

PHILOSOPHY OF SCIENCE IN CHINA

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Two apparently different genres of philosophical concern with science exist in China today. For the past forty years Chinese thinking about science has been dominated by natural dialectics. As a branch of Marxist philosophy this includes speculative, natural philosophy of a sort associated with 19th century German idealism (derived from Schiller and Hegel but influenced, most directly, by Engel's work, *Naturdialektik*) as well as, more recently, detailed historical studies of science and technology. In the last decade, however, a strong interest has emerged (or, properly, re-emerged) in Western philosophy, especially analytic philosophy of science.

Although these broadly Marxist and Western approaches are routinely presented as antithetical, many natural dialecticians have begun to address the sorts of questions about science typical of the analytic tradition. The result is that the lines between these traditions are becoming somewhat blurred and the number of philosophers in China whose interests overlap those of philosophers of science in the West is dramatically increasing. This overlap has become so extensive that for many in China "philosophy of science" and "natural dialectics" are virtual synonyms. What follows concerns philosophy of science in China that is explicitly Western and analytic in orientation.

In a recent report on philosophy in China, Robert Ware has remarked on the widespread popularity of philosophical literature which extends well beyond the boundaries of academic philosophy¹. We were likewise impressed that an enormous amount of Western philosophy is available in translation, including a range of both analytic and continental authors, and is very widely read and discussed in China. Apparently Kuhn and Popper were especially popular in the early 1980s, along with Sartre, Nietzsche and Heidegger, a fad which became one of the targets of a short-lived campaign in 1984 against the effects of "spiritual pollution" (i.e., the influence of ideas considered dangerous, many of which were attributed to foreign sources) and, again, of the equally short-lived "movement against capitalist liberalization (liberal ideas)" in 1987. More recently, more sustained popular interest has turned to Feyerabend and

¹"Philosophy in China Today", *Social Theory and Practice*, forthcoming. He notes, for example, the circulation figures for key journals: *Philosophical Research*, "an important professional journal in China, with 5,000 philosophers, has a circulation of about 40,000 copies", while "in North America, with about 10,000 philosophers, *Philosophical Review*, a comparable journal, has a circulation of about 2,500 copies."

Shapere. In Lanzhou University one of us (JRB) found enormous sympathy for Feyerabend's epistemological anarchy. Wang Jian-hua, who is from that university, is presently translating *Against Method*; the political implications of Feyerabend's methodological liberalism are not lost on the students, nor, by the way, is Feyerabend's appreciation of traditional Chinese medicine.

When one of us (AW) gave a lecture on philosophy of science to the students of the Wuhan College of Radio Technology, we were surprised to find so many technical students who had read Western philosophy of science. From middle school on (i.e., in the equivalent of high school) all students are required to take courses in natural dialectics, although they do not generally, at the technical college level, get exposure to analytic philosophy of science. This means, however, that philosophical issues about science are regularly discussed as part of the curriculum and many seek out analytic philosophy of science on their own given this introduction.

We found, in fact, that these sorts of philosophical concerns are by no means limited to the sciences and to science (and technology) students. A professor of history in Xi'an who one of us (AW) visited raised questions about contemporary philosophy of history and displayed translations of Collingwood and several other classics in the field which he had found important to his work. It was subsequently learned from a Marxist philosopher who now works on philosophical hermeneutics that

continental philosophy (i.e., Heidegger, Sartre, Gadamer, and various exponents of structuralism and post-structuralism) has an influence in the humanities comparable to that exercised by Kuhn and Popper in the sciences.

The result of this wide interest in philosophy, now including analytic philosophy of science, is that philosophical texts and journals have extremely high subscription and sales rates, and reach an audience well beyond the community of professional philosophers and their students. Within the universities, philosophy is also a core discipline, although some philosophers we spoke to indicated that the current government policy has been to cut back support for philosophy in favour of increased emphasis on the sciences and technology². Indeed, there was considerable pessimism on this score, a situation not unlike the West. Nevertheless, there are large, autonomous philosophy departments in most universities in China and many of them now include a strong component of Western philosophy of various kinds alongside traditional Chinese philosophy, and various branches of Marxist and Maoist philosophy (or Mao Zedong thought, as they prefer to put it). In some cases natural dialectics constitute a separate institute, as at

²JRB was informed by one publisher's authority that publishers of books in the humanities have instituted a new policy requiring a large deposit by an author (or translator) before a book is published. If the book sells reasonably well it will all be regained as royalties, but the initial outlay is large enough to make publishing very difficult.

Wuhan University, but otherwise it is included in philosophy³.

