

Protective Technologies: Safeguarding workers' health in 20th century wartime.

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ABSTRACT

During both the First and Second World Wars, governments around the world needed to mobilize its population to prepare for the difficulties war would bring. Technology would be central to the effective prosecution of any war effort. The role of engineers and the importance of technology to the prosecution of war has been the subject of numerous studies. Guy Hartcup was one of the first historians to illustrate the key role engineers made to the allied victory in the Second World War.ⁱ David Edgerton's numerous subsequent studies have highlighted the importance of technology, and how perceptions and feelings of technological superiority played a major psychological role in making leaders believe that they had superiority and specific advantages over their adversaries.ⁱⁱ However, while much of the attention in the historiography has been placed on the efforts made to increase production irrespective of the human and financial costs, less attention has been given to the efforts made to improve occupational health and safety in the workplace to protect workers who were exposed to greater pressure and risk as a result of the increased production needs brought about by war. In their study of the coal industry in Britain, Arthur McIvor and Ronald Johnston have shown that an unwillingness to implement new technologies to improve workers' safety was exacerbated by the pressures of war and the intransigence of managers, leading to a dramatic decline in the health condition of British colliers.ⁱⁱⁱ

This panel will address some major issues concerning the development of protective technologies, particularly in relation to their effectiveness in protecting workers' occupational health in wartime. It will build on the recent work of Christopher Sellers and Joseph Melling, whose study of industrial hazards and workplace dangers from a transnational perspective has opened up the historiography of occupational health

and disease.^{iv} It will investigate whether protective technologies were brought about as a result of workers' and trade union pressure, or whether they were informed by science and/or compassionate feelings for workers at a time when the need to maintain a stable and healthy workforce was paramount. It will situate its findings within the growing body of literature on the study of disability to show how technology was used as a means of seeking to reduce disablement caused by hazardous working conditions. It will position the debate vis-à-vis the use of sometimes unproven, largely untested, and oftentimes costly technology during wartime (when the need to produce consistent and reliable results was paramount) within the wider debates on the history of technological change. By building on Edgerton's argument, it will further enforce the inextricable connection between technology and increased production, while linking this to an aspect that has hitherto received less scholarly attention: the importance and use of protective technologies as a means of safeguarding workers' health.

I am looking for one paper and a commentator for this panel. The paper I am proposing focuses on the plans that the British government developed in their attempt to suppress dust in British coalmines in the Second World War. The second paper is a detailed study of how protective technologies were used in the munitions industries in Britain to safeguard the occupational health of workers who were manufacturing chemical weapons. Proposals that examine specifically how technology or scientific ideas were used or contemplated as a means of safeguarding workers' occupational health in twentieth century warfare will be welcomed. I would be particularly interested in receiving proposals that look at this issue from the perspective of a country other than Britain, as well as research that adopts a comparative and/or transnational perspective, or any papers that can link the issue of protective technologies to gender and/or inequality.

ⁱ Guy Hartcup, *Challenge of War: Scientific and Engineering Contributions to World War Two* (Newton Abbot, 1970).

ⁱⁱ For details, see David Edgerton's two major works in this area: *Britain's war machine: weapons, resources, and experts in the Second World War* (London, 2011); and *The shock of the old: technology and global history since 1900* (London, 2007).

ⁱⁱⁱ Arthur McIvor and Ronald Johnston, *Miners' Lung: A History Of Dust Disease In British Coal Mining* (Aldershot, 2007)

^{iv} Christopher Sellers and Joseph Melling (2012), 'Towards a transnational industrial-hazard history: charting the circulation of workplace dangers, debates and expertise', *The British Journal for the History of Science*, 45, pp 401-424 doi:10.1017/S0007087412000374.