

On the Research Focus and a Framework of the Social Information Sciences

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Abstract: *In this paper, the author discusses the proposal of the social information science, the issues of social information, the theoretical orientation of the social information science, the research focus of the social information science, and the operating mechanism of the Social Information Science Institute (SISI) at Huazhong University of Science and Technology (HUST). A system and framework of social information science was advanced in the paper. Generally speaking, if the social information science is to be viewed as a relatively independent subject, there should be four levels of researches. They are the philosophical level, the scientific theoretical level, the level of concrete subjects, and the level of social information technology.*

Keywords: information , social information, social information science

Social information science is a completely new subject. On the academic journal net of China which stores a huge amount of information, we could only find three if we search for the papers having 'social information science' in their titles. And if we use 'social information science' as topic words to search, we could only get approximately several hundred papers. Moreover, the term is used in different senses. Therefore, the establishment of our institute shows that we have daringly entered a new research area. Although it is not so unfamiliar from individual subjects and from our living experience, yet the discipline is completely new from an academic perspective.

So far I myself have not done enough research on the information science. I still clearly remember the first time when I touched the field. That was May, 1986, twenty years ago. At that time, the Dialectic Materialism Research Association of China, one of the most authoritative Marxism philosophy associations in China, held an important conference named 'Marxism Philosophy and Three Models' in Xi'an. The so-called 'Three Models' referred respectively to information

Model, system Model and control Model. It was the time when these old 'three models' sprang up and a large group of excellent scholars gathered in Xi'an for the conference. I was appointed as deputy secretary, responsible for coordinating the conference. From the heated discussion of the relationship between system science and the Marxist Philosophy I seemed to foresee a very important academic direction. That is, the development of the Marxist philosophy must be based on the modern scientific technology, in particular, information science, system science and relevant technology. After that conference I, along with the scholars I met in Xi'an, have studied the dissipative structural theory founded by Ilya Prigogine. However, at that time what I understood was only its theoretical aspect or even philosophical aspect. In the recent years, I have an interest in the question of complexity and once got a paper, 'Complexity and Creativeness in Humane and Social Sciences', published in *A Study of Philosophy* (the ninth issue of 2004). I notice that with the contemporary scientific methodology developing from simplicity into complexity, the complexity, in fact, take the lead in the development of the contemporary

science and in the construction of contemporary culture and thought.

The International General System Association held a conference at our Tongji Medical school in April of 2006. I had the opportunity to be there and listen to the speeches made by many representatives. Greatly enlightened by them, I talked about 'Ten Questions concerning Complexity of Social Information' in the conference. That speech, after certain modification, is collected into the proceedings of this conference. After many years' researches on Social Epistemology, I feel that its most difficult object prerequisite is the complexity of the social objects. The question of social complexity can be studied and analyzed from various perspectives and the complexity of information is one of the key issues. Later, I am greatly influenced by Mr. LI Zong-rong, who came to our department, the department of philosophy, to pursue another PHD degree in Marxist philosophy after achieving his first PhD in management and system engineering. Mr. Li has long been involved in the researches on the information science and has made a lot of achievements. In contact with him, I gradually realize that there must exist an important common ground for researches on the contemporary science, culture and philosophy. This is the social information science. In fact, a variety of subjects can be internally combined by this science. Nevertheless, we need to broaden our horizons to reach the goal. Now, as a member of SISI, I will say a few words about what I know about the social information science.

1. The Proposal of the Social Information Science

The social information science is a totally new concept. Why we are bold enough to make research on this concept and even construct social information as a discipline lies in the following aspects:

The first aspect concerns the extension from the Theoretical informatics to the concrete informatics. System Model in its broad sense, starting from previous information Model, control Model and system Model, going through dissipative structural

theory, **catastrophe theory** and hypercycle theory, has entered a new stage and has become a modern complexity science. That is why people say that there are not only **old 'three Models'**, but also **new 'three models'** and even 'Neo-new **three models'**, so on and so forth. In these processes of these developments, we believe that the theoretical informatics, especially the general informatics, would lack foundations of reality and science if it were not expanded into the concrete areas and concrete subjects. We also notice that the general informatics is moving towards the concrete informatics such as the medical information mentioned by Prof. HUANG Long-sheng and the communication information of communication. In the same way, the trend could be that the general information will develop towards the social information.

