

Arsenic in France. The Cultures of Poison During the First Half of the Nineteenth Century

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This essay reviews the movement of poisons across different popular, medical and legal cultures during the 1830s and 1840s in France. Many French people at that time felt that they were living in a “wave of poisoning crimes”, mostly performed by using arsenic, which was regarded as the “king of poisons” during the nineteenth century. Poisons such as arsenic were common materials employed in everyday life for different purposes in agriculture, industry and medicine. They were also frequent protagonists in popular literature, folk tales, theater plays, and other forms of popular culture. At the same time, many poisons were both objects and tools of inquiry in medicine and science. Their composition and deleterious properties had attracted the attention of doctors and natural philosophers since ancient times. With the development of animal experimentation, poisons were increasingly employed as tools for research, whose dramatic physiological effects were employed for investigating the vital functions. From a legal point of view, poisons were criminal tools for performing silent murders, which were very difficult to prove in court. The testimony of regular witnesses was useless due to the secret nature of poisoning crimes, so judges frequently requested the advice of experts in medicine and chemical analysis. Prompted by unexpected situations and puzzling questions, nineteenth-century toxicological research developed along with criminal investigations during poisoning trials.¹ The toxic effects of arsenic largely depended on the nature of the compounds, the ingested quantity, the nature of the victim and the dosage (from acute to long-term poisoning). Consequently, arsenic presented a great variety in the character, combination, and severity of symptoms, including also perplexing and misleading exceptions. For this reason, a nineteenth-century professor of legal jurisprudence dubbed arsenic as the

1 These issues are discussed in J.R. Bertomeu Sánchez, “Animal Experiments, Vital Forces and Courtrooms: Mateu Orfila, François Magendie and the study of poisons in nineteenth-century France,” *Annals of Science* 69 (2012): 1-26.

“very Proteus of poisons”; that is, “capable of producing almost every species of poisonous action.”²

Apart from its criminal uses, arsenic was employed in many other activities in nineteenth-century France: wallpaper pigment, embalming, agriculture, rat poison, veterinary treatments, medical drugs, and so on. Arsenic was among the regular commodities that could be easily found in a nineteenth-century rural house, commonly bought in pharmaceutical shops. And yet, arsenic never enjoyed the material “self-evidence of a slap in the face”, which Lorraine Daston attributes to quotidian objects.³ Its physical properties (white color and mild taste) were ambiguous and misleading, transforming arsenic into an elusive product, which could be confused with many other quotidian materials: flour, carbonates, salts, and so on. Poisoners largely relied on these properties and terrible accidents and false accusations of poisoning were frequent.

Arsenic was also elusive from the point of view of its detection. As in the case of many other early modern materials reviewed by Emma Spary and Ursula Klein, the existence of arsenic “was never contested, though the ways of its identification as well as its meaning and values were subject to debate.”⁴ Which tests were the most reliable ones and who was their right interpreter (chemists, doctors, apothecaries) were matters of contention. In short, nineteenth-century arsenic was at once a quotidian material, scientific object, criminal tool and legal concern. Its associated meanings and values were contingent and varied considerably among forensic experts, lawyers, judges or poisoners. However, the historically-located and locally-embedded ontological nature of arsenic was plastic enough to be adapted to the varied needs and expectations of different protagonists. In this sense, arsenic resembles other “boundary objects” studied by historians of science: it could inhabit different

2 “Summary of the lecture delivered by Dr. Donkin, Professor of Medical Jurisprudence at the University of Durham,” *Pharmaceutical Journal* 3 (December 14, 1872): 472, quoted by James C. Whorton, *The Arsenic Century: How Victorian Britain was poisoned at home, work, and play* (Oxford: Oxford University Press, 2010), 15; For a popular account on the general history of arsenic see John Parascandola, *King of Poisons. A history of arsenic* (Washington: Potomac Books, 2012).

3 Lorraine Daston, ed., *Biographies of Scientific Objects* (Chicago: University of Chicago Press, 2000), 2; See also Lorraine Daston, ed., *Things That Talk: Object lessons from art and science* (New York: Zone Books, 2008).

4 Ursula Klein, Emma Spary, eds., *Materials and Expertise in Early Modern Europe: Between market and laboratory* (Chicago: University of Chicago Press, 2010), 7-10, on 9.