

ERIC R. SCERRI

EDITORIAL 2

First of all I am pleased to report that the first issue has been well received by readers and new subscribers. The present second issue is somewhat unusual in that it only contains three articles. The first is a masterly analysis of the former neglect of philosophy of chemistry and of the work which has been carried out since the re-birth of the field. The author, van Brakel, is already well known in philosophy of chemistry for having written a review article along similar lines some years ago (van Brakel and Vermeeren, 1981). One thing which I think can be safely assumed is that he will not be able to use a similar title in another ten years or so, judging from the rapid growth of this field which we now seem to be experiencing.

I agree with the suggestion which van Brakel makes in the following article that the new philosophy of chemistry can be said to have properly begun in 1994 and I feel honored to have organized the two-day meeting at the London School of Economics which he mentions as one of the key events of that year. I might just add that in late 1993 we held a smaller meeting on philosophy of chemistry at the Science Museum Library in London, which van Brakel also attended. This session came about as a result of a suggestion by John Green of the Historical Group of the Royal Society of Chemistry, an organization which sponsored the event and has continued to report on developments in our field through its regularly published newsletter.¹ van Brakel's article is all the more interesting because he has been active in philosophy of chemistry for longer than most of us and in addition he appears to read everything remotely connected to the field and in several languages. In addition to providing a comprehensive review of the work carried out thus far he has provided a valuable account of philosophy of chemistry as carried out in Eastern Europe.



The second offering in this issue is a shorter article by Robert Richman which was actually the first paper ever submitted to *Foundations of Chemistry*. Richman's article marks a new direction which I hope will become a regular feature of the journal, that is, the contribution from chemical educators on matters of chemical philosophy. As I like to say, chemical educators practice philosophy of chemistry on a day-to-day basis while in the process of teaching chemistry and trying to better understand its conceptual foundations and the ways in which the various aspects of the subject are interconnected. I would venture to say that teaching chemistry probably lends itself more readily to philosophizing about the subject matter than does cutting-edge research where highly specific goals are often being pursued by researchers. Richman's article is important because it opens the dialogue between chemical educators and philosophers of chemistry. It represents the first serious attempt by an educator to respond to the philosophical claims to the effect that atomic and molecular orbitals do not 'exist' (Scerri, 1991). I believe that the kind of response offered by Richman may become more important as this field develops. Essentially he upholds the need for chemists to treat the concept of orbitals realistically. This is perhaps an expression of the need for chemists to adopt the intermediate position between realism and the findings of microscopic physics, a theme which was elaborated many years ago by Paneth in his much quoted article which appeared in translated form in the *British Journal for the Philosophy of Science* (Paneth, 1962).

I hope that more chemical educators will feel encouraged to contribute to the journal, especially in the case of articles which may not find a natural place in the more applied chemical education journals in circulation. It seems increasingly clear that research in chemical education is dividing itself rather sharply between work on the content of chemistry courses and work on the process of learning and teaching. I have yet to see any sustained discussion of this state of affairs, although William Jensen, one of our coordinating editors, has promised to write an Editorial on this theme in a future issue.

The third article is a reprinting of Robert Good's piece from the first issue in view of some regrettable errors which occurred there.

We are very pleased to be able to include a book review by one of the world's most distinguished biochemists, Professor Bo

Malmström from Sweden, who pioneered the study of copper oxidases. Professor Malmström, a long-standing member of the Nobel Prize committee for chemistry, has on several occasions given the introductory speech at the award ceremonies in Stockholm as well as editing the most recently published collection of Nobel prize lectures.

Finally I would like to briefly mention two further encouraging developments in the field of philosophy of chemistry. As of the time of writing we have a total of 35 speakers for our society conference due to take place in Columbia, South Carolina (July 28–August 1st, 1999). I also recently learned from Professor Richard Grandy of Rice University that he has organized a session on philosophy of chemistry for the American Philosophical Association Central Division meeting which will take place in Chicago around Easter of the year 2000. Not only are we infiltrating philosophy of science but now, for the first time in terms of meetings, mainstream philosophy.

NOTE

1. Interested readers can write to Dr. R. Anderson, High Ridge, Marchington, Uttoxeter, Staffs ST14 8LH, U.K.
E-mail: RAYMOND.ANDERSON@marchington.demon.co.uk

REFERENCES

- F.A. Paneth, The Epistemological Status of the Concept of Element. *British Journal for the Philosophy of Science* 13: 1–14, 144–160, 1962.
- J. van Brakel and H. Vermeeren, On the Philosophy of Chemistry. *Philosophy Research Archives* 7: 1404–1456, 1981.
- E.R. Scerri, Electronic Configurations, Quantum Mechanics and Reduction. *British Journal for the Philosophy of Science* 42: 309–325, 1991.

*University of Chemistry
Purdue University
West Lafayette, IN 47907
USA
scerri@purdue.edu*

