dual division of labor between man and machine (He & Yan, 2023). The further development of AI brings about some problems, such as structural substitution, labor transformation, employment reconstruction and so on. It poses a

challenge to the survival and long-term development of human employees. However, some scholars believe that AI still belongs to human tools and creation (Yang, 2020; Zhang, 2017), and there is no need to worry and worry too much about it (Pan et al., 2019). This cognitive differentiation reflects the lack of cognition of the subject and object identity of AI, and is unable to make a clear and complete interpretation of the human-AI relationship at the present stage. Therefore, it can not provide unified thought and practical guidance for the further development of human-AI cooperation.

"What is human-AI relationship" is an important issue that can not be avoided and urgently needs to be clarified in the theoretical research and practical application of AI, which greatly affects the next development trend of AI. This paper hopes to trace the fundamental question of whether AI has the nature of human nature, that is, independent self-consciousness, and point out the focus of debate on the cognition of human-AI relationship and make a clear response. to promote the formation of a new value creation paradigm of human-AI cooperative value creation in the primary stage of the intelligent era. The contribution of this paper lies in: theoretically, systematically combing and comparing the different viewpoints of the existing cognition of human-AI relationship, judging whether AI has self-consciousness and independent subjectivity, and then clarifying the Noumenon of human-AI relationship. It is pointed out that the focus of cognitive differences in human-AI relationship is the difference between the cognition of subjective human mechanism and the reality of objective human-AI relationship, and the subjective cognitive differences of different subjects on human-AI relationship. And the root cause of the two kinds of cognitive differences, answer the research question of "what is human-AI relationship", and on this basis, construct a three-dimensional conceptual model of human-AI cooperation value creation in the early stage of the intelligent era, in order to clear the theoretical obstacles for the in-depth study of human-AI relationship. In practice, it provides thinking direction for human-AI relationship cognition to better guide practice, and provides methodological guidance and management inspiration for the promotion and application of AI and value creation of human-AI cooperation in the follow-up workplace.

The research ideas of this paper are as follows: firstly, based on the perspective of interdisciplinary, on the basis of summarizing and analyzing the viewpoints of predecessors, from the four dimensions of computer and biological science, emotion and ethics, cognition and behavior, and legal status, this paper deduces the view that AI does not have self-consciousness. Secondly, taking the "authenticity" of AIGC generation as a starting point, this paper further verifies the conclusion that AI does not have subjectivity from two aspects of generation mode and generation level. Thirdly, clarify the human-AI relationship as a dialectical unity of subjective human-AI relationship cognition and objective human-AI relationship reality. By analyzing the cognitive differentiation of individuals with different human capital towards AIGC, further clarify the fundamental reasons for the

differences between subjective human-AI relationship cognition and objective human-AI relationship reality, as well as the differences in subjective cognition of human-AI relationships among different subjects. Then, it constructs a three-dimensional conceptual model for the comprehensive cooperation of AI ability, human intelligence ability and human-AI relationship cognition to represent the value creation process of human-AI cooperation in the primary stage of intelligence era. Finally, management suggestions are put forward based on the previous discussion.

2. Tracing to the Essential Source of AI

The goal of epistemology is to discover the "essential attribute of concept". The academic circles have different views on the human-AI relationship at the present stage, and the fundamental reason is that the essential attribute of AI has not been clarified, that is, the question of the subject and object attribute of AI. In essence, it is the question of whether AI has self-consciousness. In the sense of psychology and management, self-consciousness is defined as the consciousness of individuals looking at the relationship between themselves and their surroundings, which can be divided into independent self-consciousness and dependent self-consciousness (Markus & Kitayama, 1991; Xi et al., 2015). The philosophical circle explores the relationship between AI and self-awareness. Self-consciousness in philosophical consciousness is the cognitive process and result of taking the self as the object (Cheng, 2022), which belongs to the internal yardstick of self-to-self (Yu, 2017). That is to answer the philosophical question of "who am I" (Jiang, 2019). Whether or not to have independent self-consciousness has become the fundamental difference between AI and human intelligence (Zhao, 2019). There are different opinions and polarizing tendencies in various fields.

