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GULF WAR GUINEA PIGS: IS INFORMED CONSENT OPTIONAL DURING WAR?

Prior to ordering our forces into battle, I instructed our military commanders to take every necessary step to prevail as quickly as possible and with the greatest degree of protection possible for American and Allied servicemen and women. I've told the American people before that this will not be another Vietnam.

And I repeat this here tonight. Our troops will have the best possible support in the entire world. And they will not be asked to fight with one hand tied behind their back.¹

United States Captain Barry Kaplan and paratrooper Darrell Clark were members of the fighting force that participated in Operation Desert Storm and "restored a sense of pride in the U.S. military."² On January 16, 1991, the United States led a multinational force into the Persian Gulf to liberate Kuwait from Iraqi occupation. The attack, sponsored by the United Nations, lasted just over a month, and the Allied forces prevailed.³ Operation Desert Storm was not like Vietnam: the soldiers who fought in the Gulf War had the support of the American people, and were given a hero's welcome upon return to the United States.⁴

Captain Kaplan's duties took him through Shiite refugee camps, across desert sands, over strongholds of the Iraqi Republican Guard, and past raging oil fires in Kuwait.⁵ Just two months after serving in the Persian Gulf, though, Kaplan became sick and was removed from active duty. Complaining of excessive gastrointestinal problems, malaria-like night sweats, ringworm-like rashes, chest pains, temporary vision loss, and bleeding gums, Kaplan was admitted to several different hospitals and

1. President George Bush addressed the nation on the night of January 16, 1991, as he sent troops to battle in the Gulf. *President: 'The world could wait no longer,'* PHIL. INQUIRER, Jan. 17, 1991, at 10-A.

2. *Certain Victors, Uncertain Victims*, THE PHOENIX GAZETTE, Sept. 5, 1995, at B8.

3. MICHEL MOUSHABECK, *BEYOND THE STORM*, 371-72 (Phyllis Bennis & Michel Moushabeck, eds., 1991).

4. Mary Beth Oliver, *News Viewing, Authoritarianism, and Attitudes Toward the Gulf War*, in *THE MEDIA AND THE PERSIAN GULF WAR* 152-53, 161 (Robert E. Denton, Jr., ed., 1993).

5. *The Morning Edition: Authorities Deny Existence of Gulf War Syndrome* (National Public Radio Broadcast, Jan. 19, 1996).

eventually was classified as "100 percent disabled" by army doctors.⁶ Kaplan retired after ten years in the Army.⁷ Even though doctors diagnosed Kaplan with maladies ranging from chronic myocarditis and gastritis to chemical hepatitis, the Army claims that there is no physical condition that can account for his symptoms.⁸

Clark also faced an array of environmental hazards while he was in the Persian Gulf. Like many of his comrades, Clark developed symptoms (asthma and recurring pneumonia) of the affliction known as "Gulf War Syndrome."⁹ More troubling than his own illnesses, however, are the birth defects with which Clark's daughter Kennedy was born, and which Clark believes are a direct result of his participation in the Persian Gulf War.¹⁰ Kennedy Clark was born without a thyroid and needs daily hormone treatments just to stay alive. In addition, Kennedy suffers from benign tumors that create red, knotted lumps of blood vessels on her eyelids, lips, spinal cord, and throat. The tumors, called hemangiomas, cannot permanently be removed and distort her speech and threaten her life.¹¹

Clark and Kaplan are two of the many soldiers who unknowingly took pyridostigmine bromide, an experimental drug administered to Gulf War soldiers. Some doctors believe that the combination of the experimental drug and the heavy pesticide use during the Gulf War may have caused the birth defects in the children of Gulf War veterans.¹² President George Bush, whose administration sent troops into Kuwait, apparently agrees. During a recent interview, President Bush suggested that the experimental inoculations used to combat chemical warfare may have poisoned the soldiers instead.¹³ In preparing for the possibility of war, the United States Department of Defense ("DoD") grappled with the threat of Iraq's well known chemical and biological weapons capabili-

6. *Id.*

7. *Id.*

8. *Id.*

9. Kenneth Miller, *The Tiny Victims of Desert Storm*, LIFE, Nov. 1995, at 51.

10. *Id.* at 49-50. See also Jane Bowling, *Gulf War Chemicals Caused Birth Defects*, THE DAILY RECORD, Aug. 14, 1996, at 1 (reporting on a suit filed by three families claiming that their children's birth defects are a result of the military's negligent exposure of soldiers to pesticides, petrochemicals, and certain immunizations).

11. *Id.* at 49.

12. *Id.* at 52, 54, 56, 60-61.

13. Mike McDaniel, *Bush, Frost Talk About Gulf War*, HOUSTON CHRONICLE, Jan. 15, 1996, at 1.

ties.¹⁴ The possibility that Iraqi president Saddam Hussein would use chemical and or biological weapons against American troops was real: Hussein had employed chemical nerve agents both against his own people and on Iranian nationals during the Iran-Iraq War.¹⁵ The United States Interagency Intelligence Group reported to then Defense Secretary Dick Cheney that Iraq had biological and chemical weapon plants in several locations, and that Saddam Hussein would “consider using . . . biological warfare to save the regime from falling.”¹⁶ DoD sought ways to protect soldiers against such weapons use; research revealed two drugs that, although unapproved by the Food and Drug Administration, could potentially provide soldiers with an internal defense against chemical and biological weapons.¹⁷ DoD petitioned the FDA to waive the “informed consent” requirement, thereby allowing DoD to administer the two investigational new drugs to U.S. troops without first obtaining their informed consent.¹⁸ The waiver, approved on a temporary basis, permitted DoD to issue pyridostigmine bromide vaccine and anti-botulism vaccine to troops without obtaining their informed consent.¹⁹

It is widely accepted in the medical field that a physician must obtain the informed consent of a patient before conducting any experimental or research procedure.²⁰ Legislation mandating that doctors or researchers

14. John Hanchette, *Pentagon Worried About Gulf Illness During Desert Storm Fighting*, GANNETT NEWS SERVICE, Sept. 3, 1995, available in LEXIS News library, Curnws file.

The defense department was well aware of Iraq's extensive use of mustard gas and nerve agents during Baghdad's long war with Iran through most of the 1980s. Intelligence monitoring counted 19 major battles in which Iraq unleashed chemical weapons on Iran from artillery or aircraft, and Saddam killed approximately 5,000 Kurdish civilians in a well-publicized attack on Halabjah.

Id. DoD also was aware that Iraq had the capability to use anthrax and botulism toxin as weapons. *Id.*

15. Amy E. Smithson, *Chemical Weapons: The End of the Beginning*, THE BULL. OF THE ATOMIC SCIENTISTS, Oct. 1992, at 36, 37.

16. Hanchette, *supra* note 14.

17. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, 103RD CONG., IS MILITARY RESEARCH HAZARDOUS TO VETERANS' HEALTH? LESSONS SPANNING HALF A CENTURY 10-11 (Comm. Print 1994); see also Jill C. Keeler et al., *Pyridostigmine Used as a Nerve Agent Pretreatment Under Wartime Conditions*, 266 JAMA 693, 693 (1991) (reporting on the pretreatment effects of pyridostigmine bromide for nerve agent exposure during wartime).

18. Informed Consent for Human Drugs and Biologics; Determination that Informed Consent is Not Feasible, 55 Fed. Reg. 52, 814 (1991) (codified at 21 C.F.R. pt. 50).

19. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 21; see also George Annas & Michael Grodin, *Our Guinea Pigs in the Gulf*, N.Y. TIMES, Jan. 8, 1991, at A21 (opining that although the waiver obtained by the DoD may make it legal for military physicians to administer experimental agents to soldiers without their informed consent, it is unethical, and therefore inappropriate).

20. THOMAS A. MAPPES & JANE S. ZEMBATY, BIOMEDICAL ETHICS 206-15 (3rd ed.

obtain their patient's informed consent demonstrates the importance assigned to informed consent.²¹ Furthermore, a doctor's failure to obtain the informed consent of a patient before performing a surgical procedure may leave the doctor open to tort liability.²² Thus, although the status of the law regarding informed consent seems clear with regard to medical experimentation and research on human subjects, it is less clear when those human subjects are in the military.

Over the past fifty years, American military personnel have been subjected to government sponsored research and experimentation.²³ Caught up in the quest for atomic knowledge, DoD justified exposing unwitting, nonvoluntary human subjects to radiation by citing national security interests.²⁴ So-called "nuclear vets" were exposed without their knowledge to varying levels of radiation to determine at what level such exposure would become dangerous to humans.²⁵ During the Cold War, DoD, in conjunction with the Central Intelligence Agency, began experimenting with lysergic acid diethylamide ("LSD") on human subjects.²⁶ Again, the human subjects used in the LSD experiments were not aware of the nature of the tests being performed, and in no way consented to such testing.²⁷ Both projects were initiated by DoD and the Central Intelligence Agency to hasten the development of United States military technology in the areas of brainwashing and interrogation techniques.²⁸

Regardless of DoD's motives or goals in conducting these experiments,

1991). See also *Ethics in Biomedical Research*, ISSUES IN MED. ETHICS, July-Sept. 1996, at 91-92.

21. See, e.g., Protection of Human Subjects, 45 C.F.R. pt. 46 (1995); 32 C.F.R. pt. 219 (1996). See also Advisory Committee on Human Radiation Experiments, Final Report 676, 677 (1995) (outlining federal policy governing human subject research since 1974).

22. See, e.g., *Canterbury v. Spence*, 464 F.2d 772 (D.C. Cir. 1972) (doctors have a duty to disclose relevant information about benefits and risks of a proposed treatment); *Moore v. Regents of the Univ. of Cal.*, 51 Cal. 3d 120 (1990) (physician's research on body parts patient consents to have removed is relevant information); *Hernandez v. United States*, 465 F. Supp. 1071, 1073-74 (D. Kan. 1979).

23. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 1-2.

24. ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS, Final Report 455, 457-87 (1995).

25. ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS, *supra* note 24, at 19-21.

26. S. REP. NO. 94-755, at 385-87 (1976). The general program of LSD testing on non-consenting subjects was called MKULTRA. *Id.* at 389. See also STAFF OF SEN. COMM. ON VETERANS AFFAIRS, *supra* note 17, at 9.

27. *Id.* at 393-94.

