

The Nuremberg Code: Historical Context

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Powell's Mission Impossible



TIME

HOW
**MEDICAL
TESTING**
HAS TURNED
MILLIONS OF
US INTO ...

**HUMAN
GUINEA
PIGS**



April 22, 2002

www.time.com AOL Keyword: TIME

In the early 21st century, an erosion of public trust exists in physicians' and clinical investigators' capacity to safely conduct research with human volunteers.

HUMAN GUINEA PIGS

The story of an experiment, during the war, to discover the cause of scabies, and how the disease can be overcome.

The investigator was an army doctor ; his "victims" (who were all volunteers) were **conscientious objectors**

By KENNETH MELLANBY

- First published - 1945
- Second edition – 1973
- Kenneth Mellanby
 - Entomologist
 - Studied the transmission of scabies
 - Observer for the BMJ at the Nazi Doctors Trial in Nuremberg

Class Assignment:

- Annas, GJ, Grodin, MA, Editors, ***The Nazi Doctors and the Nuremberg Code: Human Rights and Human Experimentation.*** Oxford University Press, New York, 1992
 - Mozes-Kor, E. The Mengele Twins and Human Experimentation: A Personal Account. Chapter 4 pages 53-59.
 - Grodin, MA. Historical Origins of the Nuremberg Code. Chapter 7 pages 121-144.

Learning Objectives

- **Describe the difference between medical treatment vs. medical research**
- **Compare and contrast the role of the physician in treating patients with that of an investigator**
- **Describe how Nazi medical care arose out of the eugenics and race medicine theories of the time.**
- **Describe one example, in detail, of Nazi medical experiments conducted in concentration camps.**

Learning Objectives – Cont'd

- **Describe the formulation of the Nuremberg Code**
- **Discuss the responsibility of individual investigators conducting research with human subjects**
- **Delineate the influence the Nuremberg Code was to have on subsequent human subject regulations.**

Time Line for Human Subject Research and Protection

Eugenics Movement



Eugenics



- **‘Science’ of racial improvement through control of hereditary factors**
- **“Racial Hygiene” – U.S. and Europe**
- **Sterilization Laws (1933) in Germany**
- **Nuremberg Laws (1935) prevent intermarriage between Jews and non-Jews**
- **Euthanasia (1939)**
 - **“Incurably sick by medical examination”**
 - **Gases residents of mental institutions**
 - **Develop methods used in concentration camps**

Diane Arbus – Untitled - 1970

Time Line for Human Subject Research and Protection

WWII – 1939-45

Eugenics Movement



Josef Mengele's Twin Studies

- **Twins selected for 'controlled' studies**
- **One twin given an infectious disease, e.g., Typhoid**
- **At time of death of diseased twin, 'control' twin put to death (e.g., Phenol injected into heart)**
- **Both twins autopsied**



Two Hungarian Jewish twin brothers at the camp in Birkenau, prior to selection, 1944 (Bernhard Walter)

Dachau Studies – 1942-1943

- **Done for benefit of German Air Force**
- **High altitude**
 - **To investigate limits of human endurance at extremely high altitudes, studies were carried out in low-pressure chambers that duplicated atmospheric conditions**
 - **Experiments often resulted in death**



**Low Pressure Chamber
National Archives**

Dachau Studies – 1942-1943

- **Hypothermia**

- Experiments conducted to investigate the most effective means of treating persons who had been severely chilled or frozen. Subjects were forced to remain in a tank of ice water.
- Experiments often resulted in death.