Scholars with positive views believe that a large number of experiments have proved that AI already has self-consciousness independent of human control (Yu, 2017; Luo, 2020), such as the robot Nico developed by Yale University passed the "Mirror Test", the robot Nao developed by the Rensler AI and reasoning Laboratory in New York passed the "Wise-men Puzzle", and driverless cars use unsupervised learning technology to spontaneously adjust their behavior as the environment changes. And AI already has the intelligence, rational ability, choice and judgment ability to imitate human learning and other aspects, as well as factual cognitive ability and internal knowledge (Cheng & Gao, 2021; Feng, 2019). Therefore, AI has the self-consciousness to become an independent subject.

Other scholars hold a completely opposite negative attitude, admitting that AI has begun to appear the end of conscious activities called "self-awareness" and passed the "Mirror Test", reaching the threshold of "Strong Personification" (Yu & Li, 2023). But as a technological product deriving from the development of computer science, AI does not have the carbon-based neuroproteins that synthesize intentional thinking, and cannot form embodied cognition (Jiang, 2019; Ye et al., 2019). In addition, AI does not have the ability of semantic understanding (Searle,

2006), "expression of everything" and "reflection" (Zhao, 2019), moral evaluation ability and free decision-making ability (Yang, 2020). Unable to realize the triple essence of human communication, thinking and labor (Xie & Liu, 2023), so AI only has "formal self-consciousness". But not equipped with the same creative "substantive self-consciousness" as human beings (Cheng, 2022).

This article infers whether AI has self-awareness from four dimensions: computer and biological sciences, emotions and ethics, cognition and behavior, and legal status. In terms of computer and biological science, the current science and technology has not yet crossed the "the Computational Explanatory Gap", unable to know all about the black box of human consciousness, which provides a replicable model and clear causal clues for AI to construct self-consciousness. The generation of human self-consciousness is a cognitive process of the brain neural system directed by behavior (Shu & Wu, 2022). Connectionism constructs Convolutional Neural Network from the perspective of bionics, trying to copy and simulate the decentralized control structure of human brain (Sun, 2018). However, this artificial physiological structure still does not support AI to learn informal and unstructured "rules" such as common sense, intuition and free will (Zhang, 2023), let alone the purpose and value of its existence. Therefore, AI does not have the technical conditions and biological basis to realize the qualitative change of "existential upgrade" for the time being (Crevier, 1993; Zhao, 2019).

In terms of cognition and behavior, behaviorism tries to make AI form "embodied cognition" based on practice by simulating the interaction between human and environment. According to the Moravec's Paradox and the five levels of human cognition (Cai, 2015), AI, which simulates the most basic instinctive cognition of human beings, is still in the conceptual discussion stage. Therefore, AI cannot fully possess all human cognitive abilities at present or even for quite a long time in the future (Cai & Xue, 2016). Lack of humanization, self-consciousness, expressive ability and will ability (Peng & Chen, 2019; Sun, 2018), not to mention generating more advanced unique and creative behavior than human beings.

In terms of emotion and ethics, AI can communicate with human emotional response and emotional judgment through "emotional computing", but it does not have internal emotional mechanisms such as emotional consciousness and emotional sensibility (Wang, 2019; Zhang & Lin, 2008), unable to produce the same or similar real emotions as human beings. In addition, the operation mode of AI regards moral and ethical standards as an ethical mixture of plasticity, variability and expansibility of human empowerment, which is easy to produce ethical paradoxes in "language pollution" or "data feeding" of negative value attributes, and can not form a firm moral solid (Yu & Li, 2023), so AI does not have the emotional consciousness and moral standpoint to form self-consciousness (Ling et al., 2023).

In terms of legal status, AI at the present stage does not have the substantive elements to become an independent legal personality, that is, it actually has the will ability to enjoy rights and obligations (factual conditions) and legal

qualifications to enjoy rights and obligations (norms) (Feng, 2019), nor does it have the capacity for moral cognition and responsibility. The current law has not yet issued the corresponding formal elements to recognize its legal personality (Peng & Chen, 2019).

