Data Science and Language Science Influence on Artificial Intelligence

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Abstract. The purpose of this paper is going on to discuss how to extract a set of popular academic discussion models based on professional and amateur dialogues from the perspectives of interpersonal communication, human-computer interaction, batch processing to human-machine cooperation and human-machine mutual assistance. Its method is to adopt three groups of comparative studies, namely, interpersonal mutual assistance, including personal self-help and man-machine mutual assistance by using AI tools. Human-machine mutual assistance understanding；Interpersonal communication through AI assistance；Rongzhixue/Financial Intelligence/Smart System Studied for us all.The result is that not only emphasizes the relevant contents of the scientific financial intelligence, but also further emphasizes the RongZhiXue itself in the era of man-machine mutual assistance after philosophy and science, which requires readers to understand the application scenarios by using both data science and language science.Its significance lies in that it puts forward higher requirements for human teachers, students and all types of learners. Specifically, the regular practice activities at the three levels must be balanced. At the same time, students and all types of learners should master the basic laws of data science and language science and their corresponding methods as much as possible, especially the methods of network and &computer-aided and AI-assisted.

Keywords: AI mathematics and data science, HI Chinese and language science, human-computer interaction system, system analysis, philosophical common sense perspective, cognitive computing, scientific system engineering method.

1 Introduction

This paper aims to the purpose is going on to discuss how to extract a set of popular academic discussion models based on professional and amateur dialogues from the perspectives of interpersonal communication, human- computer interaction [1][2], batch processing[3]to human-machine cooperation and human-machine mutual assistance[4][5]. Among them, it includes not only the traditional rule-based expert

knowledge system, but also big data processing based on statistics, machine learning and deep learning,such as a new generation of artificial intelligence and even primary general artificial intelligence, such as GPT+ and LLM+.[6][7][8]

The study also aims to demonstrate that the power of data science must be taken seriously when AI comprehension exceeds that of most humans.In the following paragraphs, we will introduce the thinking of amateurs and the dialogue between professional scholars based on the theory of fusion intelligence and simplicity. With the help of GPT+ made by the team of professors He from Oxford University and the machine translation tool from Sogou, we can carry out the human-machine interaction and mutual assistance experiment.Then, when the persistent amateurs have actually surpassed some other professionals (history experts both in philosophy and in science as many scholars who are not good at thinking), the challenge of dual cognition (calculation and thinking including strategy) between human and machine appears.

Linguistic inferences without words[1] Modeling language shift.[2] Instructional Uses of the Computer: Batch-Processing Fortran IV Programs.[3] Instructional Uses of the Computer: Batch-Processing Fortran IV Programs.[4] How to Improve the Quality of Academic Conversations with the Help of Human-Computer Interaction System.[5] How to Improve the Quality of Academic Conversations with the Help of Human-Computer Interaction System.[6] How to Improve the Quality of Academic Conversations with the Help of Human-Computer Interaction System.[7] How to Improve the Quality of Academic Conversations with the Help of Human-Computer Interaction System.[8]Understanding: How to Resolve Ambiguity.[9] Cognitive Computing Smart System: How to Remove Ambiguities.[10] Ecological Characteristics of Information and Its Scientific Research.[11] The Seven-Times-Pass Method: Beneficial to the Optimization of Computer-Aided Teaching System.[12]

In the following paragraphs, we will introduce the thinking of amateurs and the dialogue between professional scholars based on the theory of fusion of intelligence and simplicity. With the help of GPT+ made by the team of professors from Oxford University and the machine translation tool from sogou, we can carry out the man-machine interaction experiment. Then, when the persistent amateurs have actually surpassed some other professionals (historical experts in philosophy and science and many scholars who are not good at thinking), the challenge of dual cognition (calculation and thinking including calculation) between man and machine appears.

2　　Method

Its method is to adopt three groups of comparative studies, namely, interpersonal mutual assistance, including personal self-help and man-machine mutual assistance by using AI tools.