28. *Id.* at 392-94. There was a common belief among those who carried out the LSD experiments in the 1940s and 1950s that the Soviets were trying to produce LSD, and/or trying to buy the world's supply of the chemical. The Soviets were thought to have devel-

the fact remains that they were carried out without conforming to any ethical, medical, or legal standard of human subject research.²⁹ Moreover, the judicial system has provided little relief to the victims of these medical experiments because DoD conducted the experiments. The judiciary has traditionally given a great deal of deference to DoD in its internal operations, as long as those operations were in the interest of national security or conducted during time of war.³⁰

While not shrouding the experimental nature of its work in secrecy to the same degree as it has in the past, DoD again used military personnel as human guinea pigs in the Persian Gulf War.³¹ Prior to sending troops into combat in the Gulf, DoD requested that the FDA allow DoD to administer investigational new drugs to be used on Gulf War troops.³² The DoD request was significant because the military was asking a federal government agency to waive the statutorily conferred informed consent rights of all personnel involved in the Persian Gulf War operation.³³

Today, Persian Gulf War veterans suffer from illnesses ranging from chronic fatigue and skin rashes to severe reproductive dysfunctions including genetic disorders (children born with birth defects).³⁴ Approxi-

oped ways to use LSD for brainwashing and interrogation, as well as to harass, kill, or disable Allied personnel. *Id.*

29. ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS, *supra* note 24, at 206-07.

30. *Bush v. Lucas*, 462 U.S. 367 (1983).

31. In 1994, bioethicist Arthur Caplan testified before the Senate Veterans Affairs Committee that the use of pyridostigmine bromide and botulism vaccine on "large populations for purposes other than they were originally designed . . . in circumstances in which they had never been tried, out in the desert . . . [falls] into the category of experimental, innovative, investigational - - - that makes it research." *Use of Investigational Drugs During Gulf War Qualifies as Research, Bioethicist Caplan Testifies*, Drug Research Reports, BLUE SHEET, May 11, 1994, available in LEXIS, Genmed Library, Blue File.

32. 55 Fed. Reg. 52,814 (1990).

33. *Id.*

34. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 48. The twenty-five most common symptoms, reported by a surveyed group of 150 Gulf War veterans, are: fatigue (65), skin problems (61), rashes (50), memory loss (59), blackouts/forgets where they are (5), joint pain (55), headaches (52), personality changes (44), diarrhea (32), muscle pain, weakness, spasms, tremors (29), pain (including back, shoulder, or neck pain) (28), trouble with vision (24), shortness of breath (22), sleep disturbances (22), hair loss (19), numbness (hands, fingers, feet) (19), dental problems/bleeding gums (18), reproductive problems (18), bleeding (16), sores (14), chest problems (pain) (12), abdominal/stomach pain (12), fever (10), nausea/vomiting (9), dizziness/staggering (10), sinus, nasal discharge (10), sensitivity to light, smell, noise (9), children born with birth defects (7), and partners with reproductive problems (16). *Id.* "Researchers so far have been struck by the wide variety of symptoms claimed by gulf-war veterans and their possible causes." Peter Cary & Mike Tharp, *The Gulf War's Grave Aura*, U.S. NEWS & WORLD REPORT, July 8,

mately 45,000 Gulf War veterans have developed symptoms that have been linked to service in the Gulf, termed "Gulf War Syndrome."³⁵ Medical experts, however, have been unable to determine the exact cause of the problems suffered by vets.³⁶ Military personnel who served in the Gulf War were exposed to a number of potentially detrimental environmental hazards: burning oil fields lit by retreating Iraqi troops,³⁷ depleted uranium,³⁸ nerve gases,³⁹ and even common chemicals such as diesel

1996, at 34. United States Congressman Steve Buyer, who served as an Army Reserve officer during the Gulf War, developed respiratory problems. According to Buyer, sick soldiers complain of symptoms ranging from chronic fatigue to insomnia to rashes to joint aches to colon infections to memory loss. Those troops . . . may have been exposed to such things as poison gases, diesel fumes, oil-fire smoke, biological agents and parasites. Moreover, 250,000 soldiers took anti-nerve-gas pills whose safety now is in question.

Id.

35. Miller, *supra* note 9. 10,142 veterans "have filed claims with the [Veterans Administration] for disability related to undiagnosed gulf-war illnesses." Cary & Tharp, *supra* note 34, at 33. Only 526 of the above mentioned claims filed with the Veterans Administration have been granted. *Id.*

36. David Brown, *The Search for Causes*, WASH. POST, July 24, 1994, at A19. Although researchers began to investigate the various illnesses affecting returning Gulf War veterans in late 1991, the results have been far from conclusive. The Centers for Disease Control reported that Gulf War veterans were "unusually susceptible to a dozen ailments — from rashes to incontinence, hair loss to memory loss, chronic indigestion to chronic pain." Kenneth Miller, *supra* note 8, at 51. Pentagon researchers concluded, however, that veterans did not display any new or unique illnesses. *Id.* The conclusion of a committee of independent experts assembled by the National Institutes of Health is that "[t]here is no single disease or syndrome apparent, but rather multiple illnesses with overlapping symptoms and causes." *Health Panel Finds No Single Cause for Gulf Veterans' Illnesses*, N.Y. TIMES, May 1, 1994, at 40.

37. Jessica E. Seacor, *Environmental Terrorism: Lessons from the Oil Fires of Kuwait*, 10 AM. U. J. INT'L L. & POL'Y 481, 481 (1994). See also William McLean, *Gulf War Health Damage Remains a Mystery*, REUTERS WORLD SERVICE, Jan. 21, 1996, available in LEXIS, News Library, Curnws File.

38. Miller, *supra* note 9, at 52. Depleted uranium is a waste product from nuclear reactors. Those troops most likely to have been at risk of high level radiation exposure were those working in areas filled with the dust and debris of tank battles, and those salvaging equipment that had been hit by shrapnel. *Id.*

39. *Id.* at 54. The presence of nerve and or mustard gases in the Gulf War is subject to debate. *Id.* The Pentagon has denied that nerve and mustard gases were present during the Gulf War, yet the British, Czech, and French governments detected both types of gases during Allied bombing of Iraqi chemical plants. *Id.* *Some Symptoms in Gulf War Vets Still Unexplained* (CNN television broadcast, Jan. 16, 1996), available in LEXIS, News Library, Curnws File. According to a landmark study conducted in 1975, even low-level exposure to nerve and mustard gases has been shown to cause chronic illness and birth defects. Miller, *supra* note 9, at 54.

fuel⁴⁰ and insecticides.⁴¹ The United States General Accounting Office estimates that American soldiers were exposed to twenty-one potential "reproductive toxicants."⁴² Although the illnesses that comprise Gulf War Syndrome have not been linked to any one cause, it has been suggested that the side effects of many of the chemicals to which the soldiers were exposed were exaggerated in personnel who took the drugs issued by the DoD.⁴³ DoD has been reluctant to acknowledge the veterans' complaints as legitimately related to service in the Gulf War.⁴⁴

Legislative and executive responses have been more encouraging.⁴⁵ The Clinton administration reopened the investigation into Gulf War

40. Miller, *supra* note 9, at 52. Diesel fuel was sprayed around the soldiers to keep the sand down. *Id.*

41. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 32-33. Diethyl-m-tolamide (DEET) and permethrin were two of the most widely used insecticides by U.S. troops during the Gulf War. *Id.*

42. Miller, *supra* note 9, at 52. Some physicians who have treated Gulf War veterans think that the general overload of chemical pollutants have made veterans' bodily fluids toxic. *Id.*

43. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 32. In 1993, Dr. James Moss, a scientist at USDA, conducted a study that showed that when pyridostigmine was used in combination with a common insect repellent such as that used by Gulf War soldiers, the pesticide became "almost seven times more toxic as when it was used alone." *Id.*

44. *Clinton's Get Second Opinion on War Ills White House Pledges New Look at Gulf Vets*, ARK. DEMOCRAT-GAZETTE, Aug. 15, 1995, at A3. The Department of Defense said it found no clinical evidence for a new or unique illness or syndrome among Persian Gulf veterans. *Id.* In a recent press release, United States Representative Joseph Kennedy stated "[i]n the past month, the Pentagon has acknowledged that as many as 15,000 American troops may have been exposed to chemical agents during the Gulf War - but it took the Defense Department five years to confirm veterans' exposure to these agents." Kennedy issued the press release in response to the National Institute of Medicine's final report on Persian Gulf War Syndrome, which concluded that "there is no evidence of a mysterious chronic illness arising from military service in the Persian Gulf War . . ." Joe Kennedy, Kennedy Calls for Probe of Department of Defense, Oct. 10, 1996, available in LEXIS News Library, Curnws File.

45. United States Senator Robert Byrd recently proposed an amendment to the 1997 defense authorization bill that would expand medical benefits to children born with birth defects or other catastrophic illnesses that may be linked to their parents' exposure during the Gulf War. See also The Veterans Benefits Improvements Act of 1994, Pub. L. No. 103-446, 108 Stat. 4645 (1994) (authorizing the Veterans Administration to pay compensation to Persian Gulf Veterans suffering from chronic disabilities resulting from undiagnosed illnesses that became manifest either during Persian Gulf War service or to a degree of 10% or more disabling within a subsequent presumptive period, as determined by the Secretary of Veterans Affairs); Grant to Support Research on Exposure to Hazardous Agents and Materials by Military Personnel who Served in the Persian Gulf War, Pub. L. No. 103-160, 107 Stat. 1547 (1993); Authority to Provide Priority Health Care to Veterans of the Persian Gulf War, Pub. L. No. 103-210, 107 Stat. 2496 (1993); The Veterans Health Care Act of 1992, Pub. L. No. 102-585, 106 Stat. 4943 (1992).