Generally speaking, AI at this stage only has some intelligent behavior (Can Machine Act Intelligently), but can not think like the real "human" (Wu, 2018; Cai & Xue, 2016), and does not have the essential attributes of human, that is, independent self-consciousness and free will. So AI is still a tool rather than a subject.

3. Is AIGC "Real Generation"?

Artificial Intelligence Generative Content (AIGC), as the latest achievement of AI development (Xie & Liu, 2023), represents the most advanced development level of AI at present and the development trend of AI in the future (Zheng et al., 2023). The operating logic of AIGC lies in taking the highest level of human cognition in a specific field as the training prototype, the large Language Model (LLM) based on the iteration of Natural Language Learning (NLL), relying on Machine Learning (ML), Reinforcement Learning from Human Feedback (RLHF) and other technologies, to gather and master the crystallization of the most advanced, comprehensive and profound collective wisdom in human history. And transplant it to a specific field to produce a capacity similar to human intelligence. Because human beings can not fully predict or even control the process and results of independent generation of AIGC through machine learning, based on the criteria of legal objectivity, AI creations can constitute works in the sense of copyright law (Yi, 2017). It can be seen that the academic circles and the public generally agree that AI creations meet the original requirements of content production. However, since AIGC does not have self-consciousness, free will and legal personality, the content generated by its creation is regarded as a work, do they constitute a paradox? Is AIGC "original" or "original"? Is AIGC "real generation" or "pseudo generation"? This paper attempts to distinguish the "authenticity" of AIGC from two aspects of production mode and generation level, in order to further verify whether AI has independent self-consciousness.

In the generation mode, AIGC is based on big data, big algorithm and big computing power (Zhang, 2023; Zhu & Wang, 2023). It spreads, transfers and applies knowledge according to the intelligent model set by human designers in advance, and then simulates human thinking for analysis, arrangement, screening and combination. Although the neural network system of AI has copied the decentralized control structure and operation mode of the human brain, all other features of human consciousness, thought, emotion, emotion and psychology are far from being contained by grammar (Zhang, 2017). Whether it is AIGC's "autonomous innovation" or "factual error", it is a random probability event produced by the computer to execute algorithm instructions (Van et al., 2023; Li et al., 2023a). Its way of thinking is discrete, accurate and unconscious, and its generation has the attribute of "Manufacture". The essence of human brain generation lies in the

invention and connection under self-consciousness and self-knowledge reflection (Yu & Li, 2023), that is, through the interaction of mind, intuition, inspiration and epiphany, human brain responds independently and naturally to movement, change and dynamics, and its thinking process is purposeful, fault-tolerant and conscious, and has the attribute of "Creation".

At the level of generation, the most valuable aspect of human brain thinking lies in its ability to transcend the constraints of existing cognition based on changes and needs in the subject, object, and environment, and generate new values of insight, divergence, and creativity, namely the endogenous "true generation" of "0 → non-zero". In contrast, AIGC can only extract historical data from a large database based on a fixed value scale assigned by human designers, and engage in repetitive production, formal processing, pieced together combinations, and mechanical output. Its generated content has shallow cognition, homogeneous thinking, and a pile of vocabulary, lacking originality, criticality, and intentionality (Dwivedi et al., 2023; Gao & Yan, 2023; Xiao, 2023), which belongs to the quantitative changes that can be predicted within human cognition, namely the "non-zero → n" utilization based "pseudo generation". Therefore, AIGC can only improve the productivity of content (Gao & Yan, 2023), but cannot create new value beyond human cognition, let alone generate new civilization increments (Gu, 2023).

To sum up, this paper holds that there is an essential difference between AIGC and the "generation" of human intelligence. AI does not have independent self-consciousness and can not fundamentally realize the original value creation of "zero → not zero". Although AI is endowed with human brain wisdom and has a certain degree of autonomy, it can imitate human thinking to carry out procedural production activities and self-management, surpassing or even replacing human labor force in specific areas of the department (He & Yan, 2023), but in the final analysis, AI is only "a synthesis of labor materials that workers use to transmit specific production activities to labor objects" (Marx, 2004), its essence is the means of production embedded in human materialized labor, as an indirect production labor process and human direct labor process to improve the efficiency of product production and value creation (Liu & Li, 2022). The local human brain function of AI is only the mapping, aggregation and extension of human intelligent thinking, will and experience (Ling et al., 2023; Sun, 2018), can not copy, simulate and transcend human mind, empathy and consciousness as a whole (Zhang, 2017). Therefore, the AI at this stage is objectively insufficient to become a "human" in the real sense, and can not fundamentally shake or even subvert the dominant position of human beings.

