# Chapter 3
# The Political Use and Abuse of Science

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## ABSTRACT

*This chapter examines the dialectical role of science in its promotion of public policy and the manner in which scientific autonomy has been challenged to further political ends. Various episodes in the ever-expanding technological reach of the marriage of science and politics are historically recounted to demonstrate the threat to scientific self-rule and to individual scientists who have been relegated to instrumentally functional roles. It is argued that the emergent class status of scientists has been subverted by the triumvirate of technology, industry, and religion. Moreover, science has met its greatest challenge from those entities which understand how the use of technology and scientific discovery translate into regulatory measures.*

## INTRODUCTION

When scientific investigation and experiment was first formalized within associations like the Royal Society, the Acadèmie des Sciences and the American Philosophical Society in the United States, government had little to do with their ongoing operation.[1] Over time governments have routinely insinuated themselves into the workings of the scientific community. Between the two world wars, for example, totalitarian ideologies guided the practical outcomes of science. In the case of Aryan racial policy and the Nazification of the university system, some speculative aspects of science were sidelined because they were too closely associated with Jewish scientists. It is estimated that the physics community was gutted by 15% to 25% and pure research was suppressed in favor of the practical and technical applications of knowledge, all in service to the needs and goals of the mythical *Volk*. According to Alan Beyerchen, the remaining scientific community ranged from those who gave into a "prudential acquiescence", a phrase he borrowed from Joseph Haberer, or sheer opportunism in service of the Nazi agenda.[2] Similarly, while Marxism may have found some innovations in psychoanalysis too bourgeois, Marxism in general embraced the application of technology and science for the benefit of humanity.[3] However, by the 1930s science in

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the Soviet Union had been absorbed by the five-year-planning mentality and centralized control through a Commissariat. As with Nazism, science was directed by production and industrial goals that eclipsed basic research in favor of the construction of a socialist and industrialized state. Centralized control had effectively aligned professional ambitions to the aims of party organs.[4] Scientists were pressured to avoid speculative reason and to pursue applicative and productive processes. Communication outside the Soviet Union became suspect and the inability to accurately forecast future research according to the demands of five-year planning undermined the vitality of scientific investigation. If these demands were not coercive enough, the Soviet scientific community would also suffer from both the short-lived Cultural Revolution and the Great Purge; in the first instance, unqualified party members supervised seasoned scientists, and in the latter, many scientists were sent to the gulag. A special challenge was presented by reconciling dialectical materialism with science; ideologues triumphed and dictated which methods best served the proletarian. Infamously, a public debate on the direction of research in genetics resulted in its abolition from textbooks.[5] Independent scientific associations would have to wait until *glasnost* under Gorbachev.

In the United States, it was only after the war in a public report to President Truman that the director of the Office of Scientific Research and Development, Vannevar Bush, promoted a prominent role for science. [6] Bush's report, *Science: The Endless Frontier* (July 25, 1945), which addressed the question first raised by Franklin Delano Roosevelt: What can be done, consistent with military security, and with the prior approval of the military authorities, to make known to the world as soon as possible the contributions which have been made during our war effort to scientific knowledge?, argued that the fruits of science were not only synonymous with the goals of government, but consistent with the historical narrative of the United States. Bush's statement was reinforced by repeated references to Frederick Jackson Turner's frontier thesis.[7] In this storyline, Jonathan Moreno credits the American pragmatist C.S. Peirce, who proposed that the meaning of ideas be calculated in their practical effects, for elevating the status of technical achievement alongside theoretical innovations. (Moreno, p.44) Additionally, Peirce's concept of the community of inquiry promised that progressive scientific inquiry would ultimately produce a more precise view of the real world. The spirit of open dialogue within the scientific community can also take some credit for advancing innovation, which would outpace the Soviet Union where lack of open communication among researchers stifled competition and progress.

Vannevar Bush could not have predicted, but following the war, scientific and technological advances remained infused with deliberations of war and military ambitions, lending credence to Randolph Bourne's assessment that the modern state is essentially militaristic.[8] The shift from private institutional funding to government subsidy for research fueled the marriage between science and politics. Bush's appeal for an institutional role for science in service of national welfare was garnered in his position as director for the Office of Scientific Research in which he oversaw wartime research and development, including supervision of The Manhattan Project (Haberer, 1969, p.185). Bush's early appeal for an active role for the scientific community in the welfare of the state persisted with the establishment of the President's Science Advisory Committee (PSAC) in 1951. Twenty years after the Second World War, action by the PSAC confirmed the alliance between science and government policy. Following the revelations of Rachel Carson, the PSAC would establish a precursor to the Environmental Protection Agency, the Environmental Pollution Panel (EPP). This panel would release a spirited statement, *Restoring the Quality of Our Environment* (The White House, November 5, 1965), which boldly promoted the need for environmental leadership at the level of the federal government in order to protect the very heritage of the United States.[9] The EPP also expressed the clear obligation that the government had in underwrit-

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