Syndrome in September 1995, pledging to leave "no stone unturned" in investigating the mysterious illness.⁴⁶ In January, 1996, the Institute of Medicine of the National Academy of Science announced that "there is no evidence for a 'previously unknown, serious illness among Persian Gulf veterans.'"⁴⁷ The Institute of Medicine's assertion that Gulf War Syndrome does not actually exist was met with skepticism by the Executive Director of the Gulf War Research Foundation, who noted that the Institute of Medicine is "a government-funded organization contracted by the Defense Department, with Defense Department funds, to evaluate Defense Department progress on a politically controversial issue."⁴⁸ In June 1996, the Pentagon disclosed that "American troops may have been exposed to nerve gas in the Persian Gulf."⁴⁹ Finally, in August the Pentagon officially acknowledged that some American troops had been exposed to chemical weapons in the Gulf. The Pentagon also acknowledged that a number of United States government officials had known about the troops' exposure since November 1991.⁵⁰

This Comment examines the FDA decision that it was "not feasible" for military personnel to give their informed consent to the use of investigational new drugs during the Persian Gulf War. First, this Comment traces the development of informed consent in the context of medical experimentation both as a legal standard and as an ethical standard in international law. Second, this Comment discusses the impact of international laws and codes on United States law governing informed consent for medical experimentation on human subjects. Third, this Comment discusses the United States government's use of military personnel to perform medical experimentation and research without informed consent. Specifically, this Comment examines Cold War era research on the effects of LSD on unwitting human subjects, and analyzes attempts of affected military personnel to obtain judicial relief for harm resulting from this testing. This Comment then evaluates the FDA decision to grant DoD a temporary waiver eliminating the need to obtain the in-

46. *First Lady Reopens Gulf Syndrome Probe*, VANCOUVER SUN, Aug. 16, 1995, at A9.

47. David Brown, *Gulf Vets' Treatment is Lauded; Panel Finds No Evidence of Serious New Syndrome*, WASH. POST, Jan. 5, 1996, at A19.

48. John Hanchette, *Medical Agency: Pentagon Assessment of Gulf War Illness is OK; Critics Protest*, GANNETT NEWS SERVICE, Jan. 4, 1996.

49. Philip Shenon, *Gulf War Illness May Be Related to Gas Exposure*, N.Y. TIMES, June 22, 1996, at A1.

50. Robert Burns, *Gulf Troops Weren't Told About Exposure to Chemical Weapons*, CHI. SUN-TIMES, Aug. 28, 1996, at 3. See also *Secrecy Syndrome: Pentagon Should Fully Explain its Actions in Gulf War Toxins Case*, L.A. TIMES, Aug. 29, 1996, at B8.

formed consent of American troops before administering investigational drugs. Finally, this Comment examines the investigational new drugs used on the Gulf War veterans. This Comment concludes that the FDA decision that it was "not feasible" to obtain the informed consent of American soldiers before issuing such drugs disregarded internationally accepted medical standards as well as the United States' own Congressionally established standards, and effectively turned U.S. military personnel into guinea pigs. This Comment also concludes that the FDA should not grant a permanent waiver allowing DoD to administer investigational drugs without the informed consent of the persons receiving the drug.

I. HISTORICAL BACKGROUND - DEVELOPMENT OF INFORMED
CONSENT AS A REQUISITE TO MEDICAL EXPERIMENTATION
ON HUMAN SUBJECTS

A. *International Law*

1. *The Nuremberg Code*

The voluntary consent of the human subject is absolutely essential.

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, deceit, duress, overreaching, 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 affirmative 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.⁵¹

The atrocious medical experiments conducted at Nazi concentration camps during World War II brought the issue of experimentation on human subjects to the attention of the world community. The Nuremberg Code was developed as part of the final judgment rendered against

51. The Nuremberg Code, *reprinted in* THE NAZI DOCTORS AND THE NUREMBERG CODE, HUMAN RIGHTS IN HUMAN EXPERIMENTATION, 2, 2 (George J. Annas & Michael A. Grodin eds., 1992) [hereinafter THE NAZI DOCTORS AND THE NUREMBERG CODE].

the twenty-three defendants in the Nuremberg Trials.⁵² Of the twenty-three defendants, twenty were doctors, and nineteen of those held positions in the Third Reich.⁵³ The "crimes against humanity" with which the defendants were charged were not just the perverted doings of a small group, but were endorsed by the state and the medical profession.⁵⁴ Thus, the Nuremberg Code was "formulated in an attempt to establish the substantive standards and procedural guidelines for permissible medical experimentation with humans."⁵⁵

The Nuremberg Code has been called the "most complete and authoritative statement of the law of informed consent to human experimentation."⁵⁶ The Nuremberg Code was ultimately based on the testimony of two American doctors and medical experts, Dr. Leo Alexander and Dr. Andrew Ivy.⁵⁷ Both men cite the Hippocratic oath as the basis for their views on medical ethics.⁵⁸ Ivy's testimony at the Nuremberg Trials was no doubt influenced by his capacity as the representative of the American Medical Association.⁵⁹ The first code of medical ethics adopted by the American Medical Association was based on an early code written by Thomas Percival.⁶⁰ That earlier code included the subject of research ethics, but did not address experimentation on humans.⁶¹ Possibly the oldest code to assert that the patient should be a voluntary participant in any research was written by William Beaumont in 1833.⁶² Finally, the writings of French physiologist Claude Bernard, known to both Ivy and

52. *Id.* at 121.

53. *Id.* at 69.

54. THE NAZI DOCTORS AND THE NUREMBERG CODE, HUMAN RIGHTS IN HUMAN EXPERIMENTATION, 2, 2 (George J. Annas & Michael A. Grodin eds., 1992).

55. *Id.* at 121.

56. George J. Annas, *Mengele's Birthmark: The Nuremberg Code in the United States Courts*, 7 J. CONTEMP. HEALTH L. & POL'Y 17, 21 (1991) (citing G. ANNAS ET AL., INFORMED CONSENT TO HUMAN EXPERIMENTATION: THE SUBJECT'S DILEMMA 21 (1977)).

57. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 122.

58. *Id.* at 123. The Hippocratic Oath states: "I will follow that system of regimes which, according to my ability and judgement, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous." *Id.*

59. *See id.* at 134.

60. *Id.* at 124. Dr. Ivy represented the American Medical Association at the Nuremberg Trials, and as representative of the AMA it is reasonable to assume that the AMA's code of ethics influenced Dr. Ivy's testimony. *Id.* at 134.

61. *Id.* at 124. Percival addressed the need for experimentation to develop new therapies and remedies. Furthermore, Percival stressed the need for sound methodology, and asserted that the doctor should be "*scrupulously and conscientiously governed by sound reason, just analogy, or well-authenticated facts.*" *Id.*

62. *Id.* at 125. Beaumont was an American physician who carried out extensive non-therapeutic experiments on one of his patients. *Id.*

Alexander, forbade any experimentation on humans that might cause harm.⁶³

The ten principles of the Nuremberg Code were influenced by the testimony of Drs. Ivy and Alexander. In addition, Ivy and Alexander each brought their own professional experiences to bear: Ivy's testimony, for example, focused primarily on the standards for conduct of human experimentation.⁶⁴ Ivy urged that research and/or experimentation conducted on humans should be guided by three principles: (1) the voluntary consent of the individual upon whom the experiment is to be performed must be obtained; (2) the danger of each experiment must have been previously investigated on animals; and (3) the experiment must be performed under proper medical protection and management.⁶⁵ As expressed by Nuremberg Prosecutor James McHaney⁶⁶ in his closing argument, "it is the most fundamental tenet of medical ethics and human decency that the subjects volunteer for the experiment after being informed of its nature and hazards. This is the clear dividing line between the criminal and what may be noncriminal."⁶⁷ The final form of the Nuremberg Code was produced by a panel of four American judges who presided over the hearings; it differed only slightly from the final memorandum submitted by Dr. Alexander.⁶⁸

2. Declaration of Helsinki: A Professional Response to Nuremberg

The Nuremberg Code was ultimately formulated "by jurists for use in a legal trial."⁶⁹ In response to the atrocities revealed at Nuremberg, the world medical community organized to develop a comprehensive set of professional ethical codes and guidelines.⁷⁰ In 1954, the Eighth General

63. *Id.* at 125-26. It should be noted that although Bernard did not condone experiments that caused harm to the human subject, he did support the use of dying patients in human experimentation that caused no suffering. Bernard does not seem to prohibit all nonbeneficial experimentation but rather that which causes actual harm. *Id.*

64. *Id.* Dr. Ivy was a noted physiologist and research scientist. *Id.*

65. *Id.*

66. *Id.* at 136. James McHaney served as the chief prosecutor for the United States at the Nuremberg trials. McHaney delivered his closing arguments on July 14, 1947. *Id.*

67. *Id.* at 137. McHaney's statement was based on the testimony of Drs. Ivy and Alexander. *Id.* at 136.

68. *Id.* at 134-37. Alexander had included a provision for consent by proxy in cases where the patient/subject of the experimental treatment was unable to give consent due to mental incapacity. The judges omitted this provision from the final version of the code, presumably because it was not applicable to the case then at trial. *Id.*

69. *Id.*

70. *Id.* The World Medical Association ("WMA") was founded in 1947. In an early statement adopted by the General Assembly, the WMA condemned the crimes committed

Assembly of the World Medical Association ("WMA") adopted the "Resolution on Human Experimentation: Principles for those in Research and Experimentation" ("Resolution") in an attempt to regulate experimentation.⁷¹ The basic principles of the Resolution were very similar to those of the Nuremberg Code. The only notable difference was that the Resolution distinguished between research on healthy subjects (nontherapeutic) and research on unhealthy subjects (therapeutic).⁷² The guiding principle of Nuremberg — the free and voluntary consent of humans subject to research or experimentation — was a primary feature of the Resolution.⁷³

The Resolution was essentially a draft document for the 1964 Declaration of Helsinki, which is regarded as the "second formal attempt to place human experimentation within a legal framework."⁷⁴ Under the Declaration of Helsinki, the treatment of informed consent differs slightly depending upon the condition of the patient. The Declaration of Helsinki distinguishes between therapeutic and nontherapeutic treatment: consent must be obtained for research conducted for nontherapeutic purposes, whereas in a therapeutic situation, "[i]f at all possible . . . the doctor should obtain the patient's freely given consent after the patient has been

by German medical practitioners and approved the judicial punishment of the crimes. *Id.* The WMA first addressed the need for professional guidelines regarding human experimentation in its 1954 publication "Resolution on Human Experimentation: Principles for Those in Research and Experimentation." *Id.* at 157.

71. *Id.*

72. *Id.* at 156, 158. The relevant portion of the Resolution states:

In experimentation on healthy subjects, the researcher must take every step to obtain fully informed, free consent. In experimentation on ill subjects, the researcher must obtain the consent of the subject or his next of kin. The researcher must inform the subject or the person who is legally responsible for the subject of the nature of, the reason for, and the risks entailed by the proposed experiment.

Id. at 157.

