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# **Centenary lecture. One hundred years of development**

[H. M. N. H. Irving](#)

## **Abstract**

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## CENTENARY LECTURE

### One Hundred Years of Development in Analytical Chemistry

By H. M. N. H. IRVING

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It is a unique honour and a very heavy responsibility to have been entrusted with the task of delivering this Centenary Lecture under the title "One Hundred Years of Development in Analytical Chemistry," but it is almost impossible, in the time available, to give a condensed history of the discipline of analytical chemistry from 1874 until the present day.

In a letter of February 5th, 1750, Lord Chesterfield wrote, "History is only a confused heap of facts," but Henry Ford, giving evidence in his libel suit against the *Chicago Tribune* in July, 1919, was more succinct and even more disparaging when he stated, "History is bunk." The historian of analytical chemistry can accept neither viewpoint, although he will realise that to do this vast subject justice he would need the synoptic view of a Sir Winston Churchill, the style and pungency of a Lytton Strachey and the sheer professionalism of an A. J. P. Taylor. In the event, I take some consolation for my own shortcomings from a typical remark of Oscar Wilde<sup>1</sup>: "Anyone can make history. Only a great man can write it."

A really fascinating history of the last one hundred years could clearly be developed around the theme of successive discoveries and developments in equipment and techniques—on the lines of the enormously important and scholarly "History of Analytical Chemistry" by Ferenc Szabadváry.<sup>2</sup> But could not an equally fascinating story be written around the personalities of those engaged in analytical chemistry, their social background and aspirations and their status in the society of their day? The education of the analytical chemist—or the lack of it—could also form a unifying theme though it might well be one in which the *leitmotif* expressed the continuing neglect of analytical chemistry as a subject worthy of encouragement and support by successive Governments and as an academically respectable and rewarding subject for study in many universities.

The impact of new legislation on the need to develop new techniques or to improve on old ones can certainly be said to have been the major reason for the foundation of the parent Society of Public Analysts in 1874. This, and a great deal more besides, is fully recorded in the recently published History of the Society for Analytical Chemistry (1874-1974) by R. C. Chirnside and J. H. Hamence with the title "The 'Practising Chemists'."<sup>3</sup>

A logical extension of this same theme could be used to interrelate the development in analytical activities resulting from the successive Factory Acts, the Food and Drug Acts of 1955 and earlier, the Consumer Protection Act of 1961, the Medicines Act of 1968, the Labelling of Food Regulations (1970), the Clean Air Act and many others.

Throughout the ages, the frailties and cupidity of human beings have found expression in criminal acts and sharp practices in industry, in commerce and in our daily life. The adulteration of gold and silver in pre-Christian times, the constant pollution of the environment, the adulteration of food and drugs, the doping of racehorses, of athletes and of the mentally sick, all these have engaged the attention and taxed the skills of the analytical chemist. Even so, the public at large may gain its only insight into the applications of analytical chemistry to modern forensic science through the medium of television (for example, the series entitled "The Expert"). Some members of the public have even carried out analytical determinations themselves—under the supervision of a policeman and with a "breathalyser."

I would now like to call attention to the extraordinary neglect of the rôle of the analytical chemist by writers of many fine books in which his activities should surely have merited at least a passing mention. Haber's well known work "The Chemical Industry during the Nineteenth Century"<sup>4</sup> is a valuable textbook for economists, with excellent accounts of the

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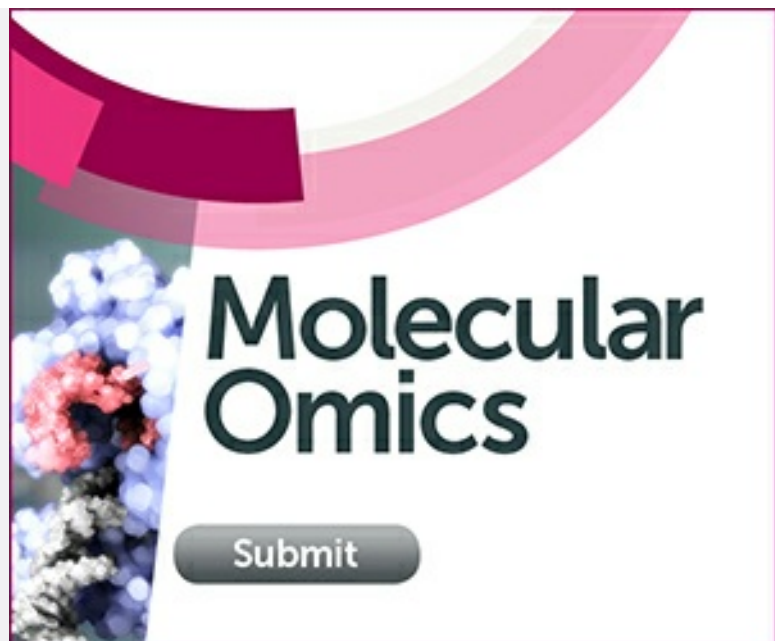


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the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million, and the number of people in the public sector who are employed in the health sector has increased from 2.5 million to 3.5 million (Department of Health 2000).

There are a number of reasons why the public sector has grown so rapidly. One of the main reasons is that the government has increased its spending on health care. This has led to a rapid increase in the number of people employed in the health sector. Another reason is that the government has increased its spending on education. This has led to a rapid increase in the number of people employed in the education sector.

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