How Experts Prevailed

Strengthening International Regimes: The Case of Radiation Protection

Daniel Serwer, Palgrave Macmillan, 2024, \$129.99/hardcover, e-book available, 431 pages.

REVIEWED BY HARRY KOPP

Advances in science and medicine invariably present risks to society as well as benefits. In some cases, international understandings or normative regimes arise that mitigate risks while preserving benefits; in others, such regimes are weak or nonexistent, and societal risks are correspondingly greater. In this book, an elaboration of his doctoral thesis written at Princeton in 1975-1976, retired Foreign Service Officer Daniel Serwer looks behind the results of norm-setting efforts to explore what forces separate success from failure.

The book is a work of extraordinary scholarship and surprising optimism. At the center of the discussion is the concept of the "epistemic community," which Serwer defines as "a network of professionals with policy-relevant expertise who share normative and causal beliefs, notions of validity, and a common policy enterprise."

The case study identified in the title is the development of norms governing exposure to and protection from certain dangerous forms of radiation, X-rays and atomic radiation in particular.

At the turn of the 20th century, X-rays and radium were medical and scientific sensations whose properties were explored without regard to side effects. Physicians and their patients, physicists and others working with radioactive materials (including the women who painted watch dials with radium for the glow-in-the-dark effect) were soon found



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in increasing numbers to suffer skin cancers, often severe and sometimes fatal.

The dangers of exposure (and the danger of lawsuits) made clear the need for standards of measurement and protection that practitioners and the public could rely on.

Although nationalist sentiment after World War I remained quite high for many years, the radiological communities in Britain and France engaged with counterparts in Germany. By 1928 they had formed an International Commission on Radiological Protection (ICRP), a "self-selected and self-perpetuating epistemic community of physicists, physicians, engineers, biologists" that exists to this day, outside the control of any government and with no powers of enforcement.

The results, Serwer says, have been good: We continue to enjoy the benefits of radiation with low levels of risk.

For most readers, the introduction and the first and last two chapters of this nine-chapter book will hold the greatest appeal. In these provocative sections, Serwer deepens the discussion of epistemic communities and explores why some issues, such as depletion of the ozone layer, yield to their regulation, while others, like pollution from toxic chemicals, do not.

He contrasts the success of epistemic communities in creating cooperative normative regimes with adversarial processes, including litigation, that are "ill-adapted to knowledge-rich issues and more suited to stop or prohibit than to protect and balance."

Epistemic communities have yet to arise to address some of the most critical scientific and technological problems of our time, which remain without broadly accepted norms to minimize risk while securing benefits. These include many environmental threats, editing of the human genome, artificial intelligence, neurotechnology, and the development and deployment of new vaccines.

Further afield, Serwer, a former vice president of the United States Institute of Peace, teases the notion that "epistemic communities of global experts might also help to improve state performance with regard to parameters like democracy, rule of law, governance and peace."

Even skeptics and congenital grouches will be drawn in and cheered by this analysis, which one can only hope will prove prophetic.

Harry W. Kopp, a Foreign Service officer from 1967 to 1985, was deputy assistant secretary of State for international trade policy in the Carter and Reagan administrations. He is the author of The Voice of the Foreign Service: A History of the American Foreign Service Association at 100 (2nd edition, 2024) and co-author with John K. Naland of Career Diplomacy: Life and Work in the US Foreign Service (4th edition, 2021).