73. *Id.* at 189, 341. See also *United States v. Stanley*, 483 U.S. 669, 710 (1987) (O'Connor, J., concurring in part and dissenting in part) (stating "the standards that the Nuremberg Military Tribunals developed . . . stated that 'the voluntary consent of the human subject is absolutely essential . . . to satisfy moral, ethical, and legal concepts.'").

The Nuremberg Code is not cited in the Resolution. The Executive Director of the WMA asserts that the framers of the Resolution did consult the Nuremberg Code, and in fact discussed the Code during WMA meetings. *THE NAZI DOCTORS AND THE NUREMBERG CODE*, *supra* note 54, at 158. Indeed, "[a]lthough nowhere documented, this very conclusion has been reached by almost all commentators who have written about medical research ethics." *Id.*

74. M. Cherif Bassiouni et al., *An Appraisal of Human Experimentation in International Law and Practice: The Need for International Regulation of Human Experimentation*, 72 J. CRIM. L. & CRIMINOLOGY 1597, 1609 (1981).

given a full explanation.”⁷⁵ The Declaration of Helsinki was most recently amended in 1989 (“Helsinki IV”) and presents the informed consent of human research subjects as a “basic principle.”⁷⁶ Helsinki IV expands the basic principle of voluntary informed consent by stating that “[w]hen obtaining informed consent for the research project the physician should be particularly cautious if the subject is in a dependent relationship to him or her or may consent under duress.”⁷⁷

The Nuremberg Code and the Declaration of Helsinki are the foundational documents in the development of international law regarding medical experimentation on humans.⁷⁸ The principles embodied in these two codes have also impacted the development of United States law regarding informed, voluntary consent to human subject research. As a legal model, the Nuremberg Code has been cited (albeit infrequently) by United States courts and reflected in legislation.⁷⁹ The Declaration of Helsinki is considered a broader statement of ethical concepts,⁸⁰ and is a professionally accepted statement of appropriate guidelines for experimentation.⁸¹

B. *United States Law*

The Nuremberg Code was promulgated by four American judges acting under the authority of the United States military,⁸² and following American rules of procedure.⁸³ Thus it would seem logical that United States courts would adhere to the principles of Nuremberg. In practice,

75. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 332-33.

76. *Id.* at 339-41.

77. *Id.* at 341.

78. *Id.* at 160. Many of the human rights charters that have emerged from the United Nations, including covenants against racism, sexism, torture, and genocide, are a result of the Nuremberg proceedings. The 1948 charter of the United Nations mentions human rights five times, an unprecedented development in world law. *Id.* at 178.

79. *See id.* at 183-94, 201.

80. *Id.* at 158.

81. Bassiouni et al., *supra* note 74, at 1611. The American Medical Association has adopted the Code of Ethics on Human Experimentation of the World Medical Association. *Id.*

82. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 201.

83. *Id.* In addition, the prosecutors were American lawyers. The four judges, appointed by President Harry S. Truman, who adjudicated the Nuremberg Trial were: Harold L. Sebring, Justice of the Supreme Court of Florida; Walter B. Beals (presiding judge), Justice of the Supreme Court of the State of Washington; Johnson T. Crawford, former Justice of the Oklahoma District Court in Ada, Oklahoma; and Victor C. Swearingen (alternate member), former assistant attorney general of Michigan from Detroit. *Id.* at 113. In addition, the prosecutors were American lawyers. *Id.*

however, the courts have not made use of Nuremberg or Helsinki documents in an authoritative context. The few existing citations to the Nuremberg Code have been in dissenting opinions.⁸⁴ However, the Code and the Declaration of Helsinki have been influential in legislative attempts to monitor and regulate human experimentation and informed consent in the United States.

1. Legislation

The Federal Government did not become formally involved in regulating research until 1962,⁸⁵ and took a more active role in regulating research with human subjects in 1974.⁸⁶ Nevertheless, the Clinical Center at the National Institutes of Health ("NIH") employed the Nuremberg Code as a working model of conduct as early as the mid-1950s.⁸⁷ The guidelines⁸⁸ adopted by NIH in the mid-1950s were based on the "ten commandments" of Nuremberg, and provided that "[e]very volunteer must give his full consent to any test, and he must be told exactly what it involves"⁸⁹ The fact that NIH promulgated such guidelines shortly after the Nuremberg trials is significant because NIH is the national health center and therefore could be seen as setting a standard for the rest of the United States medical profession to follow.⁹⁰ In 1966, NIH adopted stricter regulations enforcing the informed consent rights of human subjects.⁹¹ NIH implemented this tighter policy by refusing to ap-

84. *Id.* at 201. The Nuremberg Code has never been applied in a criminal case. Also, no court has ever awarded damages to a person injured as the result of experimentation, nor punished an experimenter, pursuant to the Nuremberg Code. *Id.*

85. *Id.* at 186. The Food and Drug Administration promulgated the Drug Amendments Act of 1962 with the primary purpose of keeping "unsafe or useless" drugs off the market. Much of the impetus for this Act was the realization in the wake of the thalidomide disaster, that no state required physicians to inform patients that an experimental drug was being used on them. The final version of the 1962 Act required experts using investigational or experimental drugs to obtain the consent of their patients wherever feasible. *Id.*

86. *Id.* at 187. The government adopted a set of regulations called the National Research Act that governed the protection of human subjects involved in research supported by the Department of Health, Education, and Welfare. *Id.*

87. *Id.* at 185.

88. *Id.* The guidelines adopted were applied to the use of normal volunteers. *Id.*

89. *Id.*

90. Bassiouni et al., *supra* note 74, at 1621-22; THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 185-86. The National Institutes of Health ("NIH") is responsible for "the support of a national program of health science research." *Id.*

91. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 185. The grantee institution had to consider the rights and welfare of research subjects, "the appropriateness of the methods used to secure informed consent, and the risks and potential

prove new or continue old grants to grantees who failed to meet the standard.⁹²

Congress attempted to regulate research with human subjects in the National Research Act of 1974.⁹³ Title II of the Act, the "Protection of Human Subjects of Biomedical and Behavioral Research," established the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research ("the Commission").⁹⁴ The Commission was charged with identifying "the basic ethical principles which should underlie the conduct of biomedical and behavioral research involving human subjects."⁹⁵ In its investigation, the Commission was to consider the nature and definition of informed consent in various research settings.⁹⁶ Specifically, the Commission was charged with studying and identifying specific requirements of informed consent for children, prisoners, and the mentally infirm, because these groups were unlikely to be able to give free and voluntary consent. By identifying special populations for consideration in application of informed consent to experimentation, the 1974 Act essentially charged the Commission to consider any factors that would affect the free and voluntary nature of the consent given.⁹⁷ The Act was a vehicle for the creation of a set of federal regulations on research with human subjects. However, the enforcement mechanism of the Act limited the reach of the regulations to institutions receiving funds from the Department of Health, Education, and Welfare rather than to individual researchers.⁹⁸ In August 1975, the Commission

medical benefits of the investigation." *Id.* (citing W. Curran, *Governmental Regulation of the Use of Human Subjects in Medical Research: The Approach of Two Federal Agencies*, DAEDALUS: ETHICAL ASPECT OF EXPERIMENTATION WITH HUMAN SUBJECTS, Spring, 1969, at 542).

92. *Id.* at 186.

93. National Research Service Award Act of 1974, Pub. L. No. 93-348, 88 Stat. 342 (1974).

94. *Id.*

95. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 187.

96. ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS, *supra* note 24, at 181.

97. *Id.* The adequacy of the information given, the competence and freedom of the individual to make a decision, and the nature of the consent obtained from the subject are all factors to be considered in evaluating the informed consent capacities of specific populations. *Id.*

98. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 187. The Nuremberg Code, on the other hand, was directed toward individual researchers. A violation of the Nuremberg Code would result in the punishment of the researcher, including possible criminal sanctions. A violation of the National Research Act is "punished" by a denial of funding for the research project. *Id.* at 187-89.

presented a comprehensive set of regulations, applicable to groups of the Department of Health, Education, and Welfare related to government-conducted or government-sponsored research.⁹⁹ Research funded by sources outside the Department of Health, Education, and Welfare was not affected.¹⁰⁰

In 1981, the 1974 regulations were revised in response to the work of the National Commission.¹⁰¹ The revised regulations set out a detailed informed consent provision, requiring that the researcher obtain patient consent under circumstances "that minimize the possibility of coercion or undue influence."¹⁰² One of the most striking provisions in the revised regulations allowed an institutional review board¹⁰³ to waive the informed consent requirement entirely if:

- (1) the research involves no more than minimal risk to the subjects;
- (2) the waiver or alteration will not adversely affect the rights and welfare of the subjects;
- (3) the research could not practicably be carried out without the waiver or alteration; or
- (4) whenever appropriate, the subjects will be provided with additional pertinent information after participation.¹⁰⁴

By allowing an institutional review board¹⁰⁵ to waive the informed consent of a research subject, the 1981 regulations strike a completely different path than previous regulations¹⁰⁶ or the Nuremberg Code.¹⁰⁷

99. *Id.*

100. *Id.*

101. *Id.* at 190. The Regulations apply to research that falls under the Department of Health and Human Services, the successor to the Department of Health, Education, and Welfare. *Id.*

102. 45 C.F.R. § 46.116 (1995).

103. Institutional Review Boards ("IRBs") are used, under the 1974 and 1981 regulations, to determine whether or not a grantee has met the necessary requirements for a government research grant. IRBs are usually composed of at least five people with different backgrounds and fields of expertise, able to review proposals from both a scientific and an ethical point of view. *Id.* at 187-88. The framers of the Declaration of Helsinki suggested that establishing ethics committees to review research protocols would ensure that the highest ethical standards would be maintained at all stages of research. Helsinki recognized the possibility of conflict of interest present with ethics committees: "[i]t is important to ensure that ethics committees do not take on a perfunctory status merely because agencies providing grants require their sanctions." *Ethics in Biomedical Research*, ISSUES MED. ETHICS, July-Sept. 1996, at 90, 92.

104. 45 C.F.R. § 46.116(d) (1983).

105. The primary purpose of an IRB is to safeguard the rights and welfare of human research subjects. It is up to the IRB investigators to determine whether proposed research meets the required ethical norms, including informed consent. ROBERT J. LEVINE, *ETHICS AND REGULATION OF CLINICAL RESEARCH* 326 (2d ed. 1988).

