

Essay

Human Sacrifice and Human Experimentation: Reflections at Nuremberg

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Hippocrates once said: “Life is short, the Art long, opportunity fleeting, experiment treacherous, judgment difficult.”¹ On this fiftieth anniversary of the Doctors’ Trial, which charged Nazi physicians with “crimes against humanity” and violations of Hippocratic ethics in the conduct of human experimentation, I want to begin with Hippocrates’ observation that to “experiment [is] treacherous.”

Being aware of medicine’s limited ability to cure and, thus, the temptation to resort to dangerous, heroic measures, Hippocrates admonished his fellow physicians, “[a]s to diseases, make a habit of two things—to help, or at least to do no harm.”² Hippocrates was not opposed to human experimentation in the practice of medicine, but in his day physicians experimented primarily to benefit individual patients, once customary remedies had proven ineffective.

At the dawn of medical science in the mid-1850s, “experiment treacherous” assumed a dimension not contemplated by Hippocrates. For the first time, experimentation would extend to countless patients, not for their direct benefit, but to advance scientific knowledge for the benefit of mankind.

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1. 4 HIPPOCRATES, APHORISMS 99 (W.H.S. Jones trans., Harvard Univ. Press 1967)
2. 1 HIPPOCRATES, EPIDEMICS 165 (W.H.S. Jones trans., Harvard Univ. Press 1972).

Medicine now held the promise of reversing Hippocrates' aphorism: Life would be longer, Art shorter and Science longer, Opportunity enduring, Judgment easier. To accomplish these objectives, a new breed of scientific physician-investigators expected their patient-subjects to make sacrifices on behalf of medical science. Thus, "experiment" would become even more treacherous.

The philosopher Hans Jonas, in a remarkable essay on human experimentation, comes close to equating human experimentation with the primeval human sacrifices that existed in some early societies for the "solemn execution of a supreme, sacral necessity"; for he suggested that both involved "something sacrificial [in their] abrogation of personal inviolability and the ritualized exposure to gratuitous risk of health and life, justified by a presumed greater, social good."³ Whatever the relationship between ancient religious practices of sacrifice as an offering to a deity and scientific research practices of sacrifice as an offering to medical progress, the readiness with which human sacrifice for the sake of scientific progress has been embraced by the medical profession is remarkable. As one distinguished surgeon put it: "[Conducting] controlled studies may well sacrifice a generation of women but scientifically [they] have merit."⁴

René Girard, in his book *Violence and the Sacred*, observes that "[i]n many rituals the sacrificial act assumes two opposing aspects, appearing at times as a sacred obligation to be neglected at great peril, at other times as a sort of criminal activity entailing perils of equal gravity."⁵ The conflict between medicine and law on the permissible limits of human experimentation, to which I shall return repeatedly, reflects these "opposing aspects." When do such "sacred [scientific] obligations" become a "criminal activity"?⁶

Sacrifice can be voluntary or involuntary. The distinction is crucial. Participation in human research always involves an element of sacrifice, for subjects are asked to submit to interventions that expose them to risks for the sake of the advancement of knowledge. In my view, unless one wishes to prohibit all research, such sacrifices are acceptable, even welcomed, if voluntarily made. Since overreaching, the "engineering of consent"⁷ as Edmond Cahn put it, is an ever-present danger, I shall argue that voluntary sacrifice can only be safeguarded if investigators learn that seeking voluntary consent is their moral obligation, if they learn to desist from employing the concept of voluntary consent as a deceptive subterfuge to shift moral responsibility for participation in research from themselves to their patient-subjects.

In my work I have been largely concerned with involuntary sacrifice

3. HANS JONAS, *Philosophical Reflections on Experimenting with Human Subjects*, in PHILOSOPHICAL ESSAYS 105, 110-11 (1974).

4. G. Robbins, *The Case for Radical Surgery*, in BREAST CANCER MANAGEMENT: EARLY AND LATE 35 (B. Stoll ed., 1977).

5. RENÉ GIRARD, *Violence and the Sacred* 1 (Patrick Gregory trans., 1972).

6. *Id.*

7. Edmond Cahn, *The Lawyer as Scientist and Scoundrel: Reflections on Francis Bacon's Quadricentennial*, 36 N.Y.U. L. REV. 1, 11 (1961).

which, as I have already suggested, brings to the surface a conflict inherent in all human research: respect for individual inviolability, on the one hand, and the pursuit of scientific knowledge for the benefit of mankind, on the other. Exploring this conflict in the context of the Nazi concentration camp experiments may seem ludicrous, because the brutality and torture inflicted during these experiments was so immoral that one need not probe further. Yet, I believe that the doctors' conduct illuminates, with flames from hell, less egregious though still troublesome practices that have stalked human experimentation from its beginnings to this day.

The Nuremberg Code is the one document that seeks in uncompromising language to protect the inviolability of subjects of research. It deserves to be taken more seriously than it has been by the research community.

We cannot resurrect the dead, but we can learn from their suffering.

When I received the invitation to speak at Nuremberg, I knew that I had to come. But I did not realize then how painful it would be to reimmerse myself in a history that is so inextricably intertwined with my personal and professional life. For what transpired in Nazi Germany has shaped my life as a person, a physician, and a teacher. In all my work the disadvantaged in our midst, those stripped of their rights and dignity—the mentally ill, women, children, patients, research subjects—have always been my people.

I was born in Germany—in the small town of Zwickau, Saxony—and lived there until 1938. After a year in Czechoslovakia, my immediate family escaped to England a few weeks before the invasion of Poland. Seven months later we arrived in the United States, and I eventually studied medicine at Harvard Medical School. I was a second-year medical student during the Doctors' Trial, but it was never discussed in any lecture or seminar, even though Harvard was a school that encouraged us to become investigators. Only after I joined the Yale Law School faculty, thirty-nine years ago, did I learn in any depth about the concentration camp experiments. A few years later, thoughts of those experiments led me, joined by many students, to a prolonged exploration of the ethical and legal implications of human experimentation,⁸ opening up a field of inquiry then pursued by only a handful of others.