2.1　　Human-machine mutual assistance strengthens mutual understanding

Human-machine mutual assistance strengthens understanding the draft discussing between amateurs and professionals.

This (*a knowledge information data processing method and product*[13]) was first officially published by China National Intellectual Property Administration Invention Magazine in 2000. In 2000, he/B also contributed and published the "*New Paradigm of RongZhiXue*[14]" in the system science papers area at Beijing Normal University.

A said: Very good, that's awesome. Co-written works and papers can be developed simultaneously, and each paragraph can be written independently until a paper system is established. Around this patent, our ultimate interpretation technology is completed, and then making chips will be convincing. There will be fewer detours. Because there are too many redundant propositions in the knowledge base that does not recognize the ultimate common sense turn. Around your chessboard model, you can integrate the ultimate self-justification of all scientific systems, and build such a website, which will have great power to contribute to the present and benefit the future. Ensure that any ambiguous proposition can be disambiguated in the context of wisdom finally.

This patent, combined with the subjective and objective of the consistency between people, material elements and machines, and the behavioral rationality of the unity of knowledge and action, is perfect.

This paper aims to discuss data science and language science and their influence on artificial intelligence with help by HI+AI methods and it is: in the relatively static relationship between semantic intertextuality and grammatical intertextuality, the conventional phonetic symbols and literal symbols, as logical cognitive elements of point, line, plane and body, are born out of nothing in the state of biological activity of physical activity, and the opposition between objective physical activity and subjective biological activity is unified or to one in similar existence. Combined with the three-dimensional space coordinate system, they all have the ability to map with all creationism intertextuality and deconstruct the creator who is divided into two and combined into one, and use the world ontology to create things consistently. Its characteristics are the combination of AI by using the laws in data science, the combination of HI by using the laws in language science, and the joint verification of the data structure and algorithm generated by interpersonal communication and how it affects inter-subjectivity.
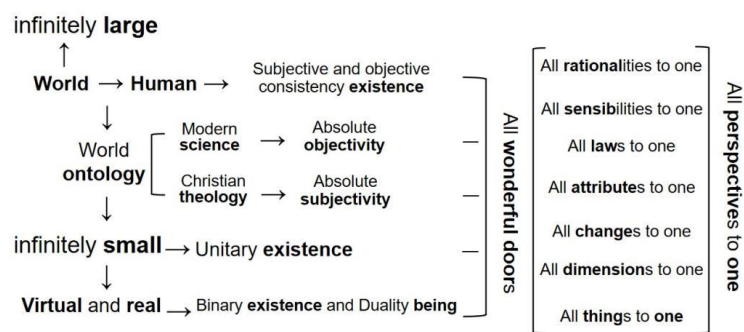

Fig. 1. (a) from infinitely large to small and then to virtual and real; (b) world onto-logically can be seen.

As can be seen from Figure 1, human cognition or understanding of the whole world comes from all perspectives, all wonderful doors, and finally, focuses on the subjective and objective existence, covering the dual existence of virtual and reality,

and the unitary existence of the world itself. Among them, the system of scientific knowledge based on facts and the system of theological ideas based on ideals belong to the system of knowledge terms in the world, whether they are absolutely objective or absolutely subjective.

2.2 Interpersonal communication through AI assistance

Interpersonal communication can also be achieved remotely through AI assistance. As for the actual effect? That depends on their respective knowledge reserves and practical experience and whether they have corresponding cognitive abilities.
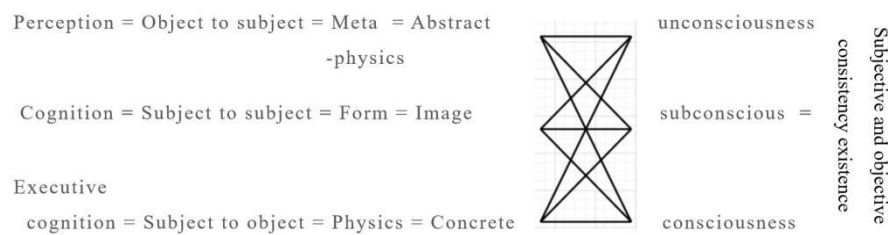

Fig. 2. (a) from perception to cognition and then to executive cognition; (b) un- sub- consciousness.