The philosophy departments regularly provide courses in logic and introductions to analytic philosophy, history of Western philosophy, and philosophy of science which are attended by students from a range of departments and backgrounds. Courses in natural dialectics are required of undergraduate students in most programs of study but, depending on the instructor, they may incorporate some analytic philosophy of science as well. (Indeed, in some cases courses that deal exclusively with analytic philosophy of science are taught under the rubric of natural dialectics.)

The texts used to teach at an undergraduate level are generally in Chinese⁴ and include several collections of articles which summarise the work of a very wide range of Western philosophers. These include members of

the Vienna Circle as well as more recent philosophers of science, e.g., Hempel, Kuhn, Popper, Feyerabend, Lakatos; a broad selection of analytic philosophers, e.g., Ayer, Ryle, Wisdom, Sellars, Quine; and some contemporary analytic and continental philosophers as well as philosophical thinkers in the social sciences, e.g., Kripke, Habermas, Foucault, Rawls, Chomsky.

One of the most influential teaching texts in philosophy of science is an introduction published in 1984 by Professor Jiang Tianji. Much of the undergraduate instruction is done by "young teachers", students of philosophy who have completed an MA at one of the major graduate institutions and are assigned to teach one or two courses a year either at the university where they trained or elsewhere. Many subsequently return to graduate school to complete a PhD, in China or abroad. Graduate students are typically admitted, on the basis of stringent entrance examinations, to study with a particular professor. The graduate students in philosophy of science and natural dialectics often have a first degree in some science. In Lanzhou, for example, the backgrounds of the fifteen MA students who are primarily interested in philosophy of science (in order of frequency) are: mathematics, physics, chemistry, and biology; one student did his BA in Chinese literature; none had a philosophy background. Of course other graduate students who are studying political philosophy or Chinese philosophy typically do have a philosophy first degree; but not if they

³Philosophy departments in China also include a range of disciplines that would be classified as social sciences in the West. Robert Ware discusses this in his article mentioned above; further interesting insights about the development of the social sciences are contained in recent issues of *Chinese Sociology and Anthropology*. For example, empirical sociology was banned during the cultural revolution and has only just been reinstated; a new Department of Sociology was opened at Fudan University, Shanghai in 1983. See "The Revival of Chinese Sociology After 1978", in *Chinese Sociology and Anthropology*, vol. 16, 1983-84.

⁴It is interesting to note, however, that most students now beginning university have had some English language training; it has become a standard part of the middle school curriculum.

are studying philosophy of science⁵. Lanzhou is, however, an extreme case in this regard. Whatever the shortcomings of this situation they certainly won't have the problem common in the West of a great quantity of philosophy of science uninformed by science.

Our impression of Chinese graduate students is that they are very enterprising about taking courses with other faculty and in other departments, but, for the most part, their professional (graduate) training is, from beginning to end, the responsibility of the individual who is appointed their supervisor. The departments with particular strengths in philosophy of science are typically, therefore, the departments where there is a senior professor active in philosophy of science.

Currently the main centres for philosophy of science seem to be: Beijing University, where Professor Hong Qian, a student of Schlick trained in Vienna in the 1930s, taught until his retirement several years ago; the Chinese Academy of Social Sciences (CASS), Institute for Philosophy, where Professor Qiu Ren-zong teaches natural dialectics and where there is a strong program in Western philosophy;

Wuhan University, where Professor Jiang Tianji has taught since the 1940s, after a brief period at Beijing University and several years training in the United States before Liberation during which time he developed an extensive background in logical positivist philosophy of science, Wittgenstein, and American pragmatism. There is, in addition, some strength in philosophy of science at Lanzhou University where Professor Lin Li works in natural dialectics and where Ma Jin-Shou and Wang Jian-hua are both very active in contemporary issues such as realism and rationality; at the People's University of China in Beijing where Lan Zheng has taught; and at Huang Zhong University of Science and Technology. Furthermore, there is strength in analytic philosophy with connections to philosophy of science at Jinin University where Professor Shu Weiguang teaches; at Nankai University in Tianjin; Zhongshan University in Guangzhou; Nanjing University in Nanjing; at North West University in Xi'an; at Nankai University in Tian Jing; at Sichuan University in Chengdu; and at Fudan University in Shanghai where an active group of young scholars have established extensive connections with Western philosophers and are developing their own strengths in philosophy of science.

The graduate program at Wuhan University, where AW visited this past Spring, has one of the largest concentrations in China of graduate students with the English language skills and analytic training to work effectively in contemporary philosophy of science. Professor

⁵How students get into philosophy from the sciences is sometimes amusing. One student with a mathematics background told JRB that he came to philosophy after stumbling on Newton's *Principia* in the library which he read and loved. (Remember its full name: *Mathematical Principles of Natural Philosophy*.) It is doubtful that the study of philosophy is exactly what he expected it would be, but he seemed very happy with it nonetheless.