As soon as I decided to go to Nuremberg, childhood memories flooded my mind: listening on the radio to Nazi party rallies where Hitler, Hess, Goebbels, and others spoke about my people in contemptuous and threatening ways. I was then a frightened Jewish boy, scared to go to school, where I knew I would be vilified and on a few occasions even beaten. I was angry at my parents for not leaving. They thought that it would all blow over. A "Final Solution" we did not contemplate; that was still years away.

The nightmare is now past; yet its memories are still alive. During the past few months, while I was writing this Article for the plenary session at Nuremberg, they haunted me in my dreams and during many nights when I

8. It led to the publication of the first casebook on human experimentation. JAY KATZ ET AL., *EXPERIMENTATION WITH HUMAN BEINGS* (1972).

could not sleep.

My problems in writing this article, however, remain unresolved. They are embedded in my intent to focus on an aspect of my life's work that began with what I learned about Auschwitz but then went beyond the Nazi horrors, to an exploration of physicians' striking inattentiveness to ethical values in the conduct of human experimentation before, during, and after the Nazi era. To be sure, at no time in the annals of human experimentation have physicians conducted experiments on humans with the sadism witnessed during the darkness of the Nazi period, where, for example, the investigators watched the deaths of their subjects and did nothing to stop the experiments because death and dissection of the corpses were an integral part of the research design.

Thus, in making any comparisons between the Nazi experiments and underlying problems in all human research, no matter how qualified, in the belief that we must learn from history and that its darkest moments have much to teach us, would I detract from the "uniqueness" of the suffering of the millions who were slaughtered, many with the active collaboration of physicians, and of the thousands who perished in the service of human experimentation? Would I make invidious comparisons between the conduct of Nazi physician-investigators and physician-investigators in the rest of the Western world? I put my questions this starkly because they have haunted me during the past months.

While I believe that the concentration camp experiments, which transgressed the last vestiges of human decency, can be located at one end of a continuum, I also believe that toward the opposite end, we must confront a question still relevant in today's world: How much harm⁹ can be inflicted on human subjects of research for the sake of medical progress and national survival? Knowledge about hell can make investigators pause and reflect, as it did at times during the days of the Cold War, when a few American physician-scientists, while contemplating experiments much less egregious than those conducted by the Nazi physicians, asked: "Are we beginning to behave as they did?"

The concentration camp experiments are embedded in the Holocaust, in what happened to my people, my relatives, Gypsies, homosexuals, political prisoners, and prisoners of war. The confluence of many forces—including biological science and the ideology of the Nazi state—made the Holocaust well-nigh inevitable. And physicians' inattentiveness to the problematics of Hippocratic ethics and its oath, which had served medicine well in the days of the Greeks and throughout the Middle Ages but required a thoroughgoing reappraisal at the dawn of the age of medical science, added its own contributions to the Holocaust and the concentration camp experiments.

9. By harm, particularly in contemporary research, I mean not only physical harm but also dignitary harm inflicted whenever subjects remain uninformed or inadequately apprised of the purposes and nature of the research project.

Since others at this conference will talk about the Holocaust—the murders committed during the selections for death or work—I shall address only the human experimentation aspects of the Holocaust. I do want to underscore, however, that, unlike in other historical instances of mass murder, the Final Solution was carried out by doctors acting as executioners, and that science—biological science—added its own justifications for the Holocaust and euthanasia as well. How could physicians behave that way? How could doctors become murderers?

I have no answers. Nor have I read any that satisfy me. Robert Lifton, in his pioneering book *The Nazi Doctors*, suggests that an explanation can be found in the psychological principle of “‘doubling’: the division of the self into two functioning wholes, so that a part-self acts as an entire self [an Auschwitz self and a non-Auschwitz self].”¹⁰ “The Nazi doctors’ immersion in the healing-killing paradox,”¹¹ Lifton says, “was crucial in setting the tone for doubling,” leading doctors to “[subvert] medicine from a practice of healing to a science of killing. Nazi medicine was not just corrupted, it was inverted.”¹²

“Doubling,” however, cannot explain the brutality of the Nazi physicians’ conduct. Doubling is an all too human proclivity, a manifestation of man’s conflictual nature. And physician-investigators are particularly susceptible to the perils of doubling because in their scientific pursuits their commitment to the objective imperatives of the research protocol conflicts with, and can take precedence over, the individual needs of subjects. Thus, in human research, the healing-harming-(killing) “paradox” is inherent in the task itself and “inversion” an ever-present danger.

Let me note only in passing that with regard to euthanasia, “the healing-killing paradox” is graphically illustrated in an article published in 1941 in the *American Journal of Psychiatry* by a Cornell Medical School professor, who recommended that hopelessly unfit children—“nature’s mistakes”¹³—should be killed, and the less unfit sterilized so that “thereafter civilization will pass on and on in beauty.”¹⁴ The Nazis began by killing their own “defectives” and then went on to killing Jews and Gypsies, whom they also considered biologically “defective.”

I continue to find it inexplicable, despite the many explanations that have been advanced, that involuntary sacrifice, with physicians’ active participation or passive acquiescence, went so totally out of control at Auschwitz. Can one say more than Erasmus did: *Homo homini aut deus aut lupus* (Man is to man either a god or a wolf)? Do we romanticize physicians too much when we wish to exclude them from Erasmus’s dictum? Must we recognize, for the sake of the future, that the ingredients for what happened at Auschwitz are inherent in the

10. ROBERT JAY LIFTON, *THE NAZI DOCTORS* 418 (1986).

11. *Id.* at 430.