As can be seen from Figure 2, it is an expanded analysis of a key part of Figure 1 (namely the existence of subjective and objective consistency). It is characterized by: Metaphysical abstraction, from objective to subjective; The image of form, from subjective to subjective; Physical concreteness, from subjective to objective. Unconscious, subconscious and conscious are determined or defined by the existence of subjective and objective consistency.

A said: I only use the channel function and information tetrahedron, and I open up the modeling cognition computability of points that I have never been able to describe before. Only in 2009 did I begin to make up my mind to study philosophy by myself, which is also a cross-time intersection.

The information tetrahedron based on Tao function by you/B is a vital link in the ladder of human civilization progress. Once this consensus is formed, the resources you/B can mobilize will be different.

2.3 Rongzhixue/Financial Intelligence/Smart System Studied for all

The course that has been listened to by me/A for more than three years; You/B the other is not only a course that has been taught for more than three years, but also a trilogy of *Rongzhixue* was founded by you/B several years ago. Up to now, there are actually not many people who can better understand the most rare basic theory part of *Rongzhixue*. This is an important reason why it is worthy of further discussion. I/A explained the key contents of you/B's *theory of financial intelligence* (*FI triangular pyramid model, information tetrahedron model and Tao function*)/*Rongzhixue*. She/C also studied with me/A, giving people the feeling that we two not only understood the model, but also seemed to have a unique understanding or opinion! So, let's go back to the previous article, but now let's do some experiments in Chat GPT+ and further

bilingual comparative analysis and further thinking, review and communication to test its specific understanding.
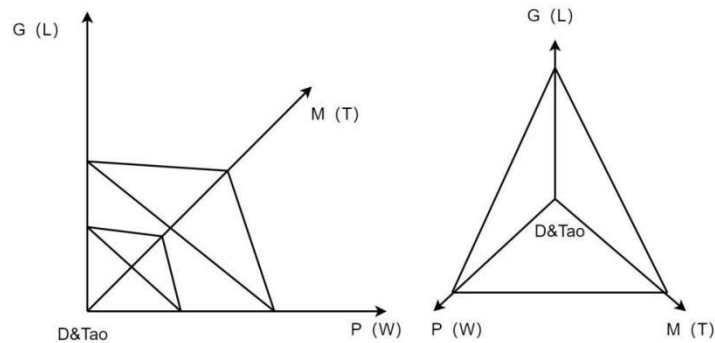

Fig. 3. (a) Tao function constructed by Xiaohui Zou in *RongZhiXue*; (b) with the pyramid.

As can be seen from Figure 3, the concrete objects in the physical world belong to sensible thinking coordinates in images; Abstract symbols of grammar language belong to known abstract thinking coordinates; The epiphany choice of thought meaning belongs to the coordinate of intuitive thinking. Together, they can not only be constructed and presented in the three-dimensional coordinate system, but also provide a theoretical model for both human thinking and artificial intelligence.

In this regard, A believes that "*Rongzhixue/financial intelligence* spans two parts: philosophy and science, the philosophy part involves the construction of the ultimate hermeneutics, and the science part involves the isomorphic integration of mathematics and physics, while computer science is only a partial system engineering relative to these two systems engineering". B did say that *Rongzhixue/financial intelligence* is based on philosophy and science theoretically, and it has also built eight knowledge systems, namely logic, mathematics, natural science, social science, engineering technology, humanities&arts, psychology&mind, philosophy, and their intersection and synthesis make up ten departments, will be regarded as the top ten departments of the new university in the near future (this international conference on data science at Oxford University, the international conference on *Rongzhixue/financial intelligence* firstly and the unveiling ceremony of *Oxford Institute of Financial Intelligence* will be regarded as the first-class comprehensive disciplines).