106. The 1974 regulations required that the subject be "so situated as to be able to

Despite the rather broad treatment given to the definition of informed consent by the 1981 regulations, prisoners, as a group, received more strongly protected informed consent rights.¹⁰⁸ Prisoners face the potential problem of exploitation, either real or perceived, because they are a captive population.¹⁰⁹ Exploitation of prisoners is possible because of the potential for coercion, which may be subtle, and a relatively low public interest in prisoners.¹¹⁰ “[P]risoners may become ‘volunteers’ because of their inability to resist material inducements.”¹¹¹ These concerns prompted informed consent regulations even narrower than those in the Nuremberg Code.¹¹² Only four kinds of research involving prisoners are allowed. Of those four, three classes allow sociological-type studies.¹¹³

The revised regulations thus provide an interesting contrast: the informed consent of the average person is easier to waive under either the Nuremberg Code or the 1974 regulations; however, special classes of people, like prisoners, receive greater protection based on the fact that their environment is inherently coercive.

The FDA, in conjunction with the NIH, controls the regulation of human research experimentation in the United States.¹¹⁴ Charged with the regulation of the pharmaceutical industry, the FDA exists to protect the consumer from unsafe products.¹¹⁵ The FDA has developed very specific rules regulating the use and testing of pharmaceutical products. Unlike the regulations promulgated by the Department of Health and

exercise free power of choice without undue inducement or any element of force, fraud, deceit, duress or other form of constraint or coercion.” 45 C.F.R. § 46.103(c) (1975).

107. *THE NAZI DOCTORS AND THE NUREMBERG CODE*, *supra* note 54, at 2. The first provision of the Nuremberg Code states that “[t]he voluntary consent of the human subject is absolutely essential.” *Id.*

108. *Id.* at 191-92. The regulations also give specific consideration to children as a special research class. *Id.* at 192-93.

109. *Id.* at 191.

110. Bassiouni et al., *supra* note 74, at 1613.

111. *Id.*

112. *THE NAZI DOCTORS AND THE NUREMBERG CODE*, *supra* note 54, at 192.

113. *Id.* “(1) the study of the possible causes, effects, and processes of incarceration and of criminal behavior; (2) the study of prisons as institutions or of prisoners as incarcerated persons; (3) research on innovative and accepted practices that have the ‘intent and reasonable probability’ of improving the health or well-being of the subject.” *Id.* The fourth class covers medical research “on conditions particularly affecting prisoners as a class (such as vaccine trials for diseases that are much more prevalent in prisons than elsewhere).” *Id.* All research in the fourth class must be approved by the Secretary of Health and Human Services, who must publish his or her intent to approve of such research in the *Federal Register*. *Id.*

114. Bassiouni et al., *supra* note 74, at 1621.

115. *Id.*

Human Services, FDA regulations are applicable nationwide without regard to the source of funding.¹¹⁶ FDA regulations regulate products, not institutions, and exemptions are statutory.¹¹⁷

Over the past forty years, informed consent rights under FDA regulations have changed.¹¹⁸ Congress passed the Drug Amendments of 1962, partially in response to an outbreak of birth defects and infant deformities caused by the prescription of the drug thalidomide to pregnant women.¹¹⁹ At the time thalidomide was being widely prescribed, and there were no regulations requiring disclosure of the fact that the drug was experimental, beyond a warning on the drug label. The drug was prescribed to 19,882 patients, including 3,760 women of child-bearing age.¹²⁰ The Drug Amendments became the basis for new FDA regulations updating the 1938 statute. The new regulations required that in addition to being safe there must be "substantial evidence" of a drug's therapeutic value. Furthermore, new drugs could be used in clinical testing only on approved human subjects. Consent of the human subject was not addressed in the regulations, but was made mandatory by a Senate amendment.¹²¹ Again, legislative concern with promulgating enforceable informed consent requirements was obvious.

As legislated, the Senate's consent requirement left the agency without discretion in obtaining patient consent.¹²² Currently, FDA treatment of informed consent is based on specific statutory definition and regulation. Current law requires the FDA to determine whether or not a researcher must obtain informed consent from a subject by evaluating the "feasibility" of obtaining that consent:

[T]he obtaining of informed consent shall be deemed feasible unless[:] (1)[t]he human subject is confronted by a life-threatening situation[:]; (2)[i]nformed consent cannot be obtained from the subject because of an inability to communicate with, or obtain legally effective consent from, the subject[:]; (3)[t]ime is not sufficient to obtain consent from the subject's legal representa-

116. *Id.* at 1621-22.

117. *Id.*

118. *Id.* at 1623.

119. *Id.* at 1622-23.

120. *Id.*

121. *Id.* at 1624. Because the Senate made human subject consent to testing mandatory, the FDA had no discretion in the application of the consent requirement. The Senate provided only two exceptions to the informed consent requirement: "(1) if consent was not feasible in the opinion of the investigator . . . , and (2) if consent was not in the best interest of the subject." *Id.*

122. Bassiouni et al., *supra* note 74, at 1624.

tive[; or,] (4)[t]here is available no alternative method of approved or generally recognized therapy that provides an equal or greater likelihood of saving the life of the subject.¹²³

Furthermore, the "consent" of a subject is defined in terms of amount and quality of information given:

"Consent" means that the person involved has the legal capacity to give consent, is so situated as to be able to exercise free power of choice, and is provided with a fair explanation of pertinent information concerning his investigational drug . . . as to enable him to make a decision on his willingness to receive [the] drug. This latter element means that before acceptance of an affirmative decision by such person the investigator should carefully consider and make known to him . . . the nature, expected duration, and purpose of the administration of . . . [the] drug; . . . the hazards involved; [and] the existence of alternative forms of therapy.¹²⁴

The FDA definition of consent is remarkably similar to the first provision of the Nuremberg Code.¹²⁵ Proxy consent as considered under Helsinki IV, is addressed by the exceptions to the FDA definition of feasible consent.

The most recent federal attempt to protect human research subjects was announced on June 18, 1991.¹²⁶ The Federal Policy for the Protection of Human Subjects (known as the "Common Rule")¹²⁷ sets forth requirements for the protection of human subjects involved in federally funded research.¹²⁸ Adopted by over twenty-five federal departments and agencies, including DoD and the Department of Veterans Affairs,¹²⁹ the Common Rule has its roots in the human subject protection regulations

123. 21 C.F.R. § 50.23(a)(1)-(4) (1995).

124. Bassiouni et al., *supra* note 74, at 1625. In formulating its definition of consent, the FDA relied on the concepts embodied in the Nuremberg Code and the Declaration of Helsinki. *Id.*

125. See THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 51, at 2.

126. ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS, *supra* note 24, at 675-77.

127. *Id.* at 675, 678.

128. *Id.*; 56 Fed. Reg. 28,003 (1991).

129. The following federal agencies and departments adopted the Common Rule: The United States Department of Agriculture, Department of Energy, National Aeronautics and Space Administration, Department of Commerce, Consumer Product Safety Commission, International Development Cooperation Agency, Agency for International Development, Department of Housing and Urban Development, Department of Justice, Department of Defense, Department of Education, Department of Veterans Affairs, Environmental Protection Agency, National Science Foundation, Department of Health and Human Services, and Department of Transportation. *Id.*

promulgated by the Department of Health, Education, and Welfare in 1974.¹³⁰ The Common Rule was designed to operate in conjunction with existing FDA regulations governing the protection of human subject research;¹³¹ to that end, the informed consent requirements and the exceptions thereto are substantially the same as those provided by the FDA.¹³²

Current federal law prohibits the Department of Defense from conducting federally funded research on human subjects without the prior informed consent of the subject.¹³³ The language of the provision restricting DoD from using human subjects for experimentation does not contain any exceptions,¹³⁴ nor is there any legislative history or other commentary suggesting that such exceptions or waivers of these provisions would be acceptable.¹³⁵

II. JUDICIAL INTERPRETATION OF NUREMBERG, CONGRESSIONAL/LEGISLATIVE INTENT AND THE ROLE OF THE MILITARY IN MEDICAL RESEARCH AND EXPERIMENTATION OF HUMAN SUBJECTS WITHOUT INFORMED CONSENT.

A. *Cold War/LSD Experimentation*

Despite the obvious intent of the legislature to regulate research on human experimentation through the use of informed consent provisions, judicial involvement in the area has been minimal. The courts have rarely applied the principles developed at Nuremberg, or contained in the Helsinki declarations.¹³⁶ Moreover, the courts have adhered to their traditionally deferential and passive role when considering research conducted by the military.¹³⁷ The Supreme Court decision in *United States v. Stanley*¹³⁸ demonstrates the extent to which the Court has refused to involve itself with human subject research on military personnel.

130. ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS, *supra* note 24, at 676-77.

131. Federal Policy for the Protection Human Subjects, 56 Fed. Reg. 28,003, 28,025 (1991).

132. *Id.* at 28,012, 28,016-17.

133. 10 U.S.C. § 980 (1995).

134. The provision allows a "legal representative" to give consent to research in the case of research "intended to be beneficial to the subject." 10 U.S.C. § 980 (1994).

135. *See Doe v. Sullivan*, 938 F.2d 1370 (D.D.C. 1991); *United States v. Stanley*, 438 U.S. 669 (1987).

136. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 201.

137. *Id.* at 218.

138. *United States v. Stanley*, 483 U.S. 669 (1987).

Government sponsored research involving non-consenting¹³⁹ military personnel was prevalent during the Cold War. According to a report issued by the Government Accounting Office (“GAO”) the DoD conducted tests involving hazardous substances on hundreds of thousands of human subjects between 1940 and 1974.¹⁴⁰ The Central Intelligence Agency and the DoD were fearful that countries hostile to the U.S. would use chemical and biological agents against Americans.¹⁴¹ In addition, of particular interest to both agencies was the potential use of chemical and biological agents to obtain information from enemy intelligence agents.¹⁴² Because these testing programs were considered highly sensitive by the agencies conducting them,¹⁴³ it is not surprising that military personnel were often the test subjects.