12. *Id.*

13. Foster Kennedy, *The Problem of Social Control of the Congenital Defective: Education, Sterilization, Euthanasia*, 99 AM. J. PSYCHIATRY 13, 14 (1942).

14. *Id.* at 16.

conduct of research and that we must learn to control it better at its source?

Let me turn to the Doctors' Trial. I shall relate it in two parts. First, I will describe two experiments most briefly; and then, after a few comments on the history of medical ethics, I will analyze the Tribunal's judgment and its implications for the future conduct of human research.

The Doctors' Trial was the first of twelve trials that followed the Nuremberg trial of the major war criminals by the International Allied Military Tribunal. Conducted by American judges, the Doctors' Trial focused on experimentation on human beings during the Nazi regime. Evidence on the experiments was presented over many months in excruciating detail.¹⁵ I have reviewed the record many times and still find it devastatingly painful to read.

Most notorious among the experiments was Dr. Sigmund Rascher's work on the effects of high altitude on human survival. On May 15, 1941, Rascher wrote to Heinrich Himmler:

During [a medical selection course in which] research on high altitude flying played a prominent part [we learned that English fighter planes were able to reach higher ceilings than we could]. [R]egret was expressed that no experiments on human beings have so far been possible for us because such experiments on human beings are very dangerous and nobody is volunteering. I therefore put the serious question: is there any possibility that two or three professional criminals can be made available for these experiments? . . . The experiments, in which the experimental subject of course may die, . . . are absolutely essential . . . and cannot . . . be carried out on monkeys, because monkeys offer entirely different test conditions.¹⁶

Dr. Rudolf Brandt, on behalf of Himmler, responded promptly: "I can inform you that prisoners will, of course, be gladly made available for the high-flight researches. . . . I want to use the opportunity to extend my cordial wishes to you on the birth of your son."¹⁷

In Rascher's report on one of these experiments, he described in graphic detail the fate of

a 37-year-old Jew in good general condition who [at ever increasing altitudes] began to perspire and to wiggle his head [and to suffer from severe] cramps [B]reathing increased in speed and [he] became unconscious. . . .

Severest cyanosis developed . . . and foam appeared at the mouth.

. . . After breathing had stopped the electrocardiogram was continuously written until the action of the heart had come to a complete standstill. About 1/2 hour [later,] dissection was started."¹⁸

The freezing experiments, many fatal, were even more brutal, if that is possible. The subjects were immersed in ice water for hours on end. They

15. See 1 & 2 TRIALS OF WAR CRIMINALS BEFORE THE NUERNBERG MILITARY TRIBUNALS UNDER CONTROL COUNCIL LAW NO. 10 (1949) [hereinafter *The Medical Case*].

16. 1 *id.* 142.

17. 1 *id.* 143.

18. 1 *id.* 146.

pleaded to be shot to escape their unbearable agony. As I read these accounts, I could almost hear their agonizing pleas. These and the many other experiments, conducted at Auschwitz and elsewhere, bear testimony to the brutality inflicted on “lives not worth living” and therefore expendable.

Rascher, in his report, was delighted that the heart actions he had recorded “will [prove to be of] particular scientific interest, since they were written down with an electrocardiogram to the very end.”¹⁹ For him the experiment represented another triumph in the 100-year history of human sacrifice for the sake of the advancement of knowledge.

Experimentation with human beings antedates the Nazis. Its roots go back to antiquity, but in the 1850s, human research increased in magnitude unprecedented during the millennia of medical history. Academic physicians observed with envy the discoveries in physics and chemistry that had resulted from systematic, objective investigations, and they adopted the methodologies of the physical sciences so that medicine would also become a respected scientific discipline. At the same time, doctors lost sight of the fact that it is one thing to experiment with atoms and molecules and quite another to do so with human beings. Once, while reflecting on the inhumanity of Auschwitz, my thoughts took me back to these beginnings of medical research. I was struck by how quickly physicians accepted these new ways of conducting research with human beings, never asking whether fellow human beings, particularly patients, should be subjected to these novel practices and, if so, with what safeguards.

The initial advances in knowledge that resulted from such scientific investigations, which promised to alleviate human suffering to an extent previously unknown, seemed to justify the means employed. The uncharted moral path led only once to Auschwitz; yet, on many other occasions down the road, human beings would pay a considerable price for the sake of medical progress.

The early fruits of medical research were spectacular. The bacterial etiology of many diseases was proven, resulting in cures never before the lot of mankind. Investigations of the use of X-rays to see the previously invisible revolutionized diagnostic techniques. Experiments with various anesthetic agents led to remarkable advances in surgery.

These experiments were largely conducted in public hospitals with the poor, with children, women, prostitutes, the elderly—that is, with the disadvantaged, the downtrodden. Albert Moll, in his remarkable book *Ärztliche Ethik*, published in 1902, described many experiments conducted with patient-subjects throughout Europe and the United States during the late nineteenth century.²⁰ He was particularly troubled by experimentation with the terminally ill, who frequently served, as they still do, as subjects of research. Since they would soon die anyway, learning from them seemed self-evidently

19. 1 *id.* 147.

20. ALBERT MOLL, *ÄRZTLICHE ETHIK* (1902)

the right thing to do. In reading these accounts my mind turned again to the Auschwitz subjects, who were also terminal cases—"lives not worth living"—soon to be reduced to ashes.

Human research and its contributions to the advancement of knowledge captured the imagination of doctors. The promise that omnipotence would replace the earlier struggle against impotence, and the promise of fame, academic advancement, and perhaps even economic fortune, loomed large in physicians' minds.