(1) In 2000, the first systematic summary of the exploration and practice of *RongZhiXue/financial intelligence* was officially published;

(2) In 2006, *the original anthology of RongZhiXue*, published in 2000-2005, was formally compiled, which is the second systematic summary that has been explored and practiced for nearly 30 years;

(3) The third systematic summary is to collect the officially published articles and conference texts of Chinese periodicals to facilitate readers to quickly query or retrieve and browse;

(4) The 32 articles summarized *(Review the old and learn the new)* on Kudos in the Researcher Xiaohui Zou are the fourth compilation of *RongZhiXue*;

(5) Xiaohui Zou's "*Introduction to Smart System Studied*" written in one go during the Spring Festival in 2023, with both pictures and texts, belongs to the simplified version of the "*Introduction to Financial Intelligence* " (which can echo the previous "*Outline of Rongzhixue*" taught and written in 2004-2005;

Among them, several application scenarios are highlighted, such as: intelligent resident loader (hardware); Language and speech relational database (software); *GXPS*（for *GLPS, GKPS, GSPS,GHPS*）.

3   Result

The result is that on the one hand, A understands the relevant contents of the *philosophical financial intelligence* written and taught by B from the perspective of the common sense turn of philosophy; on the other hand, B not only emphasizes the relevant contents of the *scientific financial intelligence*, but also further emphasizes the *RongZhiXue* itself in the era of man-machine mutual assistance after philosophy and science, which requires readers to understand the application scenarios from a philosophical perspective by using both data science and language science.

The following summarizes the relevant contents that A understands from the perspective of philosophical common sense turn:

Experimental results (1).Transforming LLM model GPT from black box to white box through GLPS.It needs to be popularized-the consistent process of creation and creation between the creator and the world ontology has micro-subjectivity perception, cognition and execution cognition isomorphic to the stress compound reaction relationship at the physical activity level; Through the ultimate self-justification between the creator and the world ontology, the creation and the ability of creation are rooted in each other, and the material elements that make up human beings are as sensitive to micro and macro as human beings. Through the process of perception, cognition, and execution, the creator's creation has macro-subjective and objective consistency, human beings' subjective and objective consistency has attributes and characteristics, and the world ontology and material elements have micro-subjective and objective consistency. Through the intuitive deconstruction of the isomorphic relationship between all things being one and all things being the same, it is impossible for any conscious reason whose subjectivity is macro, meso and micro to exist independently without the universal connection of mutual roots and intertextuality (people can perish, but the inevitability of human-like wisdom is eternal).

This passage mainly introduces some contents, including: the consistent creation process of the creator and the world ontology. Perception, cognition and execution cognition of micro-subjectivity. Through the process of perception, cognition and execution cognition, the process of image deconstruction is objective and subjective. Creators have the nature and characteristics of macro-consistency between subjective and objective, human beings have the nature and characteristics of macro-consistency

between subjective and objective, and the world ontology and material elements have the nature and characteristics of micro-consistency between subjective and objective. Through the intuitive deconstruction of the isomorphic relationship between "everything is one" and "everything is the same", it is impossible for any kind of consciousness rationality whose subjectivity is macro, meso and micro to exist independently without the universal connection of intertextuality.

These introductions can make people understand the mystery between the creator and the world ontology, as well as the perception, cognition and execution cognitive ability of micro-subjectivity.

Experimental results (2). Through GKPS, the educational innovation of STEM+A at all levels can be simplified.

It is necessary to popularize the ultimate direct replicability of cognition-the direct replicability of language symbolization and character of human cognitive experience and the purpose of regular and prescribed compound reaction. The direct replicability is the holographic isomorphic state in which facts first lie in the unification of all laws and all; The ultimate self-justification and creation ability of each ion combination that can produce biological activity, anti-connotation consistency is the ontological premise that each language phonetic and character symbol can map isomorphic ideological freedom and physical freedom by pseudonyms.