In February 1958, Master Sergeant James B. Stanley volunteered to participate in a program to test the effectiveness of protective clothing and equipment against chemical weapons.¹⁴⁴ Without his consent, Stanley was secretly administered doses of lysergic acid diethylamide (“LSD”).¹⁴⁵ The testing was conducted pursuant to a plan to study the effects of LSD on humans.¹⁴⁶ Because of the LSD ingestion, Stanley suffered hallucinations, periods of incoherence and memory loss, and would occasionally awake in the middle of the night and “without reason, violently beat his wife and children, later being unable to recall the entire incident.”¹⁴⁷ Stanley was discharged from the military in 1969 after his performance began to suffer, and his marriage dissolved shortly thereaf-

139. “Non-consenting” is used here to describe people who were not given the opportunity to consent. “Non-consenting” does not refer to people who refused treatment and were subsequently used as research subjects against their will.

140. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 15. Not all of these tests were conducted on military personnel. For example, from 1951-1969, the DoD conducted hundreds of open-air tests using bacteria and viruses that cause disease in plants, animals, and humans. In 1968, the DoD released a deadly nerve gas from an airplane over an area approximately 80 miles south of Salt Lake City, Utah, killing nearly 6,400 sheep and exposing unknown numbers of people to the deadly agent. Although the DoD initially denied responsibility for the act, it eventually reimbursed ranchers for the loss of livestock. *Id.* at 6.

141. S. REP. NO. 94-755, *supra* note 27, at 385.

142. *Id.* The program of investigation began with the purpose of developing a defensive program. Use of chemical and biological agents for brainwashing and intelligence gathering was initially a secondary concern. *Id.*

143. *Id.*

144. *Stanley*, 483 U.S. at 671.

145. *Id.*

146. *Id.*

147. *Id.*

ter.¹⁴⁸ Stanley was not aware that he had been given LSD until 1978, when he received a letter from the Army requesting his participation in a follow-up study.¹⁴⁹

Having been denied an administrative claim for compensation by the Army, Stanley filed suit under the Federal Tort Claims Act.¹⁵⁰ Congress enacted legislation that made “[a] suit under the Federal Tort Claims Act the sole remedy for injuries ‘caused by the negligent or wrongful act or omission’ of medical military personnel.”¹⁵¹ The district court granted the Government’s motion to dismiss after finding that at the time the research was conducted, Stanley was on active duty and his suit was therefore barred by the rule established in *Feres v. United States*.¹⁵² The *Feres* doctrine stated, “the Government is not liable under the Federal Tort Claims Act for injuries to servicemen where the injuries arise out of or are in the course of activity incident to service.”¹⁵³

The Fifth Circuit Court of Appeals agreed with the district court that Stanley’s claim was barred by the *Feres* doctrine.¹⁵⁴ The appellate court conceded, however, that Stanley could proceed with his claim under *Bivens v. Six Unknown Federal Narcotics Agents*.¹⁵⁵ Under *Bivens*, Stanley argued he could bring an action under the Federal Tort Claims Act by filing against individual officers.¹⁵⁶ The case was remanded, based on the rationale of the *Bivens* decision, and Stanley amended his complaint in order to add “unknown federal officers” for violation of his constitutional rights.¹⁵⁷ Stanley’s amended complaint also charged that the Government’s “failure to warn, monitor or treat”¹⁵⁸ him constituted a separate and distinct tort which was not incident to service according to the *Feres*

148. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 213.

149. *Id.* The letter requested the participation of “volunteers” who had participated in the 1958 study. This was the first notification the government gave to Stanley following his participation in 1958. *Id.*

150. *Stanley*, 483 U.S. at 671.

151. *Nagy v. United States*, 471 F. Supp. 383, 384 (D.D.C. 1979). Congress enacted legislation to this effect on October 8, 1976. *See* 10 U.S.C. at 1089 (1976).

152. *Stanley*, 483 U.S. at 672. The rule announced in *Feres v. United States*, 340 U.S. 135 (1950), is known as the “*Feres* doctrine.”

153. *Feres v. United States*, 340 U.S. 135 (1950).

154. *Stanley*, 483 U.S. at 671. While the Court of Appeals agreed that Stanley’s claim was barred under the *Feres* doctrine, it held that the District Court should never have reached the merits of the case and dismissed it for lack of subject matter jurisdiction. *Id.*

155. *Id.* (citing *Bivens v. Six Unknown Federal Narcotics Agents*, 403 U.S. 388 (1971)).

156. *Id.* at 672.

157. *Id.*

158. *Id.*

doctrine.¹⁵⁹ The district court upheld Stanley's *Bivens* claim; the court of appeals affirmed and again remanded to the district court to allow Stanley to replead his claim under the Federal Tort Claims Act.¹⁶⁰

In a closely divided decision, the Supreme Court denied Stanley's claim.¹⁶¹ Writing for a five to four majority, Justice Scalia denied Stanley's *Bivens* claim because "[t]aken together, the unique disciplinary structure of the Military Establishment and Congress' activity in the field . . . dictate[s] that it would be inappropriate to provide enlisted military personnel with a *Bivens*-type remedy . . ."¹⁶² Scalia asserted that "Stanley underestimates the degree of disruption" that would be caused by a liability claim, and that such a claim would "call into question military discipline and decision-making."¹⁶³ The Supreme Court did not say that under no circumstances may a serviceman bring a claim in civil court. The Court indicated that it would hear a claim to prevent or halt the violation of the constitutional rights of military personnel.¹⁶⁴ However, the Court effectively deprived Stanley of any viable avenue of redress; it denied Stanley's FTCA claim and remanded the decision to the trial court with orders to dismiss Stanley's *Bivens* claim.¹⁶⁵

Due to the majority's complete disregard for the extraordinary circumstances involved in this case, Justice O'Connor wrote separately to emphasize the outrageous nature of the conduct involved. O'Connor noted that while *Feres* stands for the proposition that "the special circumstances of the military mandate that civilian courts avoid entertaining a suit involving harm caused as a result of military service," the Government conduct involved in Stanley's claim "is so far beyond the bounds of human decency that as a matter of law it simply cannot be considered a part of the military mission."¹⁶⁶ O'Connor did not propose that the Court engage in a case-by-case analysis of whether challenged military action did, in fact, arise out of, or occurred in the course of, service. Rather, she

159. *Id.* at 673. Because the government's failure to monitor or treat Stanley technically occurred after he was discharged from the service, Stanley contends that action was not incident to service. *Id.*

160. *Id.* at 674-76.

161. *Id.*

162. *Id.* at 679 (citing *Bush v. Lucas*, 462 U.S. 367, 304 (1983)).

163. *Id.* at 682.

164. *Id.* at 683.

165. *Id.* at 686. The Supreme Court vacated the appellate court's reinstatement of Stanley's claim under the Federal Tort Claims Act on procedural grounds: "[t]he Court of Appeals . . . had no jurisdiction to enter orders relating to Stanley's long-dismissed FTCA claims." *Id.* at 678.

166. *Id.* at 709. (O'Connor, J., concurring in part and dissenting in part).

asserted that “no amount of negligence, recklessness, or perhaps even deliberate indifference on the part of the military would justify the entertainment of a *Bivens* action involving actions incident to military service.”¹⁶⁷ Yet, O’Connor would outlaw military experimentation on unwitting, nonvolunteer human subjects as a matter of law.¹⁶⁸

O’Connor went on to note that the United States military played an “instrumental” role in the prosecution of Nazi officials who experimented on human subjects.¹⁶⁹ Citing the first principle of the Nuremberg Code, O’Connor concluded by saying “[i]f this principle is violated the very least that society can do is to see that the victims are compensated. . . . I am prepared to say that our Constitution’s promise of due process of law guarantees this much.”¹⁷⁰ Thus, despite her statement that she would dismiss Stanley’s claim under the Federal Tort Claims Act¹⁷¹ and that there was no remedy available for Stanley under *Bivens*, O’Connor would allow Stanley’s cause of action because medical experimentation on unwitting, nonvolunteer human subjects is wrong as a matter of law.¹⁷² As Justice Brennan, writing for the dissent, concludes: “Soldiers ought not be asked to defend a Constitution indifferent to their essential human dignity.”¹⁷³

Stanley’s status as a member of the military, thus, precluded the majority not only from considering whether Stanley’s injuries were “incident to service,” but also, from considering the undisputed fact¹⁷⁴ that the DoD lied to Stanley about what they were doing. The majority opinion neither reflects any acknowledgement or recognition of the extreme nature of the acts committed by the Army, nor characterizes the Army’s conduct as unusual or inappropriate.¹⁷⁵ The effect of *Stanley* is to provide military

167. *Id.*

168. *Bivens*, 483 U.S. at 409.

169. *Stanley*, 483 U.S. at 710.

170. *Id.*

171. O’Connor concurred with the majority that the appellate court should not have reinstated Stanley’s cause of action under the Federal Tort Claims Act, and would dismiss the claim on those (procedural) grounds. *Id.* at 708.

172. *Id.* at 710.

173. *Id.* at 708.

174. *Id.* at 701. Justice Scalia states in his summary of the facts: “James B. Stanley . . . volunteered to participate in a program ostensibly designed to test the effectiveness of protective clothing and equipment as defenses against chemical warfare. Four times that month, Stanley was secretly administered . . . (LSD), pursuant to an Army plan to study the effects of the drugs on human subjects.” *Stanley*, 483 U.S. at 671.

175. Annas, *supra* note 56, at 38.

officials with unqualified immunity from claims by military personnel.¹⁷⁶ Only in extraordinary circumstances has the Court bestowed unqualified immunity on officials who intentionally violate the constitutional rights of citizens,¹⁷⁷ yet the majority does not squarely address the consequences of its decision in this regard.¹⁷⁸ Under the *Stanley* analysis it is difficult to imagine a situation where military personnel would be protected from experimentation without their knowledge and consent.

B. *The Persian Gulf War and the FDA Waiver of Informed Consent*

1. *FDA Rule 23(d)*

Responding to concern about Iraqi chemical and biological weapons capacity, the DoD began to investigate medical treatments that might be able to counter any such attack.¹⁷⁹ Research revealed two potentially useful drugs in protecting against chemical nerve agents and botulism: pyridostigmine bromide and botulinum toxoid.¹⁸⁰ Neither drug had been approved by the FDA for use as intended by the DoD during the Gulf War,¹⁸¹ and thus both were considered "investigational new drugs" ("IND") under the Federal Food, Drug and Cosmetic Act ("FDCA").¹⁸² Under the FDCA, unapproved drugs are generally prohibited from use,¹⁸³ however, the FDCA also authorizes the Secretary to promulgate regulations that exempt drugs that are used exclusively for investigational purposes.¹⁸⁴ The first requirement of researchers using IND's is that they obtain the informed consent of their subject.¹⁸⁵ The only exceptions to the informed consent requirement are those authorized by the FDCA, which are determined based on the "feasibility" of obtaining the subject's informed consent.¹⁸⁶

176. *Id.* at 39.

