Lead: The Road to Regulation

Introduction

Lead poisoning was, both statistically and politically, one of the most significant occupational diseases of the Victorian factory. Its symptoms include colic, constipation, anaemia, sterility, paralysis, blindness and encephalopathy. In its severest form it can be fatal. In women it can produce gynaecological problems. Indeed, in Victorian Britain it was deliberately used by women in some localities as an abortifacient.\(^1\) Reasonably safe in its metallic state, because in such a form it cannot normally enter the human body, lead becomes dangerous when converted into a dust or vapour that can be easily inhaled or ingested and thus absorbed into the bloodstream.

In the nineteenth century lead poisoning was not, any more than at other times, restricted to the industrial workforce. Obviously the Victorian era was free from problems associated with the use of lead additives to petroleum, but there were numerous other ways in which lead could impair the health of the general population. Notwithstanding well-established knowledge of its toxicity, lead was everywhere. It was a constituent of paint, textile dyes, food and drink containers, pottery and earthenware glazes, shotgun cartridges, water pipes, cosmetics and many other products. Ironically, the provision of piped water, usually considered to be one of the most crucial factors in the improvement of Victorian public health, also facilitated the spread of a metallic poison in the nation's drinking water. In the early-Victorian period lead, in its non-metallic form, was even a common ingredient of medicines. Thus in 1840 the *Provincial Medical Journal* noted that ‘profuse perspiration’ was treatable with sugar of lead, adding only that ‘in some cases this remedy has produced serious inconvenience’. Acetate of lead was used to treat cholera victims in the late-1840s.\(^2\) While the extent of low-level lead poisoning is unknown, it is reasonable to assume that it was more widespread than has usually been appreciated. Intriguingly, Gore Vidal has argued that many of the characters in Charles Dickens’ fiction, far from being the gross caricatures that they sometimes appear, were actually realistic pen portraits drawn from a population among whom
chronic lead poisoning, with attendant personality disorders, was widespread.³

Within the workplace lead poisoning was not associated with the textile trades and since factory regulation was confined, until 1864, to textile manufacture, the problem attracted little official recognition before this date. This is not to say that the health hazards of lead were unknown; as we have seen, these had been recognised in the ancient world and reasonably well understood, at least by some men of science, since the seventeenth century. Liquid lead glaze dates from the 1740s and Charles Turner Thackrah indicates that lead poisoning affected potters in the pre-Victorian period.⁴ In 1793 the Society of Arts offered a prize of either a gold medal or £20 to anyone who could produce a viable leadless glaze for use on earthenware. Although prizes were awarded in 1820 and again in 1822, the glazes concerned were rejected as unsuitable by pottery manufacturers. As a result the Society renewed its offer in the 1850s.⁵ In 1818 Samuel Taylor Coleridge inquired of the lawyer and diarist, Henry Crabb Robinson, ‘whether there is not some law prohibiting, or limiting, or regulating the employment of children or adults, or of both, in the White Lead Manufactory’. He went on to say that when the surgeon, Astley Cooper, had appeared as a witness before a select committee of the House of Commons, he had expressed his belief that there was such a law. Coleridge’s idea was that if his recollection was correct, the existence of protective legislation could be used to counter the laissez-faire argument that there was no precedent for laws to safeguard child workers.⁶ Coleridge was clearly referring not to Astley Cooper, but to Ashley Cooper who had appeared before the 1816 Select Committee on the State of the Children Employed in the Manufactories of the United Kingdom. Cooper had said that, with the exception of arsenical colour production, the most dangerous occupation involved manufacture of sugar of lead. He had also ‘seen many children suffer most severely from white lead manufactories’. When asked whether he knew of any law ‘to restrain children from going to such manufactories’, he had replied: ‘Yes, I think there is a law’.⁷ In fact, Cooper was misinformed. Hazardous as the processing of lead might have been, in 1816 and, indeed, for long afterwards, there was no legislation to protect the workforce.

Aside from these references, there is little evidence of sustained public interest in occupational lead poisoning until much later in the nineteenth century. However, the Children’s Employment Commission did broach the subject in the 1840s. This Commission, established in 1842 at the behest of Lord Ashley (later the Seventh