**Cold water immersion study
Yad Vashem Archives**

Time Line for Human Subject Research and Protection

Nuremberg Code - 1947



WWII – 1939-45



Eugenics Movement



Nazi Doctors' Trial – Nuremberg – 1946-47



❖ 23 Defendants

❖ Military Tribunal

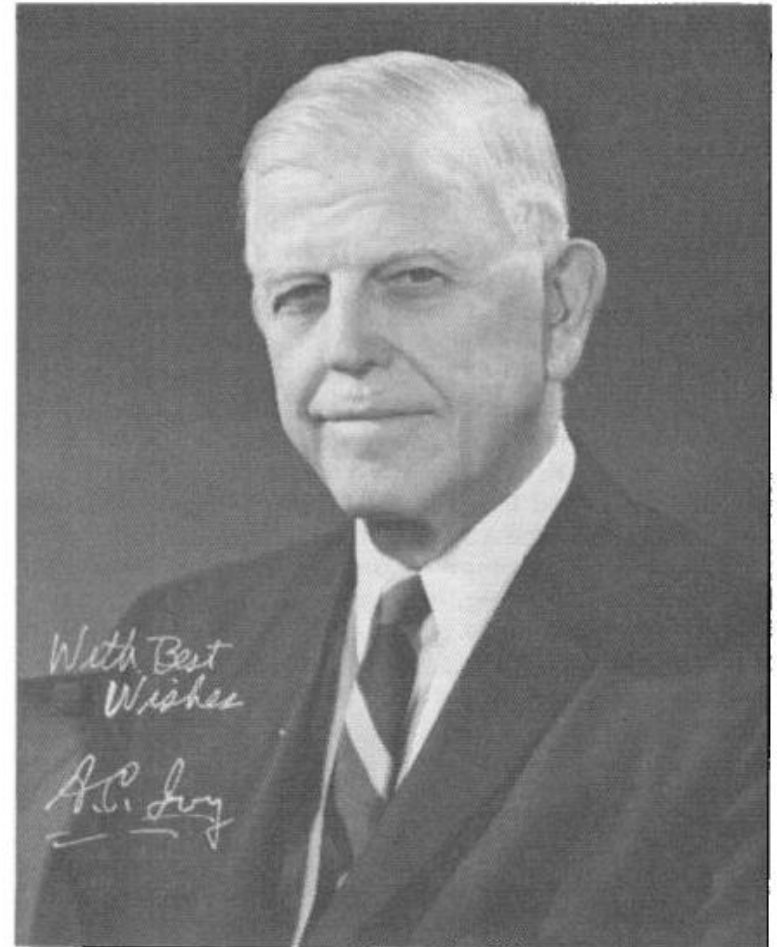
❖ Four Counts:

1. Conspiracy
2. War Crimes
3. Crimes Against Humanity
4. Membership in a Criminal Organization (SS)

Defendants in the Doctors Trial, held in Nuremberg, Germany, from December 9, 1946, to August 20, 1947

Andrew C. Ivy, M.D., Ph.D.

- **Professor of Physiology and Pharmacology at the University of Illinois, Chicago**
- **'Golden Rule of the medical profession' – treat the patient or subject as though the physician were serving as a subject.**



Medical Science Under Dictatorship

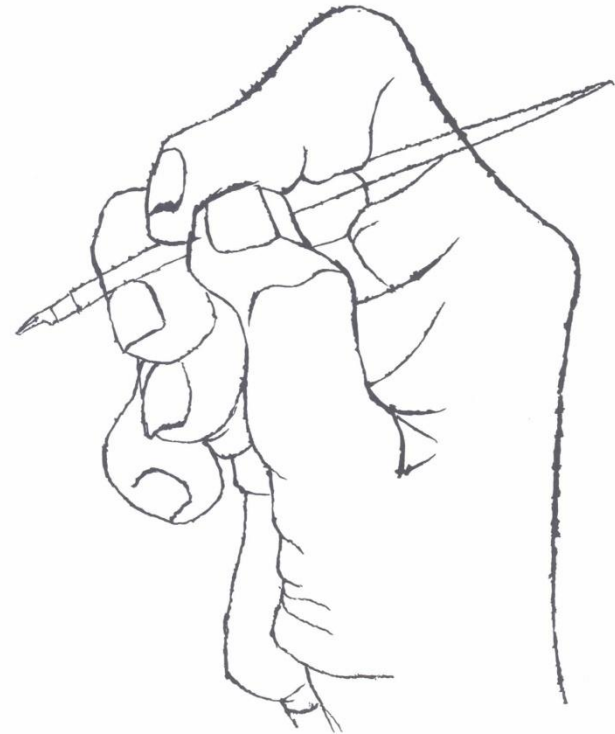
Leo Alexander, M.D., N Engl J Med 1949:39-47