But the intrusion of research into the clinical practice of medicine required keeping the two enterprises separate. Patients went to doctors to be helped and not to serve as research subjects. Crucial distinctions needed to be made between clinical care and human research for the advancement of science. Instead, the boundaries between therapy and research became blurred. The "therapeutic illusion"²¹—that research would in some undefined ways benefit subjects—contributed to this obfuscation.

Although physician-investigators were aware of the pain suffered by, and the occasional deaths of, their patient-subjects, they did not consider whether they might be violating their Hippocratic duty not to harm their patients. I shall return to this problem shortly. For now, let me note that this history reveals antecedents to the concentration camp experiments. However different they were in degree of torture and brutality, the experiments conducted by pre-World War II physician-investigators, largely medical school professors, were precursors to what transpired at Auschwitz. Medical students observed their teachers, read about their scientific investigations and their uses and abuses of patients. Dr. Helmut Poppendick, one of the Nazi doctor defendants, put it this way: "I knew [from my student days] that the modern achievements of medical science had not been brought about without sacrifices."²² Would the Nazi doctors have behaved differently without that history? At least some of them might have paused and reflected had they been differently educated.

When medical science and medical practice became intertwined, a new ethical question should have been raised: Are physicians' obligations to their patient-subjects different from their obligations to their patients? But only a few remarkable physicians considered that question, and their concerns were not heeded.²³

So far I have focused on the beginnings of objective medical science. I now want to turn to the history of medical authoritarianism. The relentless pursuit of science, with its inherent dangers of objectifying subjects, became embedded in the ancient tradition of medical authoritarianism, with its inherent objectification of patients.²⁴ Both dynamics make it difficult to respect

21. ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS: FINAL REPORT 143 (1995) (quoting Law-Medicine Research Institute, Final Report 43) [hereinafter HUMAN RADIATION EXPERIMENTS].

22. 2 *The Medical Case* 155.

23. See SUSAN LEDERER, *SUBJECTED TO SCIENCE* 1, 10, 97-98 (1995).

24. See JAY KATZ, *THE SILENT WORLD OF DOCTOR AND PATIENT* 1-29 (1984).

patient-subjects as persons with their own interests and rights.

In my readings on medicine from ancient and medieval times up to the present, I was impressed by physicians' awareness of their relative impotence, on the one hand, and their conviction that they had something useful to offer to their patients, on the other. In the late seventeenth century, the physician Samuel de Sorbière wrote that medicine "is a very imperfect science, . . . quite full of guesswork, [and] . . . scarcely understands its subject matter."²⁵ He was of two minds about whether to be truthful with patients or to foster their unconditional confidence in their physician because such confidence served the purposes of cure.

This conflict was generally resolved by encouraging physicians to be authoritarian—to demand that patients be obedient and follow doctors' orders if they wanted to be helped. "Should the patient not submit to your discipline . . . do not persevere in the treatment,"²⁶ said the physician Isaac Israeli around 900 A.D. And the surgeon Henri de Mondeville wrote around 1200 A.D. that "the surgeon also should promise that if the patient . . . will obey the surgeon . . . he will soon be cured."²⁷ As late as the mid-1950s, the influential sociologist Talcott Parsons observed: "[T]he doctor-patient relationship has to be one involving an element of authority—we often speak of 'doctors' orders.'²⁸

Any disclosures were limited to enlisting patients' cooperation; otherwise, as Hippocrates had put it, "[reveal] nothing of the patient's future or present condition."²⁹ A patient's blind trust was considered essential, even though, beyond comforting attention and a few potions, physicians had little to offer for the cure of disease.

In sum, two precepts were handed down from generation to generation of Hippocratic physicians: to avoid doing harm and to insist on silent obedience. The latter, in particular, had far-reaching consequences for the conduct of research; for the same authoritarianism with which patients had traditionally been treated in therapeutic settings was imposed on subjects of research, who learned little, if anything, about the scientific purposes for which they were recruited.

Physician-investigators seemed oblivious to these moral issues and, if they were not, charged ahead anyway. Ultimately—and, ironically, first in Germany—the state took notice and began to regulate research. In 1900, Dr. Albert Neisser was put on trial after it became known that he had injected serum from patients with syphilis into patients, largely prostitutes, suffering

25. Samuel de Sorbière, *Advice to a Young Physician*, in LEGACIES IN ETHICS AND MEDICINE 237, 249 (Chester R. Burns ed., 1977).

26. Ariel Bar-Sela & Hebbel E. Hoff, *Isaac Israeli's Fifty Admonitions to the Physicians*, reprinted in LEGACIES IN ETHICS AND MEDICINE, *supra* note 25, at 145, 155.

27. Mary Catherine Welborn, *The Long Tradition: A Study in Fourteenth-Century Medical Deontology*, reprinted in LEGACIES IN ETHICS AND MEDICINE, *supra* note 25, at 204, 213.

28. TALCOTT PARSONS, *THE SOCIAL SYSTEM* 464–65 (1951).

29. 2 HIPPOCRATES, *DECORUM* 299 (W.H.S. Jones trans., Harvard Univ. Press 1967).

from other diseases.³⁰ The German academic medical community defended his conduct. Lawyers, on the other hand, argued that “nontherapeutic research without consent fulfills the criteria of physical injury in criminal law.”³¹

That same year, the Prussian Parliament enacted the first, limited state regulation of research.³² The lawyer Ludwig von Bar, a consultant to the Prussian Minister, put it well: “Respect for rights and morality has the same importance for the good of mankind as medical and scientific progress.”³³ One hundred years later, his assertion is still being contested, and it was most flagrantly disregarded by the Nazi doctors.

