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EDITORIAL 1

The start of this new venture gives me an excuse for a little reminiscence and an opportunity to review the activities in this new field of Foundations of Chemistry or as some would like to call it Philosophy of Chemistry.

The origins of the journal itself go back about five years ago to my meeting Annie Kuipers our publisher at the festschrift for Heinz Post which took place in London. Post, my former PhD advisor, is one of those quixotic figures in History and Philosophy of Science who rather remarkably published only one widely cited paper, and yet is deeply respected by all who have come into contact with him either as students, visiting scholars or attendants at his seminars at Chelsea College before it merged with King's College, London. I would like to emphasize my indebtedness to Heinz Post who took me under his wing and in a period of six years gave an invaluable start in history and philosophy of science.

The festschrift I mentioned earlier brought together a number of leading names in History and Philosophy of Science including Michael Redhead, Arthur Fine, James Cushing, Allan Franklin as well as good wishes messages from the likes of Karl Popper and Paul Feyerabend. It also included a number of Heinz's former PhD students, among them Noretta Koertge, his first, and myself, his last. Both of us began as chemists, as did indeed Heinz himself who won an undergraduate scholarship to Trinity College Oxford. As Heinz is fond of recalling, he achieved this distinction largely on the basis of the fame of his father, the radiochemist, Fritz Paneth. It was Heinz Post who was perhaps the first to suggest to me that Philosophy of Chemistry was in a sorry state of neglect. For my PhD he put me to work on the question of the reduction of chemistry to quantum mechanics but he insisted that I should work on atoms and not mole-



cules. This restriction, which I found myself resenting as the work progressed, was based on his correct view that one would only gain a proper understanding of calculations in computational chemistry if one had a sound understanding of atomic orbitals. It took me a while to come around to his way of thinking but I am glad now that he refused to budge. This background perhaps explains my own bias for foundational issues in chemistry which has undoubtedly contributed to the choice of name for the journal which was eventually adopted but I will say more about that later.

I think I just happened to be sitting next to Annie Kuipers at the official dinner for the festschrift whereupon she asked me what my interests were and immediately seized the possibility for the emergence of a new field which would naturally require a new journal. There followed various discussions between Annie and myself at meetings of the American Philosophical Society and the Philosophy of Science Association Biennial gatherings during which time the journal gradually took shape. As I recall the early influences on my own efforts towards championing the Philosophy of Chemistry, I should also mention other individuals who also recognized the neglect of this area. These people who have provided invaluable encouragement and advice over the years include Michael Akeroyd, Ted Benfey, John Green, Joe Earley, Erwin Hiebert, Achim Müller, Mary Jo Nye and Steve Weininger.

There followed the inevitable market research exercises and canvassing of opinions in order to assess the viability of yet another new journal in Philosophy of Science. Much discussion took place regarding the scope of the journal as well as its title. Should we refer to Philosophy of Chemistry as such or would that be too narrow? Eventually Bill Jensen and I came up with the idea of Foundations of Chemistry, as he was driving me to Cincinnati airport after I had given a talk at his department.

The choice not to include 'philosophy' in the title was a difficult one but we feel it is the correct way to proceed since the field which we see developing is still too diverse to be labeled as philosophy. In addition, we should not risk deterring those who might be timid of academic philosophy or even repelled by it and yet might have a great deal to say about the nature of chemistry. Of course the term 'foundations' is not without analogous dangers but will hopefully be

taken to mean foundations in the historical, institutional, educational and cultural as well as the philosophical sense. We certainly do not intend the audience to consist of merely theoretical studies and there is ample evidence of quality research into chemical practice and instrumentation, for example, from the likes of Davis Baird (Baird, 1993) and Dan Rothbart (Rothbart and Slayden, 1994).