Science under dictatorship becomes subordinated to the guiding philosophy of the dictatorship. ... the guiding philosophic principle of ... the Nazis, has been Hegelian in that what has been considered "rational utility" and corresponding doctrine and planning has replaced moral, ethical and religious values. In the medical profession this expressed itself in a rapid decline in standards of professional ethics. **Medical science in Nazi Germany collaborated in the following enterprises:**

- the mass extermination of the chronically sick in the interest of saving "useless" expenses to the community as a whole;
- the mass extermination of those considered socially disturbing or racially and ideologically unwanted;
- the individual, inconspicuous extermination of those considered disloyal within the ruling group;
- and the ruthless use of "human experimental material" for medico-military research.

Nuremberg Code - 1947

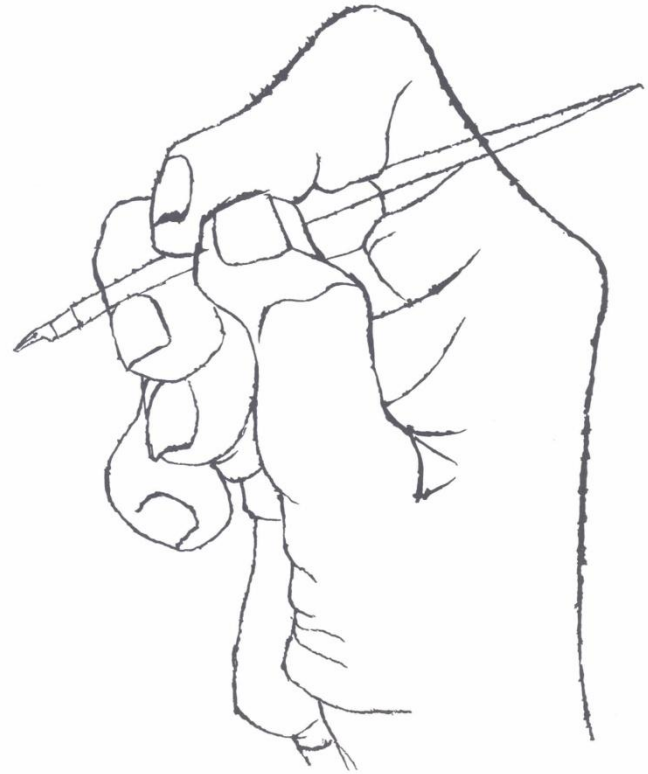
1. **The voluntary consent of the human subject is absolutely essential**
2. **The experiment should yield fruitful results for the good of society, unprocurable by other methods**



Ben Shahn

Nuremberg Code – 1947 – cont'd

3. The experiment should be designed and based on the results of animal experimentation and a knowledge of the natural history of the disease
4. Experiment conducted to avoid all unnecessary physical and mental suffering and injury
5. No experiment where there is an *a priori* reason to believe death or disabling injury will occur

