

Human Experiments and Nazi Genocide: a Problematic Legacy

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Abstract

Sixty years ago, the Nuremberg Medical Trial revealed horrific abuses in Nazi medical research. At its close on 19 August 1947, the judges pronounced a set of principles on permissible human experiments. These required that the investigator should explain to the subjects the purpose, procedures, and risks of the experiment.

The idea of informed consent has become the cornerstone of all modern medical research and clinical medicine. I will trace the story of its origins from the time when German researchers were experimenting extensively on victims for military, scientific and racial purposes. These involved victims from many countries, not least Greece.

In 1945 Allied medical officers heard about the Nazi scientific atrocities from released prisoners. The concern with medical war crimes led to the Nuremberg Medical Trial. Surviving experimental subjects testified that the experiments were coercive, often involved death or severe maiming. They described how the experiments met with resistance, protest and sabotage. We find that the research subject, and medical understanding of the victim is at the core of the story.

I. Experimental Atrocities

Nazi human experimentation involved some of the worst cases of exploitation of human life for calculated ends. Such unethical research represents an extreme inversion of the beneficence expected of modern medicine. German medicine had an outstanding reputation in the early twentieth century, built on experimental research – every German MD qualification required original research. The coercive human experiments occurred during the German’s racial war between 1939 and 1945. On the one hand, one needs to take account of the diminishing availability of stocks of experimental animals like rabbits and primates, used for “normal research”. On the other, there was the availability of vast stocks of persons categorised as “racial inferiors”. While priorities in terms of funding and facilities were allocated to research for military and racial ends, a wide variety of researchers, contexts and, consequently, victims were involved. Applying normal rules of confidentiality may serve only to prevent identification of perpetrators and concealment of the origins and extent of atrocities.

Atrocities committed in the name of medical research, included:

- physiological experiments to assess the effects of extreme conditions (as cold, low air pressure), or the effects of abnormal diet (as saltwater), or toxic substances as nerve gases

- the testing of pharmaceuticals on artificially infected individuals, and comparisons to untreated “control groups”
- using body parts as anatomical specimens, or as models for anatomical illustrations
- the taking of brains for dissection from euthanasia victims,
- the draining of blood as a culture medium for bacteria or for serological research,
- the experimental use of X-ray sterilisation,
- the making of anthropological and psychological observations.

Victims were held in coercive conditions, when they could not freely give their consent. These locations included hospitals, prisons, prisoner of war camps, children’s homes, slave labour camps. Some experiments were murderous in that they deliberately studied the physiology of death. Some were disabling, leaving the victims weak and vulnerable. Yet, some procedures involved only mild discomfort or were painless, as the taking of facemasks or the prints of hands and foot soles. Being part of an experiment meant that a victim’s existence was “evidence” of criminality, and so might subsequently be murdered.

The Nazi experiments had a distinctive chronology and structure. Unethical anthropological research on mixed race children led to their sterilisation. The war accelerated the research from 1941. The final phase of human experiments in 1944 was intensified by awareness that German science had to survive impending defeat. Remarkably, 1944 represented a high point in terms of sheer numbers of experiments, and this was when Jewish children became a primary victim group. The Nazi project of racial rejuvenation involved eradicating a diversity of subhuman groups (e.g. mental incurables, homosexuals, “a-socials”), so that this would reinvigorate the German races, and provide opportunities for settlement.

We know the identities of only a few clusters of victims of the experiments, and a structural analysis of why these research atrocities occurred is wholly lacking. Nor do we have even an approximate sense of the overall numbers of the victims of unethical research. Whereas Chief Prosecutor Telford Taylor opening the Nuremberg Medical Trial spoke of hundreds of thousands of victims of “atrocities committed in the name of medical science”, recent estimates have been as low as one thousand deaths, and compensation for survivors limited to 8000 dollars.¹ Rather than just “pseudo—science” major research institutes were involved. The Robert Koch Institute carried out unethical research in the fields of serology, and malaria, tuberculosis, typhus, typhoid and plague research. A major area of Nazi war medicine as Typhus (*Fleckfieber*) and Hepatitis research shows the scale of the experiments, as involving many

¹ Taylor’s opening address is given in: Jay Katz, *Experimentation with Human Beings* (New York, Russell Sage Foundation, 1972), pp. 294-8. cf. Robert Proctor, *The Nazi War on Cancer* (Princeton: Princeton University Press, 1999), 344 n. 4.

thousands, but also the lack of information about victims' identities.² The Kaiser Wilhelm Gesellschaft used slave labour in its scientific institutes.