The second aspect concerns the internal bond of integrating various subjects in humane and social sciences. Humane and social sciences must be internally integrated to be constantly creative. Though all of us agree with each other on this point, how and where the integration is to be done needs further discussion. With the approval of the Education Ministry and concerned departments, HUST has established a research base of the highest level in the humane science of our country. That is the philosophy and social science creativeness base of 'science and technology progress and humanistic spirit'. Through many years' efforts, HUST has possessed all seven categories of national humane sciences and covered almost all the first level subjects under them. How to adjust and integrate these subjects has long been a question of our consideration. I now feel that the integration can be done in many ways and the information science may be an important bridge, or even a central axle. Through the axle we can find out the resemblance and relevance among various subjects and we can even find out the internal unity despite their great differences. Therefore, we hope, a central axle, a base line or a bond can be discovered from the social information science to integrate various subjects of humane and social sciences.

The third aspect concerns the intersection and mutual permeation between the social science and the natural science.

'Science and technology progress and humanistic spirit' is itself a highly comprehensive topic which combines the two. As Academician YANG Shu-zi proposes, humanistic spirit education should, to a great extent, on a large scale and in a full width, be available to the university students who specialize in science and technology. The essence of his proposal is to achieve the intersection and permeation of students' knowledge about various fields. Then how can we find out a bond? At the present time, our university advocates the incorporation between technology and medicine science, and special funds was set up for the design and practice of relevant researches. In my mind, information can be an important tie which links humane social sciences with technology, medicine and other sciences. Here the receiving, disposing and spreading of information may be involved and we may, thus, see an internal relationship between different disciplines from a new perspective.

The fourth aspect concerns the intersection and interaction among humane and social sciences, modern information science and information technology. A big problem that we social science scholars are faced with is the change of research methodology. Another problem is how to disseminate results of our research to the society. Yet, these two problems can be solved by means of modern information science and technology, which can be very promising. In this sense, the humane and social science research is likely to make real use of the modern technology to move to the society, nation and people's mind on a larger scale. For this purpose we need to earnestly do researches on the information science, especially the social information science.

The fifth aspect concerns strengthening the research into Social Epistemology. I began to study this discipline in 1986 and I underwent several different research phases such as methodology of social Epistemology and scientific philosophy of humane and social sciences. I have trained more than 30 doctors and masters. Recently, I have been discussing this question with my doctor and master candidates: in which direction can the research of Social Epistemology develop? After a period of reflection I feel that there is a

feasible way for strengthening the research in this field. That is, to broaden our knowledge and our theoretical research in terms of social information. In a sense, social knowledge is the process of collecting, recognizing, handling and spreading the social information. The task of Social Epistemology is to disclose the complexity of social information and to assist people with treating information in a better way. Therefore, Social Epistemology and social information research share a common goal despite the fact that they have different research objects and emphasis. As a matter of fact, they research on two sides of the same coin.

It is not difficult to see from the above that researches on social information science reflects the needs of work as well as learning, the needs of theory as well as social reality, the needs of countermeasure as well as technology. We believe that there will be great theoretical and practical significances if this question can be gradually expanded into a field, then into a subject, and even influence other subjects concerned. That is the origin of Social Information Science.

2. On Issues of Social Information

Scientifically defining the concept of social information can have a prerequisite significance for the social information science (or social informatics) research that will soon follow.