This paper mainly introduces some contents, including: the symbolization of language and sound and the direct reproducibility of text symbolization of human cognitive experience. This kind of direct reproduction lies in the unity of all laws and books. The phonetic symbols and characters of each language can really map out the ontological and ontological premise of isomorphic freedom of thought and body through pseudonyms. At the same time, it can also make people understand the relationship between language and cognition.

Experimental results (3).Do the docking digestion team between academician cluster/set-group and industrial cluster/set-group through GSPS. It is necessary to popularize the inevitability of the ultimate common sense turn-the authoritative establishment of the symbolic cognitive system modeled by the ultimate standard cognition is the ultimate driving force for establishing a new university discipline; The idea of great harmony not only changed China's Industry-University-Research pattern, but also directly assimilated the Industry-University-Research pattern of all mankind.

It mainly introduces some contents, including: the inevitability of the ultimate common sense turn. The establishment of the authority of the symbolic cognitive system shaped by the ultimate standard cognition is the ultimate motive force for establishing a new university discipline. Great Harmony not only changed China's Industry-University-Research pattern, but also directly assimilated the pattern of all mankind.

Experimental results (4).Using GHPS as an intelligent stationary loader/resident carrier.Docking the ultimate common sense turning theory of philosophy will not only fundamentally change the pattern of human's food, clothing, housing and transportation, but also simultaneously dock the ideological innovation direction of traveling in the universe.

This passage mainly introduces the resident carrier of the ultimate common sense turn theory of docking philosophy, which will not only fundamentally change the pattern of food, clothing, housing and transportation, but also dock the ideological innovation direction of space travel.

Experimental results (5). Using GXPS to make intelligent Chinese room pass Turing test transparently and verifiably.The ultimate linguistics, which is connected with the theory of the ultimate common sense of philosophy, will provide a basic conceptual system for the final construction of the cognitive reference system with the consistency of subjectivity and objectivity through the ultimate semiotics. The popularization of the new conceptual system will quickly eradicate all ambiguous propositions in the fields of mathematics and physics, philosophy and science without ambiguous propositions will provide endless intellectual, human and material resources for scientific research activities through the simultaneous ultimate common sense popularization.

Here mainly introduces the ultimate linguistics of the ultimate common sense turn theory of docking philosophy, which will provide a basic conceptual system for the final construction of the cognitive benchmark system of subjective and objective consistency. The popularization of new concept system will quickly eradicate vague propositions in the fields of mathematics and physics, make philosophy and science finally popularize through synchronous common sense, and provide endless intellectual, human and material resources for scientific research activities.

It should be noted that these are just some basic concepts. If you want to know more, you may need to consult relevant articles and books.

The following Table 1 gives a summary of all heading levels.

Table 1.The experimental result for 5 kinds of application scenario of SSS as GXPS

level	The experimental result	Application scenario of Smart System Studied as GXPS
1st-	The experimental result (1)	Transforming LLM/GPT from BB to WB by GLPS
2nd-	The experimental result (2)	Through GKPS, the STEM+A can be simplified
3rd-	The experimental result (3)	The academic and industrial set-group through GSPS
4th-	The experimental result (4)	Using GHPS as an intelligent stationary/resident carrier
5th-	The experimental result (5)	In GXPS to make Chinese room pass Turing test

The sum of the functions of the two major factor clusters of formal information processing is exactly equal to the function of the factor cluster of content information processing, from which a set of basic variants of information identity can be obtained:

$$x\,(P(W)) + y\,(G(L)) = z(M(T)) \tag{1}$$

$$x\,(P(W)) + y\,(G(L)) = I_d(M(T)) \tag{2}$$

$$I_k\,(P(W)) + I_u\,(G(L)) = z(M(T)) \tag{3}$$

$$I_k\,(P(W)) + I_u\,(G(L)) = I_d(M(T)) \tag{4}$$

From the linkage transformation between functionals and the Z-system principle they followed, we can understand the above equations and their solutions (that is, the relationship between identities and their equivalence). Combined with the principle of Tao function shown in Figure 3, we can understand the formal factor space among the three kinds of thinking coordinates and the underlying logic among the three kinds of factor clusters/sets-groups.[15]

