Advisory Committee on Human Radiation Experiments (Ruth Faden, Chair), *The human radiation experiments: final report of the President's Advisory Committee on Human Radiation Experiments*, New York, Oxford University Press, 1996, pp. xxi, 620, $39.95 (0-19-510792-6).

In November 1993, the *Albuquerque Tribune* published a series of articles about people whose lives had been devastated because they had been injected with plutonium—without their knowledge or consent—by medical researchers working for the U.S. government. When Secretary of Energy-designate Hazel O'Leary read about these experiments she was shocked. On 15 January 1994, immediately upon assuming office as President, William Clinton responded to O'Leary's publicly expressed outrage by creating an Advisory Committee on Human Radiation Experiments. This committee was charged with "answer[ing] three fundamental questions": (1) What was the federal government's role in human radiation experiments conducted from 1944 to 1974? (2) By what standards should the ethics of these experiments be evaluated? (3) What lessons learned from studying past and present research standards and practices should be applied to the future? (p. xxiv).

What did the Advisory Committee find? Findings 12, 13, 14, 15, 16, 17, 18, 19 and 20 address Question (1) and document that between 1944 and 1974 the U.S. government and its scientists participated in deceptive and often harmful experiments on military personnel, on unsuspecting communities, on individual patients (adults and children), and even on members of the general public—often with little adequate follow up or record-keeping. These experiments laid the foundation for nuclear medicine (including radiation therapy for the treatment of cancer) and set the safety standards for both peaceful and military uses of atomic energy, but they often damaged and destroyed the lives of those who unwittingly became research subjects. For the most part, the researchers neither informed these people that they were being subjected to potentially harmful doses of radiation, nor asked them whether they wished to volunteer to serve as human guinea pigs.

Does anyone owe these victims of science an apology? Is any one liable for compensating them for the harm that they suffered at the hands of physicians and scientists? The Advisory Committee (in addressing Question 2) argues that the government and its scientists are both responsible and financially liable (thus opening the way for the victims to receive compensation). It notes "that as early as 1944 it was conventional for physicians and other biomedical scientists to obtain consent for human subjects of research . . . [unless] the research was intended to offer a prospect of medical benefit [to the research subject]" (Finding 10, p. 502). Therefore the government and its scientists are "morally responsible" for unconsented *non-therapeutic* research (Finding 11a, p. 502). The Advisory Committee also found—and this is more controversial—that even though, until 1974, there was no moral consensus requiring informed consent for potentially "therapeutic" experiments, none the less "government officials and investigators are blameworthy for not having had policies and practices in place to protect the rights and interests of human subjects who were used in research [that] might provide a direct medical benefit to subjects" albeit "they are less blameworthy for not having had such protections and policies" (Finding 11c, pp. 503–4). It is important to appreciate that with respect to "therapeutic experiments" the Advisory Committee is contending that even though it *was* customary to *exempt* research intended for the benefit of the subjects from any informed consent requirement, the government and its employees are none the less blameworthy because they did not protect their subjects better.

How, one might ask, can the government and the research community be held accountable (and legally liable) for violating a rule that had yet to be formulated? How can actions committed in the 1940s, 1950s and 1960s be judged by standards that were first agreed upon in the so-called bioethics revolution of the

1970s? Because, the Committee answers in a carefully thought out reply, the government and the researchers it supported had a moral, responsibility for protecting both the public and the subjects of scientific research. If they failed to live up to this responsibility, if they failed to develop adequate standards, *they* ought to pay the price, not their innocent victims.

One might charge that the Advisory Committee is being unreasonable in blaming people for actions that had yet to be proscribed as immoral. The Committee has an interesting reply—a reply that, moreover, demonstrates the importance of careful research into the history of medical ethics. As it happens, the so-called "therapeutic exemption" to the requirement of informed consent was *not* initially "the done thing"; it took some deliberate doing to make it "the done thing". There was no "therapeutic exemption" in the Nuremberg Tribunal's 1947 Code of Ethics for Research on Humans; that code categorically prohibited research on humans without their informed voluntary consent. Moreover, the Atomic Energy Commission and the U.S. military accepted the Nuremberg Code without seeking to introduce a therapeutic exemption. In 1954 the Army Office of the Surgeon General reissued the Nuremberg Code, with its stringent requirements of informed consent, as the official rule regulating all military and all military-funded research on human subjects; however, the research community rebelled. On 8 June 1962, at a meeting of the Board of Administrators of Harvard Medical School the medical faculty officially rejected the Surgeon General's 1954 regulation as overly-stringent. The Harvard Board decided to accept instead a set of principles drafted by Dr Henry Beecher. These principles emphasized that in therapeutic contexts obtaining informed consent may be "folly . . . difficult . . . to the point of impossible', therapy required a "special relationship of trust between subject or patient and investigator". On 12 July 1962, representatives from Harvard met the Army Surgeon General. Harvard, being Harvard, won. The researchers' triumph was total: the U.S. Surgeon General's Office permitted a "therapeutic exemption" which set the precedent for an international therapeutic exemption (Medical Research Council of Britain, 1963; World Health Organization, Declaration of Helsinki 1964, etc.). Thus the research community and the U.S. government deliberately chose to loosen the strict provisions of the Nuremberg Code. They thereby made licit the tragic experiments related by the Advisory Committee; and, to reiterate the Committee's position, they are thus responsible for compensating the victims of their ill-chosen policy.

The third question that the Advisory Committee addressed concerns the "lessons to be learned from studying the past". The pre-eminent lesson the Committee took away from its analysis was the importance of understanding the history of medical ethics—including the failings of past moral policies and practices. We have a responsibility for teaching the history of medical ethics, they argue, if for no other reason than to ensure that no future generation of medical researchers will, in their ignorance of the past, again attempt to jettison the safeguards that presently protect human research subjects. Some historians have recently announced, rather proudly, that they have found "the recent rise of medical ethics" eminently "resistible". In contrast, the historians who served on the Advisory Committee found a commendable synergy between bioethics and the history of medicine; they demonstrate that historically unexamined moral principles (such as the "therapeutic exemption") may not be worth living by. Historians sceptical of the importance of the history of medical ethics ought to read this book—they just might change their mind. Everyone interested in the history of medicine at the birth of the atomic age, or in the history of medical science generally, ought to read this superbly-organized, well-written and well-documented volume. The book is such a good read that one often forgets that it is a government report. Ruth Faden and her associates are to be congratulated.

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