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THE SPIRIT OF SCIENCE IN THE BACKGROUND OF HUMANISM

by

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It is believed that science is neutral, that scientific spirit includes the seeking of neutrality. But now we preserve the trend of said 'humanizing' around the world, of which the post-positivism of philosophy of science and the post-modernism of general philosophy interest me most.

Post-positivism has noticed some aspects neglected by the orthodox positivism on scientific knowledge, scientific language, causality and explanationality. However, it appears to be an unclear and flexible structure, i.e., a mixture of wide range of ideas criticizing positivism. These various critiques can be generated into six approaches:

(1) To introduce the concept of theoretical relativity, i.e., the concept that the scientific method can never be general and neutral, that the metaphysics must be more or less remained. Particularly, to 'verify' is not to apply an original, simple and neutral operative program. The question of 'verifying' must be described in a new, accuracy manner, even though we still regard it as a central question of philosophy of science.

(2) To abandon all the theoretical research of philosophy into the "truth". "Truth" is merely a name for the collection of all the true statements since the connection between conception and reality is always temporary and occasional. Therefore, Hume's concept of causality and the relative concept of explanative coverage law need to be reformed.

(3) The explanation of scientific knowledge itself, for the reasons above, must be specified to at least the extent including more or less some naturalist part, i.e., to understand the scientific knowledge, at least in some respect, as the subsequences of the actions of actual scientists, instead of the "non-personal" knowledge.

(4) For the above-mentioned reasons, the "natural history" of scientific theories, as the history of science, should be paid with great attention; From such a point of view it can be seen that the artificial dichotomy of "discovery" and "defence", made by the orthodox philosophy of science, is not proper or at least not important.

(5) The stand of reductism is given up. Away from the claim to "unify science", philosophers turn to the researches into various specific science (biology, psychology, history, etc.).

(6) Thus the field of study object of philosophy of science is expanded, and some proper connection has been formed between general study of philosophy of science and various specialized scientific studies. *

While post-positivism criticizes the orthodox philosophical tradition in the field of philosophy of science, post-modernism, as a more "humanized" trend of thought, attacks directly at the Occident philosophical tradition as a whole. That the founders of post-modernism, like Foucault, Derrida, Lacan and Lyotard, have taken over the mantle of Heidegger, presents to this movement with the appearance as the accusation from humanism against the said "scientism". Heidegger had complained that science and technology were dehumanizing. Foucault pointed out that science is often dominated by power structures, bureaucracy, and the state, and that the political and economic uses of science have undermined the pretensions of scientific neutrality.

I would like not to comment on this worldly trend as a whole but to concentrate on the situation of my homecountry, China. What is the real situation of China, and what should a

Chinese philosophers of science do under such a condition? On one hand, China is still being in the pre-modern era and processing the experience of modernizing. It is no doubt that modernity will be highly appreciated by Chinese in a long time. On the other hand, China can't try to isolate herself from the worldly trend of post-positivism and post-modernism. Thus Chinese are more or less pinch-attacked with two contradictory demands: we must make up for our tradition the shortcomings of formal rationality and empiricism spirit, at the same time keep our eye on the thoughts of post-positivism and post-modernism. This is also the task for Chinese philosophers of science.

In the present China, the challenge to scientific spirit doesn't come from the post-positivism or post-modernism sides only. There are some other sources for a "humanizing" movement against so-called "scientism". In general, the "humanizing" movement in China is based on four sorts of theoretical foundation which are in fact inconsistent. These are: (a) The introduction and imitation of post-modernism. (b) The return to metaphysics. (c) The anti-authority trend of liberalism. (d) The rebounding of native traditional culture. For China, the prospect of scientific spirit, as well as that of philosophy of science, in my view, depends on how will it respond to the four sects of the "humanizing" movement.

Even though the introduction of post-modernism into China is not bad, up to now the alleged Chinese "post-modernists" haven't found an effective way to apply it to the situation of China. The radical intellectuals who try to "copy" post-modernism to China, while criticize the modernity, find immediately that their action results in the growth of "pre-modernism" rather than post-modernism. There are some more or less moderate post-modernists, of course, they try to apply some key concepts and ideas of post-modernism. A typical instance is the concept of "marginization". It means that the intellectuals of the modern society are losing their "central position of powerful discourse" and moved to the margin of society. Secularization, as originally a subsequence of modernization, now leads to the "deconstruction" of modernity and the "marginization" of intellectuals. Some Chinese intellectuals thought that they were being marginized and impute to secularization. They said that in 1990s, the slogans that intellectuals had cried out with lofty feelings, such as liberty, freedom and justice, now were secularly interpreted by the popular masses. But the fact is that the historical story of Chinese intellectuals is another one. The traditional "Shi" can hardly be regarded as "intellectual" in the sense of modern intellectual. In China, modern intellectuals boomed only in this century and they appeared to have never occupied the "central position of powerful discourse" except the period of "May 4th Movement" in 1919. Besides, their fortune was related to the political process more than the process of modernization. They were mostly "marginized" in the epoch of the Great Cultural Revolution, when China experienced a sort of premodern movement involved with much irrational emotion. How can post-modernism theories be used to explain this matter? Moreover, if the "depreciation" of Chinese intellectuals since the late 80s was regarded as "marginization" in a postmodern sense, what would we name the movement to appreciate intellectuals in the late 70s and early 80s in China? Would we call it "centralization"? It is no doubt that these people should be more cautious to apply concepts of post-modernism to explain the matter of China.

