

Book Reviews

OF STATUES AND SCIENCE

Lavoisier in Perspective, ed. by MARCO BERETTA, Deutsches Museum, München, 2005, 213 pp. [ISBN 3-924183-07-4]

Despite a rather vague and non-engaging title, this collective volume is the outcome of a great historical event: a solemn ceremony for the inauguration of a statue of Antoine-Laurent Lavoisier in the Hall of Fame of the Deutsche Museum in September 2003. Why is it so unique? After all, statues of the 'founding fathers' of disciplines can be found in many halls and auditoriums of academic buildings around the world. Commemorations of their heroic achievements are integral parts of routine scientific conferences. And dozens of conferences have celebrated Lavoisier in 1994, for the bicentennial anniversary of his tragic death on the guillotine.

However the 'postponed' celebration of the Deutsche Museum had a special meaning. Even though the bust of Lavoisier is not a masterpiece of arts, it has a symbolic value in this location. As CHRISTOPH MEINEL's contribution to the volume reminds us, the *Ehrensaal* in the Deutsche Museum inaugurated in 1925 was initially meant to celebrate the supremacy of German science and no foreign scientist had been admitted in this national Pantheon until Lavoisier in September 2003. This introduction was all the more meaningful since in the context of Nazism, Paul Walden, a famous German physical chemist had discredited Lavoisier in the name of a holistic *Deutsche Chemie*.

This ceremony provided an opportunity for an international symposium gathering a few Lavoisier scholars. To-

gether with the symbolic statue the volume of proceedings aims at marking the end of a two-century dispute over the revolutionary impact of Lavoisier's chemistry. More precisely, how is it that the revolutionary project conducted by Lavoisier with remarkable awareness, generated the image of a radical foundation of chemistry? As F. Larry Holmes pointed out, it is the shift from revolution to foundation that requires explanation ("The boundaries of Lavoisier's chemical revolution", *Revue d'histoire des sciences*, 48 [1995], 9-48). Although the controversy over the founder of chemistry, repeatedly invigorated by national prejudices and the conflicts between France and Germany, stimulated historical studies of chemistry in the 19th century, it also generated biased views and robust legends. French high-school students are still taught that Lavoisier discovered 'the law of matter conservation' and invented the 'modern notion of chemical elements'. On the one hand, this naïve belief reflects the strong neglect of the history of science in science teaching, since it rests on a flat ignorance of early modern chemistry. On the other, it reveals the resilience of the legends surrounding Lavoisier, which were forged for various purposes according to changing circumstances by generations of French chemists and widely spread by means of 'vignettes' in textbooks and popular science magazines. As MI GYUNG KIM argues in her survey of the construction of the founder myth, Lavoisier has become "a rite of passage" for being accepted as a full member of the French chemical community. So strong is the mythology of the founding father that it has so far resisted all attempts by historians at debunking the statue of

Lavoisier as the father of modern chemistry (B. Bensaude-Vincent, 'Between history and memory: Centennial and bicentennial images of Lavoisier', *Isis*, 87 [1996], 481-499).

The various historical perspectives developed in this volume encourage a reappraisal of the real significance of Lavoisier's role in the complex process of changes that occurred in the late 18th century. In particular, to what extent did Lavoisier change the experimental practices of chemists with sophisticated instruments? TREVOR LEVERE's presentation of his gazometer and PETER HEERING's brave attempts at replicating the experiments with the ice-calorimeter provide new insights into the practices of chemistry of the 18th century as it conveys an analogy with what has been later named 'big science'. PATRICE BRET and JEAN-PIERRE POIRIER seriously undermine the image of the lonely genius as they stress how much academic institutions have shaped Lavoisier's scientific style. His famous balance sheet method, which became the supreme judge for understanding chemical reactions, was rooted in the experimental programs conducted at the Paris Royal Academy of Sciences during the 18th century. ALFRED NORDMANN's symmetric analysis of Lichtenberg and Lavoisier suggests that their conflict points to a radical incommensurability of two contemporary chemistries, which definitely undermines the standard and whiggish view of blind, stubborn and conservative anti-phlogistonists.

However, this rather heterogeneous collection of papers was not meant as a deep revision of the historiography of the chemical revolution. Rather one of its merits, at least in my view, is that the contributors take various facets of Lavoisier's career as a basis for discussing broader issues. For instance, how to balance the performances of a single and sophisticated apparatus with the results of repeated experiments conducted with cheap instruments (LEVERE)? What is the power of localities in the pursuit of

science? This issue raised by FERDINANDO ABBRI's comparison of Swedish and French chemistries is further discussed in a fascinating manner by NORDMANN who explicitly questions the monolithic view of Enlightenment and suggests that two radically different notions of rationality and of truth were competing. In Prussia, reason as defined by Kant's famous 1784 *opuscule*, requires the public's approval for administering a proof. In the French Enlightenment as illustrated by Lavoisier's theatrical demonstrations, the defeat of error is a spectacle provided by nature itself by way of the artifacts created in the chemical laboratories. And finally CHRISTOPH MEINEL and MI GYUNG KIM question the uses of disciplinary histories for shaping and legitimizing the present science. For this perspective, it is regrettable that there is no attempt, in the introduction to the volume for instance, at considering the statue of Lavoisier in the broader context of current studies of the anthropological meaning of commemorations in scientific communities. (See for instance Pnina Abir-Am, Essay Review 'How scientists view their heroes: some remarks on the mechanism of myth construction', *Journal for the History of Biology*, 15 [1982], 281-315; Pnina Abir-Am & Elliott Clark [eds.], 'Commemorative Practices in Science', *Osiris*, 14 [2000]).

With all these windows opened on the historiography of chemistry and more broadly on the Enlightenment period, this volume can be of interest for many readers beyond the small community of historians of chemistry.

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