In 1931, the Weimar Republic enacted regulations providing protection not only for subjects of nontherapeutic research but also for patients receiving “innovative therapy.”³⁴ The minutes of the 1930 meeting that preceded the enactment of these regulations record how the academic physicians made light of what they called “rare” abuses, emphasizing instead the importance of advancing medical science.³⁵ Only Dr. Julius Moses, a physician and member of the German Reichstag, argued for official guidelines to protect patients from dangerous experiments.³⁶ His was a lone voice among physicians.³⁷

The role of the state in the regulation of medicine raises complex questions that I cannot discuss in this Essay. Note, however, that in the United States common-law judges, not physicians, promulgated the doctrine of informed consent in medical practice, giving some decision-making authority to patients.³⁸ Medicine has never created a regulatory framework for its practices, and this lack of a structure may come to haunt us in this age of managed care and physician-assisted suicide.

Michael Kater concluded his scholarly analysis of *Doctors Under Hitler* with the observation that “[i]t was in the interpersonal relationship between healer and patient that German medicine corrupted itself [by contravening] the most important principle of the Hippocratic Oath ‘I will use treatment to

30. See Jochen Vollman & Rolf Winau, *The Prussian Regulations of 1900: Early Ethical Standards for Human Experimentation in Germany*, 18 IRB 9-10 (July-Aug. 1996).

31. *Id.* at 10.

32. See Michael A. Grodin, *Historical Origins of the Nuremberg Code*, in GEORGE J. ANNAS & MICHAEL A. GRODIN, *THE NAZI DOCTORS AND THE NUREMBERG CODE* 121, 127 (1992).

33. See Vollman & Winau, *supra* note 30, at 10.

34. See Grodin, *supra* note 32, at 130-31.

35. See DER REICHSMINISTER DES INNERN, *RICHTLINIEN FÜR NEUARTIGE HEILBEHANDLUNG UND FÜR DIE VORNAHME WISSENSCHAFTLICHER VERSUCHE AM MENSCHEN* (1932) (mimeographed typed transcript, on file with author).

36. See *id.*

37. Neither the 1900 Prussian regulations nor the 1931 Weimar Republic guidelines seemed to have made much of an impact on the conduct of human research. In 1941 when the Nazi concentration camp experiments began, see *supra* notes 15-18 and accompanying text, whatever the impact the earlier regulations might have had, they became utterly ineffective because the need to advance knowledge for the sake of national survival in wartime made research with “lives not worth living” acceptable without question.

38. See *Canterbury v. Spence*, 464 F.2d 772 (D.C. Cir. 1972); *Salgo v. Leland Stanford Jr. Univ. Bd. of Trustees*, 317 P.2d 170 (Cal. Dist. Ct. App. 1957); *Natanson v. Kline*, 350 P.2d 1093 (Kan. 1960). These and other cases as well as the evolution of the legal doctrine of informed consent are discussed in KATZ, *supra* note 24, at 59-80 (1984).

help the sick according to my ability and judgment, but never with a view to injury and wrongdoing.”³⁹ But as I have tried to demonstrate, the corruption Kater speaks of has a long history. Moreover, the Hippocratic Oath—a document that emphasizes physicians’ obligation of caring attention toward individual patients—says nothing about the ethics of human research that has relevance for an age of scientific medicine, unless one wants to invoke the oath to put a stop to most research. Thus, after the dawn of the age of science, the medical profession failed its members and its patients by not modifying its oath to reconcile its commitment to patients’ welfare with radically changed circumstances.

For many reasons, physicians have preferred to view human experimentation merely as an extension of medical practice. In 1916 the Harvard physician Walter Cannon recommended to the House of Delegates of the American Medical Association that it endorse the importance of obtaining patient consent and cooperation in human experimentation.⁴⁰ His proposal, however, was not brought up for consideration. One influential physician observed that “it would open the way for a discussion of the importance of obtaining the consent of the patient before any investigations are carried on which are not primarily for the welfare of the patient.”⁴¹

And this is only half the story. Disclosure in these contexts would require discussions with patient-subjects of the uncertainties inherent in therapeutic medicine as well;⁴² and, if that were to happen, the question would arise: Why should not patients be similarly informed? Physicians feared that their authority to make decisions on behalf of patients would be undermined and patients’ best interests would be detrimentally affected. Doctors viewed such prospects, as they still do, as a threat to the traditional practice of medicine. They valued silence, their own and their patients’, for silence maintains authority.

The Doctors’ Trial, as never before, confronted the world with agonizing accounts of what physician-scientists can do and justify when respect for human dignity is totally abrogated. Their conduct was so aberrational, almost unbelievable, that the prosecution and judges found it difficult to sort out the implications of what had transpired in the concentration camps in terms of medicine’s past and future.

In this concluding section, I intend to analyze some of the problems and confusions that haunted the trial; but first I want to note that, confusion notwithstanding, the Tribunal articulated a vision of the limits of scientific medical research that was clear and unambiguous. To be sure, its

39. MICHAEL H. KATER, *DOCTORS UNDER HITLER* 240 (1989).

40. See LEDERER, *supra* note 23, at 97–98.

41. *Id.* at 98.

42. For a discussion of the complexities inherent in medical uncertainty, see KATZ, *supra* note 24, at 165–206 (1984).

pronouncement would eventually require elaboration and modification,⁴³ but it was the uncompromising clarity of its vision about the primacy of consent that proved so disturbing to the medical community.