4. The Clarification of Human-AI Relationship: The Unity of Subjective Human-AI Relationship Cognition and Objective Human-AI Relationship

In Das Kapital, Marx pointed out that "if the form of expression and the essence of things will directly merge into one, all science will become superfluous", that is

to say, the appearance and essence of objective cognitive objects do not necessarily have identity. This explains why there is a deviation between the subjective cognizance of the objective fact and the objective fact as well as the cognition of the same objective fact by different subjects. From the perspective of epistemology, only by adhering to the practical truth of the dialectical unity of subjective and objective (Sun, 2005), which truly reflects the essential attribute of AI, can we touch and reveal the complete human-AI relationship and give the most thorough response to the question of "what is human-AI relationship". Accordingly, the human-AI relationship is not only the one-dimensional shape of the cognition of the human-AI relationship caused by the objective AI status, but also affected by the reverse construction of human intentionality, which can be deconstructed into two aspects: the cognition of the subjective human-AI relationship and the objective human-AI relationship. That is, "what people think the human-AI relationship is" and "what the human-AI relationship is actually". The former is about the "subjective due" of the human-AI relationship. The latter is about the "objective nature" of the human-AI relationship, and the two are integrated and unified to form the "objective should be" of the human-AI relationship (Ding, 1999), as shown in **Figure 1**.

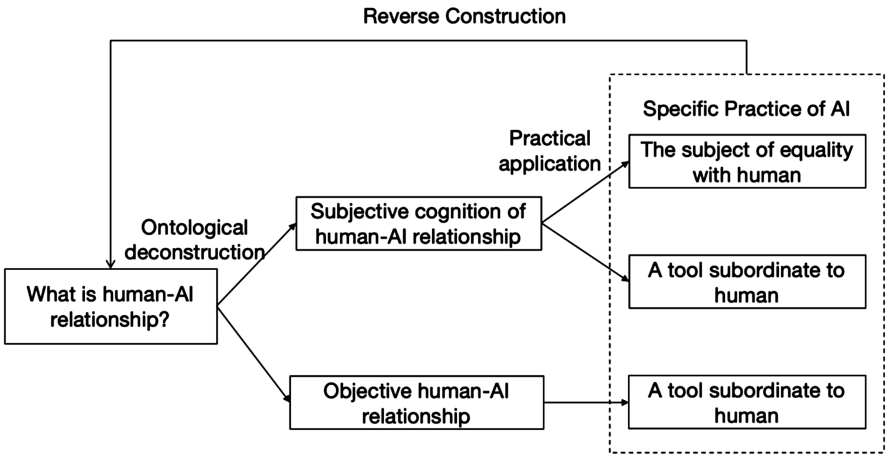

Figure 1. Clarification of the ontology of human-AI relationship.

The "subjective due" of human-AI relationship belongs to the prototype of the truth of theoretical form, and it is infinitely close to the truth of practice form in the sense of practice-cognition (Sun, 2005). Subjective human-AI relationship cognition refers to people's simple subjective reflection of external manifestations such as aspects, characteristics and phenomena of human-AI relationship before they fully understand the intrinsic nature of AI. AI is considered not only to maintain the original tool attributes, but also to develop equal subject value with human beings. Specifically, with the improvement of the degree of autonomy, AI has gradually developed from a mechanized and emotionless auxiliary tool to an autonomous intelligence agent with humanoid behavior ability (Kellogg et al., 2020). Rahwan et al. (2019), new roles such as friends, colleagues, partners and even

competitors appear in organizational management, while playing the dual role of "auxiliary tools + human-AI teammates". Human-computer relationship develops from one-way passive, non-shared, non-intelligent complementary Human-Computer Interaction between subject and object and intermediary (tool) to two-way active, shared, complementary, replaceable, adaptive, goal-driven and predictable human-AI Teaming (Cheng, 2019; Wu et al., 2022).

