

Editorial

The Report of Council for the year 1988–89, which appeared in the previous issue, recorded the award of the Society's Singer prize jointly to Graeme Gooday (University of Kent at Canterbury) and Michael Ben-Chaim (King's College, Cambridge). It is a particular pleasure to publish their prize-winning essays in this issue. Despite differences in subject matter, period and style, each displays a creative response to what has become a desideratum of good scholarship in the history of science—a willingness to bring broader historical sensibilities to bear on the analysis of context.

Remarks concerning the social context of innovation sound like platitudes to the professional historian of science; but to many engaged in the teaching of science, whether in schools or universities, they may carry alien, even alarming, connotations. In the U.K., as many readers will be aware, the historiography of science has recently assumed a high profile, through the introduction of Attainment Target 17 into the National Curriculum for Science. At the lowest level, pupils are expected to be able to give an account of some scientific advance, 'describing the new ideas and . . . the life and times of the principal scientist involved'. Lest this should sound bland, it is deemed essential for an understanding of the *nature* of science (the title and goal of the exercise) that pupils at an early stage should 'be able to demonstrate that different interpretations of the experimental evidence that they have collected are possible'. This welcome emphasis on the possibility of controversy in science, to be reinforced with historical examples such as the development of plate tectonics, clearly opens the eye to more informed perceptions of scientific practice than many young students of science will have encountered in the past. There are more conservative goals built into the scheme—an insistence, for example, that pupils gain a due reverence for the predictive power of scientific models, and some grasp of how reasoning in science might differ from that in other disciplines. The over-riding statement of intent, however, is one that might be welcomed by the most radical exponent of the view that scientific knowledge is shaped by social, economic and political context:

Pupils should develop their knowledge and understanding of the ways in which scientific ideas change through time and how the nature of these ideas and the uses to which they are put are affected by the social, moral, spiritual and cultural contexts in which they are developed; in doing so, they should begin to recognise that while science is an important way of thinking about experience, it is not the only way.

Leaving aside the difficulties raised by that last remark, it is clear that for science teachers these are heady times. A critical question is how well prepared they can possibly be to equip their students with the more sophisticated perspectives that such an approach assumes. The Galileo affair, for example, is given canonical status as exemplar of the way in which scientific innovation can affect people's lives both 'spiritually and morally'. The problem, of course, for the teacher, and for those who would teach the teachers, is that

there are as many readings of the Galileo affair as there are Galileo scholars. There is certainly a level at which youngsters can understand that the Copernican system raised difficult problems for the Catholic Church during the Counter Reformation. But beyond that does the teacher go in for the nuances; or for melodrama to drive the point home? The mind boggles at the number of young Galileos who are about to be shown the instruments of torture.

Nor is it only the teachers of science who may feel threatened by such demands. The interim report of the History Working Group for the National Curriculum observes that 'it is often through history lessons that pupils learn about the social origins, processes and outcomes of science which have been major determinants of change . . . Pupils need to know about some of the major achievements of past scientists and how they changed people's lives and views of the world'. Again, one welcomes the broadmindedness; but how many teachers of history have the preparation and expertise to respond in a lively and constructive manner? There are evidently exciting opportunities for science and history teachers to work together; but under the enormous pressures to which teachers have been subjected, is not the likelihood that the buck will rather be passed?

The Society, and especially its Education Section, is keenly aware of both the difficulties and the opportunities. At the meeting of the Association for Science Education held at Lancaster in January, members of the Society were involved in three sessions which had assistance in the teaching of Attainment Target 17 as their attainment target. It is anticipated that the community of historians of science in Britain will be involved in local initiatives to meet the need for basic information and bibliographic tools. The danger is that there will be a spate of ill-prepared, opportunistic literature flooding an indiscriminating market. Whilst the life-blood of this Journal has been, and will continue to be, the research-based article, the Editorial Board has recently agreed that, under the present circumstances, it would not be inappropriate to publish review articles on the themes of AT 17 and reviews of the specially devised literature as it appears. Readers of the Journal who would have a special interest in such developments, and who might wish to make suggestions, are warmly invited to approach the Editor.