What is social information? Many scholars are using the concept of information and there are also scholars who have given their own definitions to this term. Prof. WU Kun from Xi'an Jiao Tong University has long been engaged in the researches on informatics and philosophy of information. In his book *Philosophy of Information* published not long ago, he mentioned that social information is different from self-existent information, self-for-itself information and regenerating information. He defines social information as the integration of three kinds of information at the highest level, which is quite reasonable to me. In my research I simply distinguish social information from natural information. In my opinion, information can be classified from different angles with natural information and social information as two

fundamental types. When we look at the universe, the world, the people and even ourselves, we can see the aspect of their natural existence on the one hand, and see the aspect of social information in certain existence on the other. The world exists, first of all, as a kind of natural existence and then constantly sends out natural information to the outside world. Some existing objects only transmit natural information while people and society can convey humanistic and social information. Human beings can, of course, give forth natural information such as information about our natural lives, our physiological mechanism and our brains' wave. In addition, humanistic and social aspects can also send out social information and transmit the connotation of the social culture possessed by them. The transmission of natural information is self-existent and is in a natural state whereas that of the social information is self-conscious and purpose-oriented. Accordingly, the receiving and handling of social information can be both similar to and different from those of natural information. The biggest difficulty lies in how to effectively interpret and understand the psychological and cultural significance of social information. Thereof, social information differs from self-existent and natural information. It is that part of information related to human's autonomous creative activities, to society's culture inheritance, to human's spiritual interaction and to human's emotions. These sorts of information exist in our interactive life in the form of history, culture, country and nation. Without them, it is hard for a human to be a social creature, for a society to be a self-conscious one and for a nation to be an initiative one. Moreover, intercultural communication is hard to be achieved.

Thus, detailed research into the social information reflects not only the needs of the society but also the value of subjects. And it is in this sense that we believe the social information science has its own specific research objects, which is a basic prerequisite for the establishment of the social information science.

3. On the Theoretical Orientation of the Social Information Science

As the social information science is to be established as a discipline, careful consideration must be given to its relationship with other disciplines, among other issues. Here four of them are presented as follows:

(1) The social information science should be regarded, from general or macro-perspective viewpoint, as a branch of informatics. Its subject matter covers all sorts of information and it is, therefore, a general science on information. If we roughly classify information about the universe into natural information, social information and so on, then information science should be concerned with all the common points and universal laws of different kinds of information while the social information science is to focus on the particularity of social information. Therefore, the social information science is, actually, the deepening of the information science into certain concrete information. In this sense, as far as its subject orientation is concerned, the social information science is to be viewed as a branch of the informatics.

(2) The social information science is a generalization of various concrete branches of social information science and can be promoted by means of these branches. For example, there are dozens of concrete information sciences like medical informatics, communication informatics, intelligence informatics and of psychological informatics which are related to various kinds of social culture and rooted in researches in different fields. We can set up a social information science on the basis of them. On one hand, the social information science must summarize the common nature and law of various concrete social information sciences and on the other, it must provide some fundamental theories, principles and methodology for them.

(3) The social information science is a kind of traversing and comprehensive research on individual social science from the angle of information. Its aim is to study the functioning mechanism of information among various concrete social sciences and to probe into the internal relevance between them.

(4) The social information science is a kind of exchange and interaction between social theoretical research and the modern information technology. It is a sort of transplant and even creation. Modern information technology is extremely advanced. It is worth our while to discuss how to apply them to the modern social life, social management and social science research. The electronic government and business affairs which are popular at present are, in fact, the application of electronic information technology. In the same way, the research on the social information science might provide a more efficient means of information technology for the research of the social science.

4. The Research Focus of the Social Information Science

The focus of the social information science is to grasp the complexity and particularity of social information so that we can have a comprehensive and profound understanding of social information. Its goal is to increase people's consciousness in understanding, grasping, applying and spreading of social information. In the last international general system conference, I raised ten difficult problems or ten big features for the study on social information science. Here I would like to mention them briefly. The first feature is the interweaving of the factual information and the valuable information. The biggest difference between social information and natural information is that the former contains valuable information, which causes the social, factual information to have a change of value and also makes people have a strong value choice when they collect, grasp and receive social information. The second feature is the interweaving of subjective information and objective information. The information sent out from the natural source remains neutral and external to all receivers and thus has very strong objectivity. Nevertheless, in social life, various kinds of information are transmitted with strong subjectivity. It is, in fact, subjects' action of choice. The third feature is the interweaving of rational information and irrational information. Generally speaking, social information, in