The "objective essence" of human-AI relationship belongs to the truth of practical form, which exists objectively and is not transferred by the subjective consciousness of the subject (Zhang, 2006). Objective human-AI relationship really refers to the absolute and one-sided objective reflection of the essence or laws of human-AI relationship from the standpoint of materialism, which is characterized by that AI can only copy and simulate the function of human brain, but can not equate or replace human subject status and initiative. AI is actually a tool subordinate to human beings.

The dialectical unity of the subject's pure "subjective ought" and the object's "objective ought" constructs a new ideal object, namely the "objective ought" of the human-AI relationship. The foundation lies in the specific practice of individuals with different ability endowments applying AI. Understanding and grasping truth is an endless process of approaching objectivity subjectively. In this process, although the facts recognized by the cognitive subject may not necessarily have the same identity as the objective facts themselves, the facts recognized subjectively often have a strong direct effect on practice. Following this logic, AI has objectively failed to surpass humans in obtaining a dominant position, and people have differentiated their attitudes towards human-AI relationships in terms of subjective cognition and emotion through the specific practice of AI applications.

5. Cognitive Differences of Subjective Human-AI Relationship among Different Subjects

Hancock et al. (2011) pointed out that individual characteristics such as job skills, training experience, attention and self-confidence will affect the cognition and judgment of human-computer relationship. Human society is composed of independent individuals who have differences in knowledge, experience and skills in a particular field (collectively referred to as human capital). Due to the constraints of many factors, such as subject, object and cognitive tools, there is a tension space in the process from cognizing and grasping the objective reality to infinitely approaching the truth (Sun, 2020). It causes different subjects of human capital to have different cognition of human-AI relationship. AIGC relies on the continuous nourishment of big data to continuously train its deep learning ability, so as to achieve rapid development (Li et al., 2023b). When AIGC gradually approaches or even exceeds the human average level, individuals with different human capital may have different evaluations of human-AI relationship, either subjective or objective, perceptual or rational, shallow or profound (Ding, 1999), which means that different subjects have different subjective perceptions of human-AI relationship.

For the mental workers with high human capital, their comprehensive quality is much higher than that of AIGC, they can stand on the cognitive high ground overlooking AIGC, and give a relatively rational and objective evaluation of human-AI relationship. With its high computing power and high interconnection, AIGC shows great advantages in data mining, information integration and programming, using the role of "artificial limb" of efficient tools and technology (Gao & Yan, 2023) to help human employees overcome the "knowledge barrier" and liberate it from low value-added work such as mechanization, repetition and programming (He & Yan, 2023). People are able to devote themselves to core tasks that require higher logic, depth and connectivity (Cheng et al., 2022). However, in the face of unknown battles, flexibility changes and uncertain requirements in the case of "no fixed rules" (Zheng et al., 2023), standardized AI can not accurately extract and interpret information, and can not replace human beings to complete complex tasks. Therefore, mental workers with high human capital regard AI as an auxiliary tool rather than an independent subject that replaces or even surpasses human beings.

For the mental workers with low and middle human capital, their thinking and ability levels in specific areas do not reach the comprehensive level of AIGC, and the cognition and evaluation of human-AI relationship are more subjective and perceptual. On the one hand, AIGC has shown some transcendence in some local functions such as cross-border fusion, data processing and heuristic content generation (Sun, 2020), which can overturn the traditional "brain work" (Cao, 2023), showing higher individual professional skills than human beings. On the other hand, AIGC can break through and exceed human physiological limits such as environment, physical strength and life, human psychological limits such as emotion, cognition and memory, as well as the moral limits of non-working day overtime (Liu & Li, 2022), carry out stable and continuous production activities with a high level of concentration, flexibility and thinking efficiency, and achieve "machine replacement" in the field of standardized operation and routine cognitive work. Therefore, mental workers with low and middle human capital generally regard AI as an alternative independent subject and have a sense of identity threat (He et al., 2023). To a large extent, this is the promotion and illusion of AI to create value (Cao, 2023). In fact, this kind of "substitution" is neither the "substitution" of AI to human intelligence, nor the "substitution" of AI for non-biological thinking, but the "substitution" of human's own high thinking ability to low thinking ability (Yu, 2017).