The problems began with the opening statement by Telford Taylor, then chief counsel for the prosecution of war crimes, who charged the doctor-defendants "with murders, tortures, and other atrocities committed in the name of medical science."⁴⁴ But in his closing argument, James McHaney, the chief prosecutor for the medical case, redirected the Tribunal's attention to what he considered the nub of the case: "[T]hese defendants are, for the most part, on trial for the crime of murder. . . . It is only the fact that these crimes were committed in part as a result of medical experiments on human beings that makes this case somewhat unique. And while considerable evidence of a technical nature has been submitted, one should not lose sight of the true simplicity of this case."⁴⁵

Thus, was it a murder trial of ordinary criminals, who also happened to be doctors, or of medical scientists (and medical science) whose conduct made them murderers? The ensuing and prolonged disregard of the Nuremberg Code by members of the medical profession depended on their answer to this question. Most focused on the barbarism of the Nazi doctors' conduct and concluded that the code was relevant only to Nazi practices but not to research in a civilized world.⁴⁶ They disregarded the fact that murder and torture were not the sole issues before the court. Beyond murder, the permissible limits of scientific research were on trial as well.

The Tribunal addressed both issues: "War crimes and crimes against humanity" and rules that must be observed in the conduct of medical experimentation. With respect to the latter, the Tribunal observed that "medical experiments . . . when kept within reasonably well defined bounds, conform to the ethics of the medical profession generally."⁴⁷ But then the judges immediately asserted that "[a]ll agree however, that certain basic principles must be observed in order to satisfy moral, ethical and legal concepts."⁴⁸

The phrase "all agree" was confusing. Who were these "all"? Surely not the Nazi doctors, among them some of the most distinguished German medical scientists, and surely not many physician-investigators of the nineteenth and

43. For example, the limits of proxy consents in experimentation with children and the mentally disabled.

44. 1 *The Medical Case* 27.

45. See Grodin, *supra* note 32, at 136-37 (quoting Trials of War Criminals, Closing Argument for the United States of America by James M. McHaney, July 14, 1947, transcript pp. 10718-96).

46. HUMAN RADIATION EXPERIMENTS, *supra* note 21, at 151. The Advisory Committee reported: [David Rothman] asserts that "the prevailing view was that [the Nuremberg medical defendants] were Nazis first and last; by definition nothing they did, and no code drawn up in response to them, was relevant to the United States." Jay Katz has offered a similar summation of the immediate response of the medical community to the Nuremberg Code: "It was a good code for barbarians but an unnecessary code for ordinary physicians."

Id.

47. 2 *The Medical Case* 181.

48. *Id.*

early twentieth centuries. Nor do many contemporary medical scientists embrace the Tribunal's principles. The confusion, I believe, had its origins in the previously noted disagreement over the issues that required adjudication: All agreed with the prohibition against murder and torture; but "all" did not agree with the Tribunal's "basic principles" for the conduct of research.

Of the ten principles known as the Nuremberg Code, the first will be my focus here. It reads: "The voluntary consent of the human subject is absolutely essential."⁴⁹ The judges did not, however, stop there. Instead, they went to unusual lengths to define voluntary consent, in terms of both subjects' capacity to give consent and the information that investigators must provide to subjects. It is the detailed disclosure requirements which, I believe, the research community has found difficult to accept.⁵⁰

The judges wondered whether they had gone too far in imposing their legal views on the medical profession: "[O]ur judicial concern, of course, is with those requirements which are purely legal in nature. . . . To go beyond that point would lead us into a field that would be beyond our sphere of competence."⁵¹ But if indeed they did venture "beyond [their] sphere of competence," they were compelled to do so. Whatever their ignorance of medicine's needs, being American judges—steeped in the self-determination ideal, so much celebrated in our political tradition—they wanted their first principle to safeguard human dignity and inviolability, in research and civilized life.

The judges then shifted their focus back to the concentration camp experiments. This, too, proved confusing, because it created the impression that their code applied only to the case before them, that they were not addressing the entire universe of human experimentation. Yet, in their preamble to the Nuremberg Code, they had suggested otherwise. There they spoke to this entire universe when they averred that they wanted to promulgate "basic principles [that] must be observed in order to satisfy moral, ethical and legal concepts [in] the practice of human experimentation." This is my view of their intent. And

49. *Id.*

50. The judges stated:

This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, or deceit, duress, over-reaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an enlightened decision by the experimental subject there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonably to be expected; and the effects upon his health or person which may possibly come from his participation in the experiment.

The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity.

2 *The Medical Case* 181-82.

51. *Id.*

this gives their pronouncements historic significance for the post-Nuremberg conduct of experimentation with human beings.

In the most uncompromising language, the judges suggested in their first principle that the tensions between progress in medical science and the inviolability of subjects of research must be resolved in favor of respect for the person, his or her self-determination and autonomy. Consent became the necessary justification for the conduct of research, though not a sufficient justification. In most of its nine other principles, the Tribunal spelled out other conditions that must be met before human beings could even be asked to serve as means for others' ends. These conditions include importance of the research question, prior animal experimentation, and avoidance of unnecessary or predictably disabling injury or death.⁵²

Critics have correctly observed that the first principle was of course violated in the case before the Tribunal, for none would have given their "voluntary" consent when being immediately dispatched to the crematoria was the only alternative. Thus, beyond the coercion which vitiated any semblance of consent, these critics have argued that the basic problem with the concentration camp experiments was the brutal and lethal ways in which the subjects were cruelly sacrificed for the sake of research. This incontrovertible fact only lends support to my contention that the first principle, like the rest of the code, did not speak solely to what transpired at Auschwitz; it spoke to the future. Put another way, with regard to making a judgment about the Nazi physicians' conduct, the Tribunal did not have to promulgate its first principle of "voluntary consent," for the evidence on "crimes against humanity" was

52. The other nine principles are:

2. The experiment should be such as to yield fruitful results for the good of society, unprocurable by other methods or means of study, and not random and unnecessary in nature.