most cases, is rationally expressed by means of logic, norm and symbol after thinking. But in social interaction, irrational information such as gesture, eye-expression, posture and dress can express even more profound and complicated information than language can. The fourth feature is the interweaving of general information and the idiosyncratic information. Though natural information is general and social information can be also general, in the real social life and in most cases, social information is highly individualized and idiosyncratic because it is designed by the subjects, aimed at certain problems and related to people's emotions and psychological states. The existence of non-neutral value phenomenon in social life, together with the permeation of irrational factors, leads to individual differences when grasping the idiosyncratic information. The fifth feature is the difference between comprehensive information and restrictive information. Big differences exist between comprehensive information and restrictive information during the conveyance of the social information. The comprehensiveness of people and social information is sensed by people's eye, nose, tongue and body which do not possess the ability of comprehensiveness. These organs can only sense a limited part of information about universe and life. Thus, if there is a comprehensive natural world and social world, people can only sense and recognize a very small part of information transmitted by them. And usually they do so in a one-sided way. The sixth feature is the collision between purpose-oriented information and spontaneous information. In social life there co-exist purpose-oriented activities and constant blindness caused by the collision between different purposes. The seventh's feature is the man-made increase and decrease and purposeful distortion of social information. In the process of social information transmission, it is most likely that man-made increase as well as decrease of information will take place. And these increase and decrease are, quite often, normal in the spreading of information. But we cannot exclude the abnormal and even malicious increase, decrease and distortion of social information. The eighth feature is the

cognition, evaluation, interaction, intersection and even mutual restriction of information. From the angle of information cognition, people strive to be objective, accurate and reliable. But from the angle of information evaluation, they often pursue the usefulness, effectiveness and benefit. Because natural information remains value-neutral, it is easy for people to reach objective and scientific cognition and also easy for them to carry out reasonable and unanimous evaluation in the process of recognizing and evaluating natural information. However, as the social information is an internal mixture of the value information and the factual information, and as social facts often have the characteristics of being non-value-neutral, receiving and collecting the social information necessarily involves comments on and attitudes towards such information and it is affected by the attitudes of the subjects towards information. Therefore, people often disagree, contradict and even conflict with each other when they recognize and evaluate the two value-orientations of social information. The ninth feature is the great differences between the exposition and understanding of information. The receiving of natural information is mainly an exposition based on reflection whereas the receiving and handling of social information further require understanding based on exposition. Although reflection and exposition are fundamental, what humane and social information requires more is the understanding, communication and agreement among people. The tenth feature is the strikingly different effects resulting from the passive reception of information and the active collection of information. In general, the receivers can only receive information when the information possessors send it out. In this way, the information receivers are mostly passive. But in the social life, information could not enter people's mind and be effectively interpreted if there is a lack of activeness. In the social information processing, whether the receivers are active or passive and whether they are positive or negative will have an important effect on the receiving and understanding of information.

Certainly, the features of social information can be summarized from many angles besides the above. We think that only

when we have a good understanding of these features can we grasp the characteristics of its research objects, can we determine our research methodology and find its internal operating law and mechanism.

5. The System and Frame of the Social Information Science

In general, there should be four levels of researches if the social information science is to be viewed as a relatively independent subject.

The first level is the philosophical level of the social information science at which the social information philosophy will be established. The social information philosophy is the theoretical foundation for the whole social information science. Before doing some researches on the social information science it is essential for us to do researches on the social information philosophy. In fact, the social information philosophy is a merger of two philosophies. One is information philosophy and the other is social, historical and cultural philosophy because social information in question is entailed in the social, historical and cultural life. If information philosophy is explored in the direction of social, historical and cultural philosophy and vice versa, a joint or a new social information philosophy will come into being. This kind of philosophical research is likely to provide sound philosophical guiding principles and lay a solid methodology foundation for researches on social information. It is a prerequisite in philosophical sense. At the philosophical level, we have a bold assumption, namely, on the basis of the material unity of the world, we would further probe into the information basis upon which this kind of unity is formed and would grasp the diversity of the world in the whole process of discussing information diversity.