The clarification of human-AI relationships not only provides a universal basis for the existence of AI as a tool, but also lays an epistemological foundation for understanding the human demands of AI as a subject. Individuals' subjective understanding of the subjectification of AI needs to elevate reliable sensory knowledge to correct rational understanding, grasp the profound and comprehensive, eternal and stable internal connections or essential attributes of AI from vivid and concrete, variable and fleeting phenomena, abandon pure subjectivity, in order to achieve an

understanding of its essence or laws, that is, to obtain the commonly understood cognitive meaning of "objective truth". And individuals' understanding of the abstract truth of AI instrumentalism cannot be limited to abstract speculative theories. It is necessary to constantly distinguish and test the objective truth in scientific cognition in practice, and transform it into practical truth in order to better guide practice. The recognition of the truth of human-AI relationships requires not only actively exerting the initiative and creativity of "subjective should be", but also grasping the objectivity and inevitability of "objective should be" in the scientific cognitive sense, and reducing objective truth to practical truth of "objective should be" in the practical sense. Only in the end can subjectivity come from objectivity and subjectivity be seen in objectivity.

6. The Three-Dimensional Conceptual Model of Value Creation of Human-AI Cooperation in the Primary Stage of Intelligent Era

With the upgrading of the autonomous technology of AI, employees' cognition of human-computer relationship and the way of human-computer interaction have changed fundamentally, resulting in a new value creation paradigm of human-computer cooperation and empowerment. Existing studies call for the combination of AI capabilities and value creation (Zhang et al., 2022), Sun (2020) believe that digital value creation emphasizes the combined use of digital technology to innovate the value creation processes such as productivity, decision-making model and management practices, so as to enhance the core competitiveness of enterprises and achieve sustainable competitive advantage (Li et al., 2023a). This paper corresponds the subject of value creation to the micro individuals in the organization, and puts forward the value creation paradigm of human-AI cooperation, whose logic is that human intelligence empowers individuals to improve work efficiency with the help of a new generation of AI technology. the process of creating value through "enabling" innovation. Based on the subjective and objective view of practical truth, this paper preliminarily constructs a three-dimensional conceptual model of value creation of human-AI cooperation in the early stage of intelligence era, which includes the dimension of AI ability and the dimension of human intelligence ability in the objective sense. the cognitive dimension of human-AI relationship in the subjective sense, the three play a comprehensive role in the value creation process of human-AI cooperation, as shown in **Figure 2**.

In this model, the X axis represents AI Capability, which refers to the ability of AI to give full play to its technical advantages such as selecting, choreographing and making use of specific resources (Haenlein & Kaplan, 2019), and the ability to help human employees complete work tasks and adapt to complex environments (Huang & Rust, 2018; Li et al., 2023a), which objectively reflects the development level of AI (high/low). High AI capabilities help to "digitally outsource" some repetitive tasks (Chung et al., 1996) and improve the efficiency of value

creation (Isma & Brahim, 2015). Y-axis represents Human Capability, which refers to the sum of accumulated knowledge, experience, ability and behavior acquired by individual employees in their career and helps to achieve good job performance (Francis-Smythe et al., 2012), which objectively reflects the human capital of human employees (high/low). High human intelligence capabilities contribute to effective interaction between employees and AI, thereby enhancing the effectiveness of value creation (Chung et al., 1996; Fraser et al., 2007; Singh et al., 2007). Z-axis represents the Cognition of Human-AI Relationship, which refers to employees' subjective views on the use of AI machines and technologies in the workplace, including positive and optimistic augmented human-AI relationship cognition and negative and automated loss human-AI relationship cognition.