177. *Stanley*, 483 U.S. at 694. (Brennan, J., dissenting).

178. *THE NAZI DOCTORS AND THE NUREMBERG CODE*, *supra* note 54, at 214.

179. *Doe v. Sullivan*, 938 F.2d 1370, 1372 (1991).

180. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 19-20. The Department of Defense had spent years, and billions of dollars, trying in vain to develop drugs that would provide safe and effective protection against chemical nerve agents and biological toxins. *Id.* at 11.

181. *See id.*

182. *Id.* at 19-20. Pyridostigmine and botulinum toxoid are considered investigational because they have not been approved for use against chemical nerve agents and botulism.

183. 21 U.S.C. § 355(a) (1994).

184. 21 U.S.C. § 355(i).

185. *Id.*

186. 21 C.F.R. § 50.23(a) (1995). Informed consent is deemed "not feasible" when: (1) the human subject is confronted with a life-threatening situation; (2) when the human sub-

In a letter to the Assistant Secretary of Health for the Department of Health and Human Services, the Assistant Secretary for Defense (Health Affairs) asserted that the FDA should recognize a new regulatory exception under which informed consent would be deemed "not feasible" during military combat exigencies.¹⁸⁷ The Secretary of Defense urged that although in peacetime "we believe strongly in informed consent and its ethical foundations," during time of war the interest of an individual in exercising his right not to take an unapproved drug may run counter to the military mission.¹⁸⁸ Furthermore, DoD stated that "special military exigencies sometimes must supersede normal rights and procedures that apply in the civilian community. Consistent with this, . . . military members may be required to submit to medical care determined necessary to preserve life, alleviate suffering or protect the health of others."¹⁸⁹

The FDA responded to DoD's request by promulgating rule 50.23(d) as an interim regulation to allow the Commissioner of the FDA to determine whether obtaining informed consent from military personnel is feasible in certain combat situations.¹⁹⁰ The rule provides specific guidelines detailing the considerations and findings the Commissioner must make before determining that informed consent is not feasible. For example, the DoD request may cover only a single military operation "involving combat or the immediate threat of combat."¹⁹¹ The Commissioner will also take into consideration such factors as: the proven safety and effectiveness of the investigational drug; the context in which the drug will be administered; the type of condition or disease the drug is intended to prevent or treat; and "the nature of the information to be provided to the recipients of the drug concerning the potential benefits and risks of taking or not taking the drug."¹⁹² Finally, the FDA will not waive informed consent in the military context unless it can be documented that the use of the drug in the combat situation serves the best interests of individuals involved.¹⁹³

ject cannot adequately communicate his or her consent; (3) when there is not enough time to obtain consent from a subject's legal representative; and (4) when there is no reasonable alternative method of treatment available. *Id.*

187. Informed Consent for Human Drugs and Biologics, Determination that Informed Consent is Not Feasible, 55 Fed. Reg. 52,814, 52,815 (1990) (codified at 21 C.F.R. § 50.23(d)).

188. *Id.*

189. *Id.*

190. *Id.* at 52,815, 52,817.

191. 21 C.F.R. § 50.23 (d)(1).

192. *Id.*

193. *Id.*

With the new regulation in place, DoD was able to obtain a ruling from FDA Commissioner Kessler that obtaining the informed consent of the Gulf War soldiers was “not feasible.” According to DoD, pyridostigmine bromide was issued to 696,562 American troops in the Gulf; it is estimated that approximately two-thirds actually took the drug.¹⁹⁴ Whether or not the troops actually took the drug depended on the order of each major unit commander.¹⁹⁵ The majority of those troops who took pyridostigmine were told that they had no choice.¹⁹⁶ Also according to the DoD, the botulism vaccine was offered on a voluntary basis; however, eighty-eight percent of the troops who received the vaccine said that they were told that vaccination was not optional.¹⁹⁷

Pyridostigmine bromide is a chemical nerve agent, intended in this instance to enhance the effectiveness of other drugs that have been proven effective in the treatment of nerve agent poisoning.¹⁹⁸ Although pyridostigmine is FDA-approved for use in treating a serious neurological disease,¹⁹⁹ the dosage given to healthy United States troops had not been approved.²⁰⁰ That the troops received a dosage of pyridostigmine significantly lower than that which the FDA had approved for other uses is not relevant in evaluating the safety of the drug because the troops were healthy.²⁰¹ Pyridostigmine works when taken in combination with other

194. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 11.

195. Keeler et al., *supra* note 17, at 693.

196. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 47.

197. *Id.* at 11. There was some controversy surrounding the issuance of the vaccine to women: the FDA Waiver Review Group recommended that the vaccine not be administered to pregnant women, and that information about the vaccine be posted wherever it was administered. *Id.* at 21. One hundred percent of the women who received the vaccine and later participated in a survey of Gulf War veterans reported receiving no warning on the risk of receiving the vaccine if pregnant. *Id.* at 47.

198. *Id.* at 11.

199. *Id.* at 12. Pyridostigmine has been used to treat a neurological disease, myasthenia gravis, characterized by extreme weakness. That pyridostigmine has been used on people suffering from myasthenia gravis does not imply that it is safe to use on healthy individuals, or that the response of a healthy individual would be the same or similar to that of a myasthenia gravis patient. *Id.* at 12-13. Furthermore, some of the side effects of pyridostigmine bromide observed in myasthenia gravis patients include confusion, memory loss, irritability, tremor, and ataxia. *Id.*

200. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 13.

201. *Id.* at 12. The Senate Report provides the following analogy:

Whereas the dosage of pyridostigmine bromide for patients with myasthenia gravis may reach 120 mg every three hours, the dose for U.S. troops was only 30 mg every 8 hours. A good analogy is the use of insulin for diabetes mellitus; very high doses of insulin are sometimes necessary to treat diabetics, but similar doses could be fatal for non-diabetic individuals.

Id.

nerve agent antidotes, such as atropine and 2-PAM.²⁰² It is also effective when taken before exposure to nerve gas.²⁰³ DoD research on pyridostigmine²⁰⁴ revealed that in order for atropine to be effective the dosage had to be .40 mg/kg. However, the dosage of atropine provided to American troops was based on earlier studies using inadequate dosages (.096 mg/kg) of atropine.²⁰⁵ Thus, all other concerns about the safety and propriety of pyridostigmine aside, it is unlikely that pyridostigmine provided any protection because the dosage of the companion drug atropine was inadequate.²⁰⁶

Finally, the safety of pyridostigmine was called into question by research conducted by Dr. James Moss, a scientist at the Department of Agriculture. Dr. Moss found that when pyridostigmine bromide was administered to cockroaches that were subsequently exposed to diethyl-m-tolamide ("DEET"), a common insect repellent, the DEET became almost seven times more toxic.²⁰⁷ Additionally, pyridostigmine becomes four times more toxic when used in combination with DEET.²⁰⁸ Because DEET and many other common insect repellents were widely used in the Gulf War, it is likely that individuals who took pyridostigmine bromide were more vulnerable to pesticides, and that those exposed to pesticides were more vulnerable to pyridostigmine bromide.²⁰⁹

Military researchers appear to have been aware of the potential problems with pyridostigmine in interaction with other substances.²¹⁰ An early study from the United States Army Medical Research Institute of Chemical Defense stated that, based on initial observation, the pyridostigmine bromide regimen "can be administered to virtually all soldiers under wartime conditions without impairment of military performance."²¹¹ Reactions to the pyridostigmine were measured in terms of

202. *Id.* at 16. Pyridostigmine bromide was administered to enhance the effects of atropine and 2-PAM. *Id.*

203. *Id.*

204. *Id.* at 26. According to the Senate Report, the FDA was not made aware of the research data discovered during this study.

205. *Id.*

206. *Id.*

207. *Id.* at 32.

208. *Id.*

209. *Id.*

210. *Id.* Military researchers have stated publicly that pyridostigmine should never be used after exposure to a nerve agent because of the damaging effects of the combination. *Id.* at 33.

211. Keeler et al., *supra* note 17, at 695. The researchers based their conclusions on the fact that about half of the reactions to pyridostigmine were "nonincapacitating." *Id.* at 693.

their effect on military performance, not in relation to their effect on the health of the individuals.²¹² Moreover, DoD researchers were concerned about adverse reactions to pyridostigmine bromide to the extent that they screened subjects to determine whether they were hypersensitive to pyridostigmine before allowing the subject to participate in the test.²¹³ Patients taking other medications were excluded from many studies, as were smokers and people with abnormal blood pressure, asthma, glaucoma, low serum cholesterol, gastrointestinal disorders, and urinary or intestinal blockage.²¹⁴ Women were excluded across the board.²¹⁵

The other investigational drug administered to military personnel was botulism toxoid, a vaccine intended to protect against botulism.²¹⁶ The Informed Consent Waiver Review Group, the FDA body that decides whether or not to waive consent, heard from an FDA representative that the existing supply of the vaccine was almost twenty years old;²¹⁷ another FDA reviewer pointed out that in 1973 the Centers for Disease Control had considered terminating the distribution of the vaccine completely because of the number of persons who had negative reactions to it.²¹⁸ In addition, testing of the vaccine²¹⁹ suggested that it would be ineffective against two of the five botulism toxins it was intended to protect against.²²⁰ Furthermore, the manufacturer of the vaccine reported that there had not been any studies on the effects of the vaccine in pregnant

The study reported that although nonincapacitating symptoms occurred "often," military performance was not impaired. *Id.* The measure of intolerance to pyridostigmine was the "perceived need for medical attention." *Id.* at 694.

212. STAFF ON SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 32.

213. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 28-29.

214. *Id.*

215. Because no studies were done on women, information is lacking regarding long term side effects specific to women, such as menstrual cycle irregularities or disorders, and breast cancer. *Id.* at 28.

216. Botulism is caused by one of the seven neurotoxins found in the bacteria clostridium botulinum. *Id.* at 13. When home canning was common in American households people often got botulism as a result of food poisoning. *Id.* The botulism vaccine used in the Gulf War is produced by the Michigan Department of Health and was designed to protect against five of the seven neurotoxins. *Id.* The vaccine is not a licensed product, hence the investigational status of the drug. *Id.* at 13.