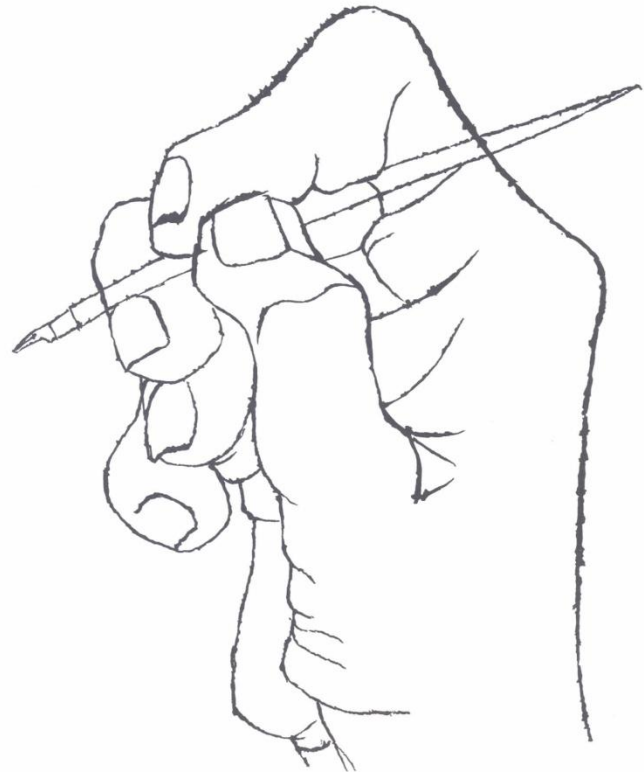


Ben Shahn

Ben Shahn – A Verse Arises - 1968

Nuremberg Code – 1947 – cont'd

6. Degree of risk should never exceed humanitarian importance of problem
7. Proper preparation and facilities to protect the subject against even the remote possibility of injury, disability, or death