3. The experiment should be so designed and based on the results of animal experimentation and a knowledge of the natural history of the disease or other problem under study that the anticipated results will justify the performance of the experiment.

4. The experiment should be so conducted as to avoid all unnecessary physical and mental suffering and injury.

5. No experiment should be conducted where there is an *a priori* reason to believe that death or disabling injury will occur; except, perhaps, in those experiments where the experimental physicians also serve as subjects.

6. The degree of risk to be taken should never exceed that determined by the humanitarian importance of the problem to be solved by the experiment.

7. Proper preparations should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death.

8. The experiment should be conducted only by scientifically qualified persons. The highest degree of skill and care should be required through all stages of the experiment of those who conduct or engage in the experiment.

9. During the course of the experiment the human subject should be at liberty to bring the experiment to an end if he has reached the physical or mental state where continuation of the experiment seems to him to be impossible.

10. During the course of the experiment the scientist in charge must be prepared to terminate the experiment at any stage, if he has probably [sic] cause to believe, in the exercise of the good faith, superior skill and careful judgment required of him that a continuation of the experiment is likely to result in injury, disability, or death to the experimental subject.

Id. at 182.

sufficient to indict and convict the Nazi physicians.⁵³ All this suggests that the judges had a broader objective in mind. American judges are not averse to going beyond the facts of a case; in this instance, I am glad that they did.

Another confusion was introduced by the medical experts for the prosecution, who asserted that in the rest of the Western world, physician-investigators conducted their research according to the highest ethical medical standards, including obtaining consent. I doubt that the judges believed them. On cross-examination, Dr. Andrew C. Ivy was forced to admit that the first written AMA code on human experimentation was enacted while the trial was under way, a fact he had tried to hide on direct examination.⁵⁴ Whatever the judges' reactions to this testimony, they required little convincing that physician-investigators should not use human beings for research without consent and, if they had done so in the past outside of Auschwitz, such practices should cease. Their convictions on that point were only reinforced by the nightmarish stories they had just heard.

They could not know that for decades their code would make little impact on research practices; that many violations would continue to occur in the United States and elsewhere. For example, the Tuskegee Syphilis Study, begun in 1932, in which the lives and health of many African-Americans were ruined, was not stopped until 1972.⁵⁵ That study had been conducted by the U.S. Public Health Service with 400 uninformed African-American men in order to gather data on the natural history of untreated syphilis from its inception to death. The study should never have begun, and it surely should have been stopped in the early 1940s when effective treatment for some of the late manifestations of syphilis became available.

Or consider the experimental injection of live cancer cells into uninformed elderly patients at the Brooklyn Jewish Chronic Disease Hospital.⁵⁶ Or consider

53. The Doctors' Trial, as all others, was guided by Control Council Law No. 10: Punishment of Persons Guilty of War Crimes, Crimes Against Peace and Against Humanity:

Article II

1. Each of the following acts is recognized as a crime:

c. *Crimes against Humanity.* Atrocities or offences . . . including but not limited to murder, extermination, enslavement, . . . torture, . . . or other inhumane acts committed against any civilian population, or persecutions on political, racial or religious grounds whether or not in violation of the domestic laws of the country where perpetrated.

1 *The Medical Case* at xvi-xvii.

54. See Jay Katz, *The Nuremberg Code and the Nuremberg Trial: A Reappraisal*, 276 JAMA 1662, 1663-64 (1996); see also Jon M. Harkness, *Nuremberg and the Issue of War Time Experiments on US Prisoners*, 276 JAMA 1672 (1996). Harkness documents that Ivy's assertion that a committee appointed by Governor Green of the state of Illinois had drafted regulations for research with prisoners was untrue, for at the time of Ivy's testimony the committee had not even met. "Indeed, Ivy held to this position so steadfastly in the trial that it seems he was willing to risk perjury—or, at least, avoid the truth—to hold his ground." *Id.* at 1675.

55. See FINAL REPORT OF THE TUSKEGEE SYPHILIS STUDY AD HOC ADVISORY PANEL. U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE 1-15 (1973); see also JAMES H. JONES, *BAD BLOOD: THE TUSKEGEE SYPHILIS EXPERIMENT* (1993).

56. Many of the original documents on the Jewish Chronic Disease Hospital Case are reprinted in EXPERIMENTATION WITH HUMAN BEINGS, *supra* note 8, at 9-65.

the experimental injection of plutonium into uninformed pregnant women to learn whether plutonium crosses the placental barrier, conducted at a time when little was known about plutonium and its dangers.⁵⁷ Or consider the total body radiation experiments with terminally ill patients at the Cincinnati University Hospital.⁵⁸ The plutonium and radiation experiments were conducted during the Cold War and were justified on grounds of national defense, an argument that had also been advanced by the Nazi physicians for what they had done. Finally, consider more recent drug studies to determine the toxicity of new cancer treatments, which were presented to patient-subjects not as research but as “new and promising frontier treatments.”⁵⁹

These experiments were not comparable to the Nazi research, for care was generally taken to keep physical harm to a minimum.⁶⁰ In putting it this way, I want to make distinctions between the deliberate torture that accompanied the concentration camp research and the care taken to minimize physical harm to the extent possible in contemporary research. With respect to consent, however, we still have a long way to go in learning the lessons that the Nazi experience should teach us. As one American research scientist put it, “I am aware of no investigator (myself included) who was actively involved in research involving human subjects in the years before 1964 who recalls any attempts to secure voluntary or informed consent according to *Nuremberg’s* standards.”⁶¹

In giving preeminence to “voluntary consent” in the conduct of research, the judges sought to admonish investigators to become more respectful of subjects’ dignitary interests in making their own decisions in interactions with investigators. Implementation of that objective remains the unfinished legacy of the Nuremberg judges. For the regulations that now require consent will not adequately protect the rights of subjects to self-determination unless the mindsets of physician-investigators embrace these rights as a new Hippocratic commitment.