Let's take a further look at the graphic descriptions of various viewpoints (Figure 4) and methods (Figure 5) put forward by A.
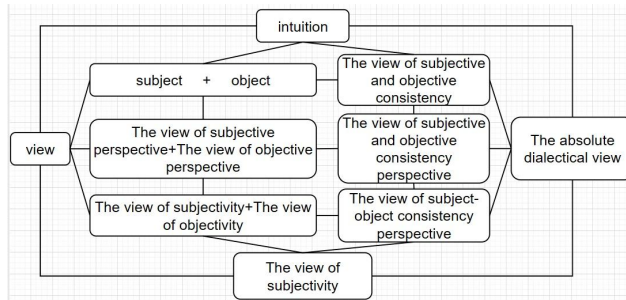

Fig. 4. Subjectivity and subject are the same etymology (so are objectivity and object) .
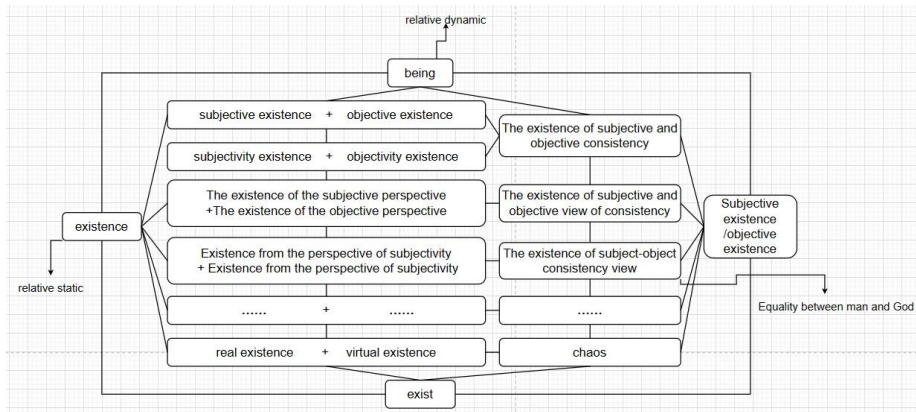

Fig. 5. Subjective and objective existence and its multi-change of reality and reality.

A or C uses this kind of deduction of Chinese characters to English equivalent words both in fig.4 and fig.5 can only be approximate partially.

4   Conclusion

Its significance lies in that it puts forward higher requirements for human teachers, students and all types of learners. Specifically, the regular practice activities at the three levels of teachers' teaching practice, teaching research and scientific research must be coordinated and balanced. At the same time, students and all types of learners

should master the basic laws of data science and language science and their corresponding methods as much as possible, especially the methods of network and computer-aided and AI-assisted. Keep pace with the development of big data and AI (Man-Machine Mutual Assistance), so as to optimize the teaching process of large-scale cross-border knowledge, even the whole process of lifelong learning or education of human beings, instead of just being limited to the discrete and fragmented practice of specific and regular subject teaching in universities of all levels and types. It is particularly noteworthy that the big data processing technology based on machine learning and deep learning, the new generation of AI, general artificial intelligence such as GPT+ and LLM+, and the understanding and application of the principles of data science and language science behind it have great influence on natural language understanding, especially on the acquisition, expression and reuse of expert knowledge, and on AI-assisted teaching.

In this paper, aiming at the process of ideological exchange between professionals and amateurs in the teaching&discussion of cross-border financial intelligence, some profound knowledge is discussed, and a series of thought-provoking problems are put forward, especially a series of new problems between human and machine's ability to understand natural language and express professional knowledge (which is the key topic of our further research and discussion).

The above is the idea of a philosophical discussion that we are trying to make. Our cooperation can fully blossom at the basic theoretical level, and then provide basic theoretical assistance for *Rongzhi system Engineering*. At the same time, it will open a new era of the development and simplification of human civilization.

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