The renewed interest in chemistry comes from many diverse sources not least of which is chemical education. It is no exaggeration to say that chemical educators are reflecting upon the foundations of chemistry on a day-to-day basis in trying to communicate the subject to their students. We have already witnessed and anticipate further interest from folks at all levels of chemical education at our conferences and meetings. We hope that the new journal will provide a medium for the discussion of issues which might not otherwise find a niche in the more practically oriented educational journals which are already in existence.

At this point I should perhaps back-track slightly to the beginnings of organized meetings on the foundations/philosophy of chemistry. One of the earliest such events, to my knowledge, took place in October of 1993 at the Science Museum in London under the auspices of the Historical Group of the Royal Society of Chemistry. A number of other meetings were held as were sessions on Philosophy of Chemistry at larger meetings on Philosophy of Science. In 1994 a session on Philosophy of Chemistry was included at the Biennial meeting of the Philosophy of Science Association (PSA) in New Orleans, Louisiana (Hull, Forbes and Burian, 1994). A second session on this theme was held at the 1998 meeting of the same society in Kansas City, Missouri.

Jaap van Brakel's suggestion at an early meeting at the London School of Economics had been to delay trying to start our own journal but to attempt to infiltrate the existing literature in philosophy of science. This advice has indeed been followed and remains essential to the emergence and perhaps eventual general acceptance of the field by the wider community of scholars. However, due to a growing interest and activity it has also been felt appropriate to develop a sense of disciplinary identity and what better way to do that than by having our very own publication.

In 1997 Lee McIntyre, a philosopher of social science who is also deeply interested in the philosophical aspects of chemistry, and myself were invited by the editor of *Synthese* to put together a special issue (McIntyre and Scerri, 1997) of the journal on Philosophy of Chemistry to which we also appended a comprehensive bibliography. In addition, the International Society for philosophy of Chemistry was formally inaugurated at a meeting in Bradford organized by Michael Akeroyd. We now have a very active internet discussion list<sup>1</sup> which at the time of writing has about 300 members world-wide. There is no denying the early promise suggested by all these developments. What remains to be seen is the full fruition of ideas and their careful and rigorous criticism in the forthcoming issues of this journal.

As in the case of the present inaugural issue we envisage the inclusion of contributions from what might be called 'real chemists', who bring to bear a life-time of experience and reflection on the nature of chemistry and are undaunted by any lack of formal study in philosophy or philosophy of science. Such contributions will provide ample material for the more philosophically inclined to ponder over and perhaps re-interpret in the light of mainstream research in philosophy of science and related fields of science studies.

In short, any sincere and knowledgeable work in philosophical, historical, cultural, educational, sociological or many other aspects the central science, chemistry, will be carefully considered for publication in *Foundations of Chemistry*. As we have often heard said in our meetings, reflective studies on chemistry have been dormant for too long. Suggestions for this state of affairs have ranged from the alleged reduction of chemistry to quantum mechanics, the apparent lack of big ideas in chemistry and the essentially practical nature of the subject. All of these notions have already been taken up in discussion in published articles but much work remains to be done in order to convince some traditionally inclined philosophers and other scholars of science of the value of focusing on the chemical sciences.

## NOTE

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## REFERENCES

- Baird, D., Analytical Chemistry and the Big Scientific Instrumentation Revolution. *Annals of Science*, 50: 267–290, 1993.
- French, S. and H. Kamminga (ed.), Correspondence and Reduction in Chemistry. In *Correspondence, Invariance and Heuristics. Essays in Honour of Heinz Post, Boston Studies in Philosophy of Science*, Vol. 148, Kluwer, Dordrecht. (Post's much cited paper is reproduced in its entirety in this volume.)
- McIntyre, L. and E.R. Scerri (eds.), *Philosophy of Chemistry*. Special Issue of *Synthese*, 111(3), 1997.
- Hull, D., Forbes, M. and Burian, R. (eds.), *Proceedings of the Philosophy of Science Association*. East Lansing, Michigan, Vol. 1, 141–170, 1994.
- Rothbart, D. and S.W. Slayden, The Epistemology of a Spectrometer. *Philosophy of Science*, 61: 25–38, 1994.

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