The trend of returning to metaphysics was derived from the disappointment of the movement to "scientific philosophy" in 1980s, which meant to remedy the traditional philosophy, especially Marxism philosophy, with the introduction of scientific knowledge and the imitation of the structure of scientific theory. After the movement was defeated, some people put the blame on its character of "dehumanizing". This point of view is not senseless, but when they attributed this character to science itself, and more, to the scientific philosophy, they are completely wrong. One of them said: "As soon as the scientific worldview took the place of metaphysics, human being was removed to a subordinate position." ** But it is well known that logical empiricism had never try to replace metaphysics by the scientific worldview. It attacked at any sorts of metaphysics, no matter whether they were "scientific" or "humanizing". Thus the return to metaphysics can not serve as an effective idea to make up for the defect of "dehumanizing".

The anti-authority trend of liberalism, like the post-modernism, is also imported from the western world. Emphasizing the absolute value of freedom, the modern liberalism in the west fights against any authorities, including that of science. Feyerabend, when titled his book "Science in the Free Society", had manifested this idea. Perhaps it told us something of truth of the western society, which had imbued with science and its productions. However, when these liberal anti-authority Chinese copied the explanation of western world, they stepped in a wrong way. An American Chinese, Guo Yinyi, wrote a book to claim that sciencism had founded the totalitarianism in China.*** His book was translated into Chinese in 1989 and since then many Chinese embraced his thought. This thought indeed said something about China, but it seemed generally not proper. For example, the autocracy during the epoch of the Great Cultural Revolution can't be explained as resulted from sciencism. It is just sciencism which acted as the pioneer of liberalism after the ending of the Cultural Revolution. If these Anti-authority liberals kept on attacking sciece, what would dominate China would probably be not the spirit of freedom, but the irrational beliefs like those in the cultural revolution, and thus led to a dictatory government.

Among the four sorts of anti-scientific thoughts, the rebounding of traditional culture is winning more and more supports of Chinese scholars. Surely the traditional Chinese culture is very different from the western culture in which science had evolved. This is the main reason that the process of introduction of modern science into Chinese imbued with frustrations and defeats since 17th century. Whether will we keep up this task, or is it better to give up? Some people chose the latter. In the field of linguistics, a theorian suggested that the western grammar and the scientific analytic method were not applicable of Chinese language. He said that we needed to return to the traditional method of "gloss" and to establish so-called "cultural linguistics".**** In fact, many Chinese, when they talked about humanism, meant something relating to traditional Chinese culture. Published in the periodical Du Shu (Reading), a series of symposium on so-called "humanist spirit" had been discussing about the revivation of many virtues of traditional "shi" in the whole 1994. But if the traditional culture, like the virtues of "shi", is completely inconsistent with scientific spirit? If they were indeed inconsistent, we would face a miserable choice that we must abandon the effort of modernization, otherwise we had to discard our traditional culture. Of course it is hard to believe that we are in so miserable a dilemma, and thus we would re-think of the premise inferring to this dilemma, that whether traditinal Chinese culture could never coexist with scientific spirit. Moreover, we would re-think that whether the tradition ideology was equal to so-called "humanist spirit". Could those thoughts of male chauvinism, of autocratic monarchism, of absolute patriachism, which were all abounded in the traditional cultural, be responded as parts of "humanist spirit"?

In my view, the alleged opposition between scientific spirit and "humanist spirit" is a modern illusion to much degree. Sciencism is not good when it announces that scientific method is the only right foundation of the cultural life of human being. On the other hand, humanism have not said the truth either, when it emphasices on the absolute importance of the feelings of human being, and the absolute value of the autonomous being of him. In the field of philosophy, sciencism and humanism are indeed opposite, but sciencism is not equal to scientific spirit, while humanism is not equal to the spirit of human being. Humanism, if not guarded by rationality, could led to very dangerous action that was entirely harmful for human being. One example is Nietzsche's philosophy. The lost decades were full of evil minor religious. This situation is not unrelated to the growth of radical humanism and anti-sciencism.

We must see that the scientific spirit, like the irrational feelings and emotions of us, is a integrated element of the spirit of human being. It is difficult to make a rigorous defination of "scientific spirit", but it could be expected that a perfect defination ought to include the followings: the attitude of skepticism against all authorities, the confidence in our rationality, the feelings of longing for knowledge, the belief of operative program, the love of truth and the hate of all the frauds and hoaxes, the respect of principles for generality, justice and innovation. All of these are no doubt essential elements of the spirit of human being at the deepest level.

The scientific spirit can never be clearly separated from the other parts of the spirit of human being, that is: the belief of the absolute value of every person, the concerning about the absolute situation of human being, the respect of principles of opening, democracy and freedom. It is senseless to decide that which one of these two sides of the spirit of human being is "higher" than another. They are closely depended on each other and none of them will have sense without the another. Both the philosophy of science and the humanist philosophy need to keep "necessary tension" between these two sides, and Chinese philosophers of science have to listen carefully to the great talks between the two sides of human being spirit.

Notes:

* Liu,, Dachun: On the re-orientation of Philosophy of science, Journal of natural dialectics, Beijing, no.1, 1994.

** Wu, Guosheng: Error of natural ontology, Hunan publishing house, 1993.

*** Guo, Yinyi: Sciencism in modern China, Jiangshu people's publishing house, 1989.

**** Shen, Xiaolong: Interpretation of language, Liaolin education publishing house, 1991.