217. *Id.* at 34. According to a representative of the FDA's Center for Biologic Evaluation and Research, there was concern that due to the age of the vaccine it would break down into toxic products. *Id.* at 34.

218. *Id.* at 13-14.

219. An FDA reviewer pointed out that there was no data on the efficacy of the vaccine in humans. The dosage estimates were based on studies conducted on guinea pigs. *Id.* at 13.

220. *Id.* at 14.

women.²²¹

Like pyridostigmine bromide, the questionable safety of botulism toxoid vaccine was coupled with faulty and incomplete administration. Although approximately 8,000 people received the botulism toxoid,²²² the vaccine was administered to most military personnel after the onset of the war. To be effective, the vaccine is supposed to be given as a series of four injections, at 0, 2, and 12 weeks, and then again in 12 months.²²³ Because the war was brief, most troops did not receive more than the first two injections, thus the effectiveness of the vaccine was reduced.²²⁴

2. *Doe v. Sullivan: Judicial response to the FDA Waiver of Informed Consent*

It was far from clear that botulism toxoid and pyridostigmine would be either safe or effective when used as intended. Moreover, the administration of experimental drugs to military personnel is apparently contradictory to the statutory prohibition of the use of DoD funds to conduct research on human subjects.²²⁵ The Court reconciled the FDA informed consent exception for military exigencies with the Congressional mandate that the informed consent of military personnel be obtained in defense department research in *Doe v. Sullivan*.²²⁶

Doe, a serviceman stationed in Saudi Arabia during the Persian Gulf War, brought a claim alleging: (1) FDA Rule 23(d) was facially invalid and outside the authority of the FDA under 505(i) of the FDCA;²²⁷ (2) the DoD's use of investigational drugs without obtaining informed consent was improper under the informed consent direction of the Defense Department Authorization Act ("DAA"); and (3) the Government's use

221. *Id.*

222. *Id.* at 22.

223. *Id.* at 14.

224. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 27.

225. 10 U.S.C. § 980 (1995). The Act provides in pertinent part:

Funds appropriated to the Department of Defense may not be used for research involving a human being as an experimental subject unless: (1) the informed consent of the subject is obtained in advance; or (2) in the case of research to be beneficial to the subject, the informed consent of the subject or a legal representative of the subject is obtained in advance.

Id.

226. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 216-17.

227. Section 505(i) of the FDCA enables the Secretary of Health and Human Services to promulgate regulations for exempting investigational use of drugs by experts. The regulations have to require that investigators obtain informed consent from their subjects except where in their professional judgment such consent is deemed not feasible, or contrary to the best interests of the patient. 21 U.S.C. § 505(i).

of drugs on a nonconsenting person is a violation of that person's Fifth Amendment Due Process rights.²²⁸ Writing for the Court, Judge Ginsburg declared that while the FDA Rule 23(d) "unquestionably involves a military matter," Doe's claim does not necessitate that the Court review the existence of a military exigency.²²⁹ The Court was willing to review the claim because it involved review of a non-military agency, the FDA, and thereby did not entail "judicial interference with the relationship between [a] soldier[] and [his] military superior[]."²³⁰

The court first held that the FDA acted within its authority in promulgating Rule 23(d).²³¹ Next, the court addressed the apparent discrepancy between the FDA Rule 23(d) and the language mandating informed consent under the DAA.²³² The court pointed out that the DAA only limits the authority of the DoD.²³³ The Commissioner of the FDA is not regulated by the DAA.²³⁴ Thus, the court denied Doe's claim that Rule 23(d) is facially invalid.²³⁵

Finally, the Court dismissed Doe's Fifth Amendment Due Process claim. The Court found that concerns raised by the DoD constituted "legitimate government interests that . . . counterbalance an individual's interest in being free from experimental treatment without giving informed consent."²³⁶ The Court found that the DoD had "legitimate government interests" in the uniform administration of drugs to troops to prevent unnecessary danger, and in the success of the military goals of Operation Desert Storm.²³⁷

The Court dismissed Doe's complaint without addressing the propriety of issuing investigational drugs to military personnel. By deferring to the judgment of the FDA, the Court appeared to have left military personnel without an avenue of protection. The DoD need not make public its requests for informed consent waivers, and the FDA need not publicize its determinations; it is entirely possible that military personnel will be una-

228. *Doe v. Sullivan*, 938 F.2d 1370, 1374-75 (1991).

229. *Id.* at 1381.

230. *Id.* at 1380-81.

231. *Id.*

232. 10 U.S.C. § 980 (1994).

233. *Sullivan*, 938 F.2d at 1383.

234. *Id.*

235. *Id.*

236. *Id.* (citing *Doe v. Sullivan*, 756 F. Supp. 12, 17 (D.D.C. 1991)).

237. *Id.*

ware that their right to informed consent is being eliminated.²³⁸ The Court acknowledged and validated the concerns of the Government in deploying troops in a war zone fraught with the peril of chemical weapons,²³⁹ yet did not address the interests of military personnel in being able to determine whether to ingest unapproved drugs.

III. CONCLUSION

The FDA's decision to grant DoD's waiver represented the first instance "since World War II that any official government agency had politically sanctioned the direct violation of the Nuremberg Code (which makes no exception either for members of the military or for wartime expediencies)."²⁴⁰ Until the inclusion of Rule 23(d), the FDA rules provided for a waiver of the right to informed consent only when the subject was incapable of giving his or her informed consent, or was in a life-threatening situation. These laws were firmly anchored in the dictates of ethical codes such as the Nuremberg Code and the Declaration of Helsinki. The practice of DoD in administering LSD to unwitting, nonvolunteer subjects for research purposes was completely repugnant to legally and ethically accepted practices. By promulgating the military exigency informed consent waiver, the FDA gave its stamp of approval to DoD's violation of the ethical norms established at Nuremberg.

The rule promulgated by the FDA sets up relatively specific standards by which to measure the designation of informed consent as "not feasible." The final determination is made at the Commissioner's discretion. What is especially disturbing is that the Commissioner's determinations were based upon the apparent misrepresentations of DoD, presumably to ensure that the waiver request would be granted. For example, one of the criterion that the Commissioner must take into account when reaching a determination is "the extent and strength of the evidence of the safety and effectiveness of the investigational drug for the intended use."²⁴¹ There is ample evidence that the Government was unsure whether the drugs issued were either safe or effective. Test subjects in government research were a purified group: people taking other medications and people who smoked or had abnormal blood pressure, or other health condi-

238. Justice Ginsburg notes that public notice need not be given by either agency as part of her rejection of Justice Thomas' dissent that Doe's claim is moot. *Id.* at 1376.

239. *Id.* at 1377.

240. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 216.

241. 21 C.F.R. § 50.23(d)(2)(i)(1995).

tions, were excluded from research on pyridostigmine.²⁴² DoD researchers withheld from the FDA information gathered in research on the effectiveness of various dosages of pyridostigmine in conjunction with atropine,²⁴³ and tried to prevent testimony by a USDA scientist regarding the heightened toxicity of pyridostigmine when used in combination with DEET.²⁴⁴

One of the overriding concerns of the FDA, as stated in its decision to promulgate Rule 23(d), was that any waiver of informed consent under the military exigency exception be in the best interest of the group.²⁴⁵ Most of the studies considered in the process of determining whether to grant the waiver were conducted by DoD. Allowing the FDA to rely on the data of *any* organization seeking to take away the informed consent of a group of people creates a conflict of interest, especially when the organization has a track record for experimenting on people without their consent. Such a system renders the exception process almost meaningless. Despite the time constraints involved in a war situation, there ought to be an independent panel of research scientists who at the very least are responsible for questioning the validity and reliability of studies presented by DoD.

The DoD has requested that the interim rule be turned into a blanket waiver to use investigational drugs without informed consent in the case of war or threat of war.²⁴⁶ The FDA should reject this proposition for several reasons. First, drugs are given investigational status for a reason. FDA approval is an important safety check on drugs. Researchers must obtain the informed consent of human subjects upon whom they wish to use investigational drugs so that the subjects are aware that they are taking a risk, that the FDA has not endorsed the safety of the drug, and that there may well be adverse consequences to their health. Second, DoD broke its promise to the FDA that it would provide information and warnings concerning the risks of pyridostigmine and botulism toxoid.²⁴⁷

242. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 28-29.

243. *Id.* at 26.

244. Dr. James Moss testified on May 6, 1994, before the Senate Veterans Affairs Committee hearing despite efforts by the USDA to prevent him from doing so. *Id.* at 32. Dr. Moss's research revealed that when taken in conjunction with exposure to pesticides, pyridostigmine and the pesticide both became more toxic. Dr. Moss was warned by his supervisor at USDA not to discuss his findings with anyone, and noted the warning in an internal memorandum. USDA and the S.C. Johnson Wax Co. invented DEET. Moss lost his job at USDA. *Id.* at 33-34.

245. THE NAZI DOCTORS AND THE NUREMBERG CODE, *supra* note 54, at 349.

246. *Id.* at 42.

247. STAFF OF SENATE COMM. ON VETERANS AFFAIRS, *supra* note 17, at 42.

Botulism toxoid was supposed to be administered on a voluntary basis but was in fact mandatory.²⁴⁸ The FDA should not reward or encourage such a violation. Finally, DoD should not be given free reign to use investigational drugs simply because of a state of war. Waiving the informed consent of a group should not be an easy task; it should be an exceptional process requiring a substantial showing of need.

Eroding the rights of military personnel is unethical and legally questionable. Allowing military personnel in the Gulf War to decide whether to take investigational drugs was feasible. In his dissenting opinion in *Stanley*, Justice Brennan states:

The soldier's case is instructive: Subject to most unilateral discipline, forced to risk mutilation and death, conscripted without, perhaps against, his will — he is still conscripted with his capacities to act, to hold his own or fail in situations, to meet real challenges for real stakes. Though a mere "number" to the High Command, he is not a token and not a thing. (Imagine what he would say if it turned out that the war was a game staged to sample observations on his endurance, courage, or cowardice.)²⁴⁹

Claire Alida Milner

248. *Id.*

249. *Stanley*, 483 U.S. at 707-708. (Brennan, J., dissenting) (citing H. Jonas, *Philosophical Reflections on Experimenting with Human Subjects*, in *Experimentation with Human Subjects* 3 (P. Freund ed., 1969)).