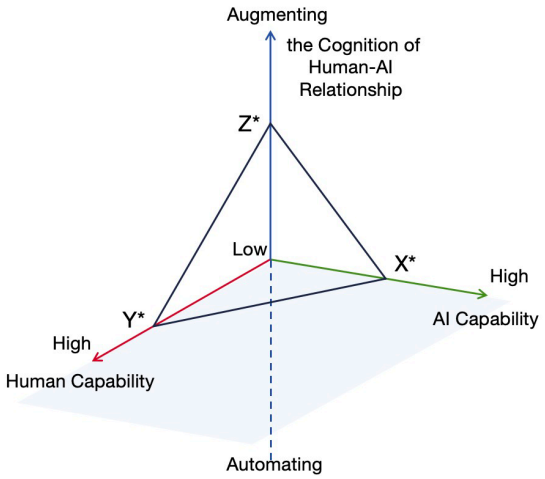

Figure 2. Three-dimensional conceptual model of value creation of human-AI cooperation in the primary stage of intelligent era.

The cone OXY * indicates the value creation results generated by the combination of specific levels of AI, human intelligence and human-computer relationship cognition. There is a kind of adaptive relationship between AI ability and human intelligence ability. When they match each other and form a dynamic complementary system (Guo & Hu, 2022), it can provide a good objective condition for value creation of human-AI cooperation. In this case, the dynamic effectiveness of subjective human-AI relationship cognition can be maximized (de Visser & Parasuraman, 2011).

As AI plays a more and more important role in the workplace, AI will gradually surpass some human intelligence and replace its work functions. Different cognition of human-AI relationship will affect the efficiency and effectiveness of value creation of human-AI collaboration. When an individual holds a positive and optimistic perception of human-AI relationship, the representative holds an open, inclusive and supportive attitude towards human-AI cooperation in the workplace, and is more inclined to think that AI is controlled, used and empowered by people. The development of AI is to better serve people (Shu & Wu, 2022), thus

showing a sense of trust in AI. Form a human-AI cooperative relationship of extreme and close cooperation, dependence and integration (Cheng et al., 2022). Therefore, when the individual holds the mechanism cognition of the gainer, the result of human-AI cooperation value creation is positive, and the higher the degree of gain human-AI relationship cognition is, the greater the positive effect of human-AI cooperation value creation is.

When individuals hold negative and pessimistic perceptions of depleted human-AI relationships, they may think that AI poses a threat to human dominance and individual career development (Li et al., 2021; Yin & Niu, 2023). Fear and anxiety of being replaced, marginalized or even eliminated (Ling et al., 2023), under the psychological influence of worry, fear, defense and mistrust (Lee & See, 2004), reject the adoption of AI technology (Li & Tao, 2022), and make anti-productive behaviors such as slack, resistance to human-AI cooperation, throwing pots to frame AI, destroying and retaliating AI (He et al., 2023; Hancock et al., 2011). Złotowski et al. (2017), which has a negative impact on the value creation effect of human-AI cooperation. Therefore, when the individual holds the loss of human-AI relationship cognition, the result of human-AI cooperation value creation may be negative, and the higher the degree of loss human-AI relationship cognition, the greater the negative effect of human-AI cooperation value creation.

7. Conclusion and Implication

7.1. Conclusion

Through interdisciplinary analysis and exploration, this paper draws the following conclusions: 1) Based on the limited understanding of objective reality, this paper clarifies the focus of cognitive differences in human-AI relationship from the different views on AI self-consciousness in academic circles, through the judgment of the "authenticity" of AIGC, defines the tool attribute and subordinate status of AI at present, and responds to the research question of "what is human-AI relationship". 2) Clarify the human-AI relationship based on the view of practical truth, extract the fundamental understanding of the human-AI relationship on the philosophical level, and sum up the focus of the cognitive differences between the subjective human-AI relationship and the objective human-AI relationship, as well as the subjective cognitive differences of different subjects to the human-AI relationship, and then according to the cognitive distinction of different human capital employees to AIGC, clarify the root cause of cognitive differentiation of human-AI relationship. 3) On the basis of the previous discussion, this paper puts forward a three-dimensional conceptual model of the interaction between human-AI relationship cognition, AI ability and human intelligence ability, and reveals that the value creation of human-AI cooperation in the primary stage of intelligence era is the result of the joint action of subjective and objective factors.

