
2. CHEMISTRY COURSES AND THE CONSTRUCTION OF CHEMISTRY, 1750-1820

*Introduction by Bernadette Bensaude-Vincent;
Christine Lehman; John Perkins*

Between about 1750 and 1820 chemistry underwent a series of profound changes. It became an autonomous science; in particular, independent from medicine, it became hugely popular and was for many the enlightenment science par excellence. The conceptual changes of the Chemical Revolution coincided with the increasing engagement of chemistry and its practitioners in industrialisation and as agents of technological change. Its practitioners were often engaged in close and problematic relationships with politics and the state. The process of the professionalisation and institutionalisation of chemistry in general and of chemical research in particular began to accelerate. The chemical expert emerged and chemical expertise was deployed in a wide range of contexts from public health to legal disputes, from military technology to agricultural improvement.

What was the role of chemistry courses in these developments?

Although chemistry is one of the few scientific disciplines whose educational component has attracted historical attention,¹ we lack a clear understanding of how chemical knowledge was spread and how experimental skills were transmitted. Yet, most of the time, the pedagogical component is perceived exclusively through textbooks. Apart from Rhoda Rappaport's classic articles on Guillaume-François Rouelle,² oral didactic practices have been largely ignored, for the obvious reasons of a lack of accessible sources. However, recent studies based on archival materials, suggest that Rouelle's demonstrations were but one example among a host of chemistry courses in parallel with the development of laboratories and, at the period, the emergence of research schools in chemistry.³ However, much of this work has been in the form of separate case studies and the Louvain conference offered an opportunity to review this work and to bring it together within a comparative framework, and, at the same time, to address the wider role of chemistry courses in the creation of modern chemistry.

Notes

¹ See for instance H el ene Metzger, *Les doctrines chimiques en France du d ebut du XVII^e si ecle   la fin du XVIII^e si ecle*, (Paris: Les Presses Universitaires, 1923), Owen Hannaway, *The Chemist and the Word: The Didactic Origins of Chemistry* (Baltimore: Johns Hopkins University Press, 1975), Anders Lundgren and Bernadette Bensaude-Vincent, eds. *Communicating Chemistry: Textbooks and their Audiences, 1789-1939* (Canton, MA: Science History Publications, 2000). On the relative absence of pedagogy on the map of science see David Kaiser's introduction to the collective volume *Pedagogy and the Practice of Science, Historical and Contemporary Perspectives*, ed. David Kaiser (Cambridge, MA: MIT Press, 2005).

² Rhoda Rappaport, "G.-F. Rouelle: An eighteenth-Century Chemist and Teacher," *Chymia* 6, (1960) 68-101; "Rouelle and Stahl – The Phlogistic Revolution in France," *Chymia* 7, (1961): 73-102.

³ Kathryn M. Olesko, "Tacit Knowledge and School Formation", *Osiris* 8 (1993): 16-29.