Jiang has eight current doctoral students, two of whom are now studying abroad, five recent PhD graduates, and a dozen or more MA students at various stages of completion, although I understand that the emphasis of this programme is now shifting to PhD level training. In the course of a giving a four-week seminar on philosophy of the social sciences, I was enormously impressed by the English language competence of these students, and the sophistication of their philosophical training. We supplemented morning lectures with informal afternoon discussions which were invariably well informed and unexpectedly challenging.

I (AW) had been warned before coming to China that it would be difficult to engage Chinese students in critical discussion but I found this wholly inaccurate of the students with whom I worked at Wuhan. Several of the PhD theses in philosophy of science currently in progress or recently completed at Wuhan University are in English, and the written work I have received from students testifies to long training in English language philosophy.

The graduate programme at Lanzhou University where JRB stayed for a month is not as advanced as Wuhan's. It has a large number of MA students, but no PhD programme yet. The students who complete the (three year) MA degree will go on to teach at this or some other university, a technical school, some sort of college, or perhaps will do a PhD at another university such as Wuhan or abroad. The level of English is not as high as at

Wuhan. Students' reading and writing abilities are good, but oral skills are weak since they have had very little opportunity to practice. I (JRB) had several people with no interest in the philosophy of science attend my lectures just because they wanted to listen to a native speaker⁶.

Judging by the level of interest in the philosophy of science and the emerging sophistication of the students that we encountered (both MA and PhD) we expect some very interesting work in philosophy of science to be forthcoming from China in the near future. In addition to these graduate programs, there is a very active philosophical community in China trained in Western philosophy. Before liberation, Russell and the American pragmatists were quite influential and there continues to be some interest in these philosophical traditions, despite sharp criticism during the Cultural Revolution. In addition, there is now work being done in the analytic style on philosophy of language, general epistemology (including, for example, Quine's naturalised epistemology), ethics and political philosophy (e.g., Rawls), and, most intriguing, there is growing interest in the critiques of analytic philosophy and in other developments which have begun to draw the continental and Anglo-American traditions closer together (such as are associated with Rorty and the "end of philosophy" debates).

⁶One of my (JRB) greatest pleasures was doing Shakespeare readings in the evenings.

Within philosophy of science current work includes philosophy of mathematics, physics (including work on foundations: e.g., space-time, relativity), and cognitive science (including studies of "intelligent automata" and neuroscience), theories of confirmation and explanation, the debates over scientific realism, the rationality and relativism debates, and work on figures such as Kuhn, Feyerabend, Laudan, Lakatos, Popper, Newton-Smith, and others. Although some philosophical work in China is original, a large amount of energy is devoted to understanding and assimilating what has been done in the West. It is perhaps something like the early European Renaissance when philosophical work concentrated on translation and commentary.

Chinese philosophers regularly meet to discuss their work in these areas. In May 1987 a fifth nation-wide conference on Philosophy of Science was held at Chengdu, sponsored by the Chinese Association of Natural Dialectics, Institute of Philosophy in the Chinese Academy of Science (CAS), and the *Journal of Natural Dialectics: Studies in Philosophy, History, and Sociology of Science* which is published by the Institute of Policy and Management Studies in Science, a division of CAS: these conferences are roughly biennial. There are in addition, general conferences on Western philosophy, including an annual Summer Institute in Beijing, which sometimes incorporate philosophy of science. The result is that there is at least one national conference a year in China which provides a forum

for papers on analytic philosophy of science. There are also frequent special interest conferences organised at particular universities. One which involved a number of Western philosophers concerned Popper and was held at Wuhan University in 1987; another such conference on Kuhn is being organised for 1989, also at Wuhan University.

In addition to conferences, there are a number of outlets for translations of Western philosophy texts and for original work in philosophy of science. The main outlet for translations of classic texts in philosophy of science are the Commercial Press of China in Beijing, the Shanghai Press of Translation, the Hua Xia Press and Sanlian Press both in Beijing, and the Hunan Press. The *Journal of Natural Dialectics*, under the editorship of Professor Fan Dainian, is a major outlet for original work in analytic philosophy of science; *Studies in the Dialectics of Nature and Philosophical Research* publish in this area as well.

Some Chinese philosophy is available in English translation in *Chinese Studies in Philosophy* and in *Philosophy East and West*. The former sometimes publishes papers that relate broadly to philosophy of science (e.g., there is an issue on "Astrophysics and Ideology" which includes papers on Einstein's relativity theory, space-time, and science and pseudoscience) but the latter journal includes almost nothing in this area. Nevertheless, we hope that the work of Chinese philosophers of science will be increasingly accessible to philosophers in the West through its publication in their own journals.

