



## EDITORIAL

## WAR, NATURE AND TECHNOSCIENCE

This issue of *Notes and Records* contains three papers and an essay review. The papers may be read, in rather different ways, as commentaries on the relationship between science, technology, medicine and war. War appears in these studies as an opportunity for the display of diverse technologies in the Crimea; as the unavoidable context for chemical work in the first half of the twentieth century; and as a chilling metaphor—Rachel Carson’s ‘war against nature’—for the potentially devastating effect of pesticides and other chemicals on the natural world. The three papers comment, also, on the changing status and perception of technocracy—by throwing new light on the complex interplay of scientific innovation, large-scale industry and technological impacts, whether wanted or undesired.

The first paper, by Yakup Bektas, discusses the Crimean War (1853–56) as a ‘technological enterprise’, challenging and complementing previous accounts that have emphasized military, political and logistical incompetence. This theatre of war provided a stage for technological novelties and innovations, not least submarine electrical telegraphy and photography; entrepreneurs might simultaneously contribute to a very public war effort while advertising their wares—or, in the case of Isambard Kingdom Brunel, their entrepreneurial selves. Unequivocal success seemed less a concern than rapid and spectacular trials of science-based innovation for mid-nineteenth-century technocrats offering technological fixes for transportation, communication and, like Brunel, field medicine.

The second paper, by Deri Sheppard, considers the life and work of the British chemist Robert Le Rossignol, ‘engineer of the “Haber” process’, by which ammonia is synthesized from its constituent elements. Le Rossignol was Fritz Haber’s assistant. In this case, Haber generously acknowledged Le Rossignol’s role in scaling up, or engineering, a laboratory process ultimately of profound importance to chemical industry, yet Le Rossignol has still been overshadowed. Sheppard uses transcripts of interviews to bring him to the centre—but the author is not concerned simply to bring a forgotten hero to light. Le Rossignol, who worked in Berlin in the early twentieth century and was interned during World War I (‘the ‘chemists’ war’), illustrates the difficulties encountered by scientific researchers seeking to secure intellectual ownership while carving out international careers in what Eric Hobsbawm evocatively called an ‘age of extremes’. Back in the UK, Le Rossignol worked at GEC laboratories—in research that ultimately contributed to the military technologies of World War II (‘the physicists’ war’).

Politics is present in the first and second papers, and comes to the fore again in the third. J. F. M. Clark turns an apparently local case study—the ‘Smarden incident’, a serious toxic waste spill in Kent in 1963—into a profound contribution to the history of ‘environmental consciousness’ on a national scale. The Smarden incident, and attempts to deal with it, coincided with the publication in Britain of Rachel Carson’s environmentalist classic *Silent spring*. The Crimean entrepreneurs of Bektas’s study were on the cusp of a second

scientific revolution of science-based industry; yet Le Rossignol experienced intimately the moral ambiguities of early twentieth-century technoscience. Clark's diverse actors—politicians, pesticide manufacturers, vets—showed, within a 'fracturing of the consensus of progress', a parallel fragmentation of technical expertise: from this very public chaos of opinion, it was only with difficulty that unified conceptual, legislative and governmental responses to a purported war on the 'the environment' could emerge.

This issue concludes with Jon Agar's thought-provoking essay review evaluating Peter Collins's new history of the Royal Society of London since 1960.

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