The second level is the scientific theoretical level of the social information science at which the theoretical social information science will be established. The social information science has many important theoretical problems that deserves special study. Examples are its origin and historical development, its basic concepts and propositions, its fundamental problems and

internal logics, its macro structure and system frame. The research into these questions constitutes the essential theoretical contents of the social information science.

The third level is the level of concrete subjects of social information science at which expansion can be made to build some discipline clusters of social information science. The research on the social information science should penetrate into various concrete social sciences and set up an internal relationship with them. Almost all the social sciences, like linguistics, semiotics, psychology, communication, education, literature, history, management, economics and law can be re-perceived and re-studied from the angle of the information science. Even many natural sciences can have new breakthroughs and new growth points in the interaction with social culture. For example, historical geography, economic geography and humanity geography are likely to have their particular orientation in the new perspective.

The fourth level is the level of social information technology. The social information science should have an interface with relevant technologies and interweave with them. These technologies are communication technology, computer technology and net/cyber- technology, so on and so forth. It should be also connected with our social behaviors and social management, such as social policy, social management and social communication. In this sense, we believe that research on the social information science is extremely promising.

6. The Operating Mechanism of the SISI

First of all, our SISI will gain support from the national philosophy and social science creativeness base. This base has been established under the approval of the National Education Ministry and other ministries and committees concerned. Its theme is 'science and technology progress and humanistic spirit', which reflects not only the need of the progress of the contemporary science and technology, but also the need of the development of the humane and social sciences. In the base twelve important research projects have been designed and

the relevant research is being conducted. While conducting these researches, we need, simultaneously, a kind of traversing and comprehensive research, which will integrate and link the twelve projects. Our SISI will be closely linked with and supported by the base and fulfill such a function so that more than ten projects, more than ten schools and departments and a large number of experts can discover a common way of and a common approach to their researches.

Next, our SISI will gain support from and try to move into different discipline clusters like humanities, science, engineering and medicine at our university. We hope, through the research on the social information science, to find a way in which the research of the humane and social science can be internally knitted and interacted with that of engineering, medicine, science, management and etc.. Our university has long been encouraging the study of humane sciences to emphasize the inteweaving of different disciplines and to create characteristics of our own. We have long been concerned with and confused about how to incorporate different disciplines and how to create our own features and hopefully, the social information science will provide an approach to it.

And next, SISI will rely on the schools and the departments of humane studies at our university and also make use of rich academic sources of various subjects to carry out the research on social information science. Definitely, the social information science can not replace other humane and social sciences. Rather it should base itself on the foundation of those humane and social sciences and try to reach the subject frontiers and grasp their latest developments. Meanwhile, the social information science will be of help to enrich the methodologies of various concrete subjects and will promote their academic consciousness.

Finally, we should make efforts to incorporate academic research sources at home and abroad, inside and outside our university. This time we succeeded in inviting Prof. YAN Xue-shan to be the deputy director of our institute. We also have successfully invited a lot of excellent scholars like Prof. Wu

Kun, who have made great academic achievements in the field. However, we did not invite all the experts who should be here as we donot have sufficient time for the preparation of a larger conference. We will, in the future, invite more experts and scholars to join us, at home and from abroad. According to the requirements explicitly made by Secretary ZHU Yu-quan a moment ago, we must consider the SISI as a new research mechanism and a new adjusting and incorporating mechanism, which can absorb into HUST the academic sources at home and abroad, inside and outside our university, and which can also merge into the main stream of the development of our nation's philosophical and social sciences, and the main stream of the development of our nation's science and technology.

Certainly, we have fully realized that the task we assign ourselves is an extremely tough one. There is a lot of rather complex and difficult pioneering work in front of us, whether it be the construction of new subjects or the organization of academic teams. However, it is because of these difficulties that we are determined to do researches on social information science. It is because of these difficulties that social information science is worth our painstaking efforts, and it is because of these difficulties that the support and concern from various departments, universities and scholars appear so invaluable. In this sense, I, again, sincerely thank the leaders and the experts for attending today's conference. I thank you for the intelligent speeches made to us. Also, I thank, from the bottom of my heart, all of you for your participation and concern!

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