7.2. Practical Implication

AI is a value activity of "artificial" and "human" (Sun, 2017), and its fundamental

purpose is to realize the liberation and all-round development of human beings. In the practice of organization and management, AI plays a double-edged sword role of both "replacing people" and "helping others" (He et al., 2023). On the one hand, AI has greatly optimized the forms of labor organization and production processes, promoting the value reconstruction of traditional labor factors in organizations (Xie et al., 2021), promoting the synergistic improvement of labor productivity and relative surplus value, and adding tremendous impetus to value creation and the development of the digital economy; On the other hand, its large-scale application inevitably brings conflicts between management efficiency and management ethics (Xu & Xu, 2020), resulting in uneven social development. The pain of transformation is also the only way to achieve long-term development. This requires us to face up to the objective instrumentality of AI calmly and rationally, and also admit the differences in cognition of subjective human-AI relationship among different subjects from a dialectical point of view of historical materialism. We should not completely negate the gospel brought by AI machines and technology to social progress, while adhering to humanism and people-oriented, and attaching importance to the ultimate concern for human life (Xie & Liu, 2023), grasping the human-AI harmony in the opportunities and challenges.

At the social level, the ability of AI at the present stage does not reach the average level of human intelligence. If we over-publicize or even exaggerate the complete substitution of AI to human workers in the social field, it is not in line with the objective facts. second, it will cause panic at the social level, which is not conducive to the benign and sustainable development of AI. The designers and developers of AI should adhere to the idea that machines serve people, give full play to the absolute dominant position of human beings in the whole process of labor production, reconstruct the tool attributes of AI, and hold high the banner of humanism, affirm the subjective status, value source and fundamental attribute of human labor. The social level should hold an open and inclusive attitude towards the development of intelligent technology, actively embrace the civilized achievements of scientific and technological progress, and oppose the materialization and alienation of human beings by absolute scientism and instrumentalism, and short-sighted development at the expense of human value.

At the level of capital and managers, enterprise organizations must abandon the misunderstanding of belittling human subjects, and those who use AI to exploit and dominate human workers will eventually find after paying a heavy price and adjustment costs. AI can not create original value from the source, and human beings still need to seek from themselves in order to achieve the progress of social civilization. After the introduction of AI change work mode, the main body of enterprise management should pay attention to the psychological state and acceptance of employees and help them adapt to the impact brought by new technology, so as to make workers work with dignity and dignity. Build a collaborative and co-growing relationship between man and machine in the workplace, make use of the complementary advantages of man and machine to enable the value creation process, and realize

the imbalance between the rationality of AI tools and value rationality.

At the individual level, whether it is the active embrace of advanced technology or the passive adaptation under limited autonomy, the promotion and application of AI and the construction of human-AI cooperation relationship in the digital context is the general trend. Individual employees should actively tap their own potential, enhance the sense of urgency and internal drive to accelerate their own growth and evolution, develop the ability dimension that highlights the uniqueness and irreplaceability of human beings, and cultivate the bottom competitive advantage based on individual specialties. the routine, low-level and restrained repetitive work is handed over to AI, so that human-AI advantages complement each other. In addition, employees need to look at the value of AI rationally and objectively, not from self-anxiety and self-denial, and beware of falling into the language trap of digital capitalism that regards human beings as useless classes, surplus people and digital poor (Gong, 2023).

Human subjective initiative is the only source of driving algorithm, and human existence is the measure of the value of AI. The vigorous development and universal application of AI is the manifestation of the in-depth development of the dominant position of human beings (Liu & Li, 2022). The continuation of human civilization is the background for the development of advanced science and technology. If AI replaces human beings, human civilization will cease to exist. We do not deny that with the progress of science and technology and the further development of social productive forces, AI may be able to reach or even break through the singularity of human intelligence, and develop beyond human intelligence and out of human control (Cheng, 2019; Cheng & Gao, 2021), but we always respect, cherish and respect human values, dignity and personality (Sun, 2020). People are the most precious, and we are on the side of people.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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