Vulnerable subjects are compelled by their necessitous circumstances to place their trust in physicians whom they consider care givers, not investigators. The problem of “trust” surfaced in one of the studies conducted by the President’s Advisory Committee on Human Radiation Experiments during the Cold War, in which we assessed attitudes toward research among many hundreds of patient-subjects who as recently as 1994 were enrolled in

57. See HUMAN RADIATION EXPERIMENTS, *supra* note 21, at 233–82.

58. See *id.* at 366–420.

59. For an extensive presentation of contemporary problems in the conduct of human research, see *id.* at 694–757, 849–56.

60. A most telling example to the contrary is the Tuskegee Syphilis Study. See *supra* note 55 and accompanying text. That study inflicted serious physical harm on a considerable number of research subjects. It constitutes a shameful chapter in the American history of human experimentation. I hope that I will not be misunderstood, however, by adding that deplorable as the study was, it also cannot be equated with the gruesomeness of the Nazi research.

61. Robert J. Levine, *International Codes and Guidelines for Research Ethics: A Critical Appraisal*, in *THE ETHICS OF RESEARCH INVOLVING HUMAN SUBJECTS: FACING THE 21ST CENTURY* 235, 241 (Harold Y. Vanderpool ed., 1996).

research projects. We discovered that patient-subjects believed that “an [experimental] intervention would not even be offered if it did not carry some promise of benefit [for them],” and that therefore the consent process was “a formality” to which they need not give much thought.⁶²

The lesson to be learned from our findings is clear: Consent will never be truly informed or voluntary unless patient-subjects are disabused of that belief. Their rights can be protected only if physician-investigators acknowledge that their patient-subjects view them as physicians and not investigators, and that they, the doctors themselves, have the responsibility to challenge that trust in research settings. Patient-subjects must be told that their own and their physician-investigators’ agendas are not the same. Research is not therapy.

This is a formidable undertaking and a consequential one, about which I have written extensively.⁶³ It takes time, may impede research because of too many refusals, and may thereby make some experiments impossible to conduct. Choices have to be made between the relentless pursuit of medical progress and the protection of individual inviolability. The latter, however, will be given the weight it deserves only if doctors learn to respect patient-subjects as persons with minds of their own and with the capacity to decide for themselves how to live their medical lives. Their choices may or may not include a willingness for altruistic self-sacrifice, but such choices must take precedence over the advancement of science.⁶⁴

My work on the Nazi concentration camp experiments and the history of human research during the last 150 years have led me to these judgments about the permissible limits of experimentation with human beings. It all began with reading about Auschwitz. It led me on a long and painful journey, during which I learned much about what human beings can do to one another in less egregious though still hurtful ways. Without my and my people’s past, I might never have embarked on that journey.

In conclusion, I return to questions I raised somewhat differently at the beginning of this talk: Am I doing justice or injustice to the victims of the concentration camp experiments by placing their suffering also in the context of the historical processes by which they came about? Am I doing an injustice

62. HUMAN RADIATION EXPERIMENTS, *supra* note 21, at 747-48.

63. See, e.g., Jay Katz, *Abuse of Human Beings for the Sake of Science*, in WHEN MEDICINE WENT MAD 233-70 (A. Caplan ed., 1992); Jay Katz, *Ethics and Clinical Research Revisited—A Tribute to Henry K. Beecher*, 23 HASTINGS CENTER REP. 31-39 (Sept-Oct 1993); Jay Katz, *Human Experimentation and Human Rights*, 38 ST. LOUIS U. L.J. 7, 7-54 (1993).

64. In our Final Report, the Advisory Committee on Human Radiation Experiments made recommendations on “efforts [that need to] be undertaken on a national scale to ensure [a commitment to] the centrality of ethics in the conduct of scientists whose research involves human subjects.” HUMAN RADIATION EXPERIMENTS, *supra* note 21, at 817. Our recommendations, however, were all too general. Most specifically, they did not comment on what I argued above; i.e., that any tensions between the advancement of science and the inviolability of subjects of research must be resolved (except under the rarest of circumstances and with most rigorous justifications) in favor of the latter. How to implement such a recommendation will take thought and prolonged discussions; it is not yet an integral part of the education of physician-investigators.

to the victims by comparing their fate with that of other research subjects whose lives were not reduced to ashes? Am I doing them an injustice, since violent death is always a tragedy, to celebrate the Nuremberg Code that resulted from their suffering?

What is justice, what is injustice? A friend of mine once pointed out to me the repetition of the word justice in Deuteronomy: "Tzedek, tzedek tirdof" (Justice, justice, shalt thou pursue).⁶⁵ Such a seemingly unnecessary repetition always invites commentary, and the one he heard was this: "Justice can never be adequately pursued only as a goal or an idea; it is also reflected in the means employed."⁶⁶

I have attempted this morning to employ the proper means by comparing this unprecedented tragic episode in the history of human experimentation with its less egregious, yet troublesome, past as well as present violations of the dignitary interests of research subjects. What happened in the concentration camps was unique and not unique. And I have attempted to pursue justice—to do justice to the victims—not merely by commemorating their suffering but also by construing the Nuremberg Code as their last unwitting legacy. They were subject to coercion, sadism, and torture; the Nuremberg Code celebrates freedom and human dignity.

As medical professionals, we remain unconvinced that we should embrace the Code's principles in the spirit in which they were promulgated. It remains my dream that we shall do so. It may only be a dream, but it comforts my nightmares.

65. *Deuteronomy* 16:20.

66. TONY PERRY, PERSONAL COMMUNICATION (1994).