Papers by established Chinese philosophers of science are appearing in Western journals such as *British Journal of Philosophy of Science* and *Ratio*, and the students now finishing doctorates on analytic philosophy are being encouraged to submit their work to the relevant British, American, and Canadian journals⁷. Some of the senior professors working in philosophy of science have had an opportunity to travel abroad in recent years; Professor Jiang has visited the United States twice since 1983 and we understand that a session representing Chinese scholarship is planned for the conference on Peirce scheduled for October of 1989 which will bring him and several others to Boston.

Such exchanges will certainly be profitable for both Chinese and North American philosophers and we hope that more can be arranged. We also hope that there will be more exchanges like those which have allowed us, among many others, the opportunity to visit and lecture in the various universities in China where philosophers are studying English language philosophy.

Western philosophers who plan to visit China (or who would like to do so) will likely find a warm reception from any of the philosophy departments mentioned above should they write ahead offering to give a lecture or two.

Acknowledgements: This report is an outgrowth of discussions we had with faculty and students when one of us (AW) was in residence teaching a seminar on philosophy of the social sciences in the Philosophy Department at Wuhan University during a four-week period in May and June 1988 and the other (JRB) was in residence teaching a seminar on rationality and realism in the Department of Philosophy at Lanzhou University during the month of October, 1988. We thank them all for their enormous generosity and enthusiasm. AW would also like to thank the Dean of Arts and the Department of Philosophy, University of Western Ontario, and Professor Jiang Tianji and the members of the Philosophy Department and Foreign Guest Office at Wuhan University who made her visit possible. JRB wishes to thank the University of Toronto for financial help and Lanzhou University, its Foreign Office, and its Philosophy Department for being such gracious hosts. We both wish to thank William Newton-Smith for his hand in the arrangements. Many others have since helped to improve the accuracy of this report and broaden its scope. We would particularly like to thank Robert X. Ware, George Gale, Ian Hacking, and Lu Zhaolu for their generosity in this connection. We hope the result

⁷For example, Professor Jiang recently published "Scientific Rationality, Formal or Informal?" in *British Journal of Philosophy of Science*, 36 (1985), 409-423, and we understand that Professor Hong will be contributing an article to the volume on Ayer in the *Library of Living Philosophers*. Lan Zheng, a recent graduate of Wuhan University, has just published a paper on "Incommensurability and Scientific Rationality" in *International Studies in the Philosophy of Science: The Dubrovnik Papers*, vol. 2, 1988: 227-236.

conveys something of the excitement about philosophy of science that we encountered in China, and suggests

areas of mutual philosophical interest in which there might be fruitful exchange with Chinese philosophers of science.

MINUTES OF COUNCIL MEETING

WINDSOR
MAY 28, 1988

PRESENT: J. Brown, R. Butts, M. Osler, S. Turner, P. Winsor, P. Wood, J. Wright

MINUTES OF THE 1987 MEETING: Passed.

PRESIDENT'S REPORT: (a) The President would urge SSHRC to review its policy of funding research, especially its new policy of having local universities administer travel grants. (b) The future of *Communiqué* would be considered.

SECRETARY-TREASURER'S REPORT: (a) A financial report was circulated. (b) It was agreed that up to \$1200 extra should be used for travel expenses if deemed necessary.

COMMITTEE REPORTS:

I. NOMINATIONS: The following were recommended:

W. Shea for 2nd Vice President

F. Tournier for Council

S. Straker for Council

II. PROMOTION OF SOCIETY: J. Brown reported on the mail campaign to get new members. The number of members is expected to increase from about 50 in 1987 to about 100 in 1988.

III. *COMMUNIQUÉ*: No changes are expected.

LAVAL MEETING (1989): (a) Local arrangements to be handled by F. Tournier. (b) Programme to be handled by A. Wylie (chair), Y. Gauthier, and S. Turner.

MINUTES OF THE ANNUAL GENERAL MEETING

WINDSOR
MAY 28, 1988

MINUTES OF THE 1987 MEETING: Moved and passed.

PRESIDENT'S REPORT: Thanks expressed for their efforts in making the local arrangements (J. Wright) and for the programme (P. Wood).

COMMUNIQUE

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*That great possibilities
Come within our scope,
but that we are terribly
prone to fall short of
our ideals*
Oliver Lodge

*Autograph of
Sir Oliver Lodge*

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COMMUNIQUÉ

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invites

- News of research undertaken.
- Abstracts of papers presented by members.
- Announcements of and reports on conferences or workshops held.
- News of courses taught in history and philosophy of science.
- Brief biographies of Canadian scientists.
- News of Canadian scholars abroad (temporarily or permanently).
- Guidelines for and experience of lobbying Government support.
- News of posts vacant in the field.
- Names of scholars from afar known to be visiting Canada or the U.S.
- Suggestions.