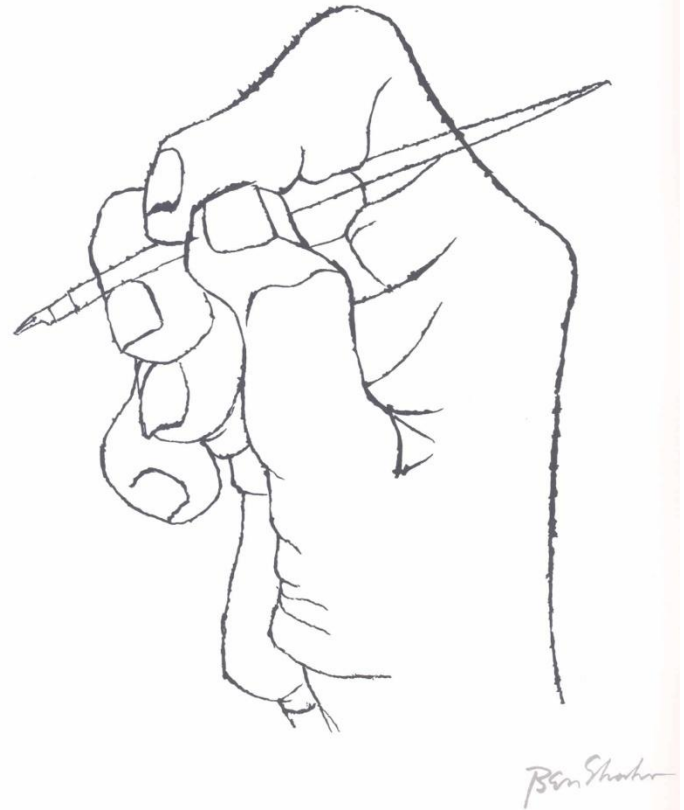


Ben Shahn

Ben Shahn – A Verse Arises - 1968

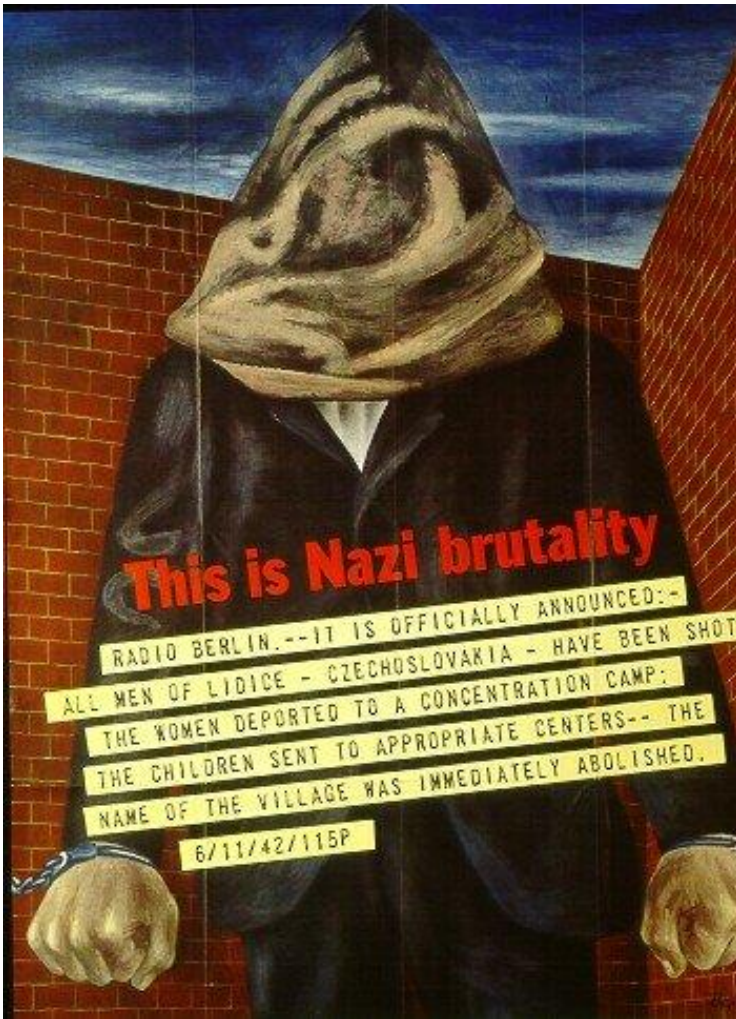
Nuremberg Code – 1947 – cont'd

8. Experiment conducted only by scientifically qualified persons
9. Subject has the right to bring the experiment to an end at any time
10. The scientist in charge must be prepared to end the experiment at any stage

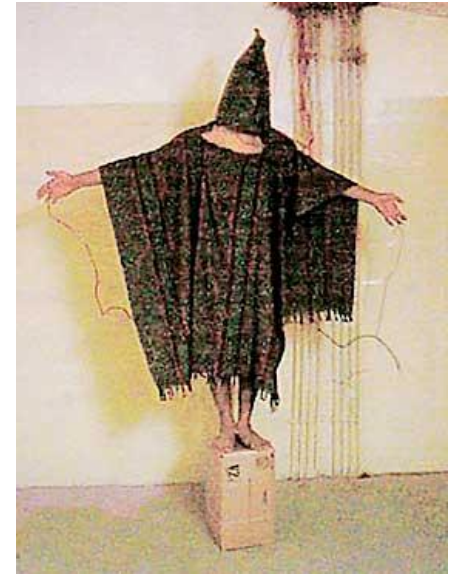


Ben Shahn – A Verse Arises - 1968

Echos from the Past

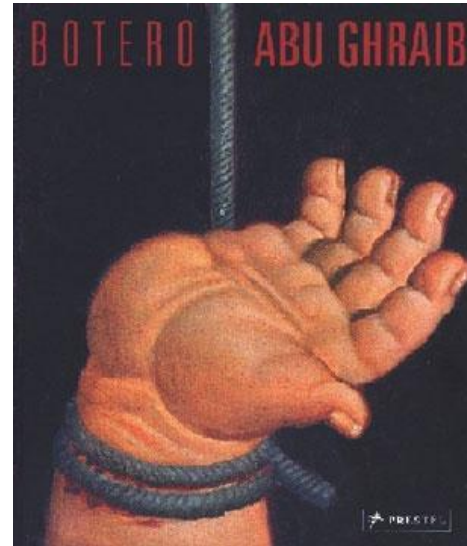


Europe
1942



Iraq
2004





Roles of Medical Professionals Debated in Times of War

- Lifton RJ. Doctors and Torture. N Engl J Med 2004; 351(5):415-416.
 - Correspondence N Engl J Med 2004; 351(15):1571-1574.
- Annas GJ. Unspeakably Cruel – Torture, Medical Ethics, and the Law. N Engl J Med 2005; 352(20):2127-2132.
- Bloche MG, Marks JH. When Doctors Go to War. N Engl J Med 2005; 252(1):3-6.

Elie Wiesel. Without Conscience.

N Engl J Med 2005; 351(15): 1511-1513

“Yet these horrors of medical perversion continued beyond Auschwitz ... how can the recent, shameful torture to which Muslim prisoners were subjected by American soldiers be justified? Shouldn't the prison conditions in Iraq have been condemned by legal professionals and military doctors alike?”



“Am I naive in believing that medicine is still a noble profession, upholding the highest ethical principles? For the ill, doctors still stand for life. And for us all, hope.”