The *Stern* journalist Günther Schwarberg in 1979 identified the 20 child victims of TB experiments murdered on 20 April 1945.³ The war crimes investigators focused on the involved concentration camp staff, rather than on scientific networks. The TB specialist, Heissmeyer (an NSDAP but not an SS member) instigated the research. He invited the pathologist Fritz Klein to dissect extracted glands from the children. Klein was involved in the Kaiser Wilhelm Institute for Anthropology programme of hereditary pathology under the geneticist, Hans Nachtsheim.⁴

The nameless twenty child victims were selected by Josef Mengele who was informed of new research trends in genetics, and stood in direct relations to the Kaiser Wilhelm Institute for Anthropology| geneticist, Otmar von Verschuer, who actively researched on TB and heredity.⁵ Thus an isolated, rogue atrocity becomes part of a larger research network, which held stocks of children in Auschwitz as a reservoir for experimentation. The second point to emerge is the sabotage of the experiments. Two prisoner physicians, Professor René Quenouille and Gabriel Florence, attenuated the serum, so that it should cause less pain to the children. They were killed along with the children. Fourteen of the children were Polish; Jacqueline Morgenstern, 12 years old was French, Sergio Desimone, 7 years old, was Italian. There were two Dutch brothers. And one child was Yugoslav.

Experimental victims were drawn from all target groups in the Holocaust. The Germans used Soviet prisoners for vaccine research at Buchenwald. In December 1943 an editorial in *The Lancet* deduced that vaccine trials, published in a leading German journal of bacteriology by one Erwin Schuler, involved deliberate infection of human subjects.⁶ The inference was that the experiments were on prisoners of war. *The Lancet* envisaged that the experiments were in a prisoner of war camp and that British

² Paul Weindling, *Epidemics and Genocide in Eastern Europe* (Oxford: Oxford University Press, 2000).

³ Günther Schwarberg, *The Murders at the Bullenhusser Damm, The SS Doctors and the Children* (1984). Günther Schwarberg, *Meine Zwanzig Kinder* (Göttingen: Steidl, 1996).

⁴ Paul Weindling, 'Genetik und Menschenversuche in Deutschland 1940-1960. Hans Nachtsheim, die Kaninchen von Dahlem und die Kinder vom Bullenhusser Damm', in Hans-Walter Schmuhl (ed.), *Rassenforschung an Kaiser-Wilhelm-Instituten vor und nach 1933* (Göttingen: Wallstein Verlag, 2003), 245-274.

⁵ Universitäts-Archiv Münster, Nachlass Verschuer 7 Diehl to Verschuer 19 Oct. 1944, Verschuer to Diehl 25 Feb. 1944.

⁶ 'Typhus Vaccines. A Crucial Experiment', *Lancet* ii (18 Dec 1943), 770 concerning Ding, 'Über die Schutzwirkung verschiedener Fleckfieberimpfstoffe beim Menschen und den Fleckfieverlauf nach Schutzimpfung', *Zeitschrift für Hygiene*, 124 (1943), 670-82. Weindling, *Epidemics and Genocide*, p. 356

soldiers were the victims. What was not known was that that was that hundreds of Russian POWs were used in the often fatal typhus vaccine experiments.

The Germans conducted experiments on Crete. On 19 September 1941 Meythaler wrote:

- “We carried out person to person experimental vaccinations on the English, one of whom reacted with an enlarged liver.”

These were announced in a medical journal, *Klinische Wochenschrift* by Oberstabsarzt Prof. Dr. F. Meythaler in August 1942. The published account refers to experimental infections with hepatitis. Archived military medical correspondence shows that the victims were British prisoners of war. How many prisoners were infected is not clear. Meythaler observed an enlarged liver on the infected. One hopes that the experiments were non-fatal:

- As the cause is unknown, I carried out on Crete transmission experiments from person to person through transfer of blood in a pre-Icteric condition
- 3 of the experimental subjects had a higher temperature and an enlarged liver
- They were observed for eight days, but no Hepatitis/ Icterus occurred.⁷

Greek men, women and children were often victims. In 1943 Greek men were victims of experimental infectious with “Paratyphus” at the concentration camp of Mauthausen. Here among ca 1000 experimental victims were Spanish and Soviet prisoners.

Numbers	Place	Date	Experimenter	Purpose
Ca. 105 Greek women, aged from 15 years	Auschwitz, Block 10/ surgical block 21	Dec 1942-1943	Schumann	Gynaecological experiments / X ray sterilisation
Greek men	Auschwitz Block 10	1943	Schumann	X ray sterilisation
100 Greek women	Auschwitz Block 10	1943	Clauberg	Intrauterine sterilization
Greek women	Auschwitz Block 10	1943	Wirths	Cancer tissue samples
23 Greek men, and 20 Greek women	Strassburg Jewish skeleton collection	1943	Hirt	Anthropology
At least 4 Greek men	Mauthausen		Gross	Serum research

⁷ F. Meythaler, ‘Zur Pathophysiologie des Ikterus’, *Klinische Wochenschrift*, vol. 21 no 32 (8 August 1942) 701-6. B. Leyendecker, F. Klapp, ‘Human Hepatitis experiments in the Second World War’, *Zeitschrift f d gesamte Hygiene*, vol. 35 (1989) 756-60. B. Leyendecker and B.F. Klapp ‘Deutsche Hepatitisforschung im Zweiten Weltkrieg’, Ärztekammer Berlin in Zusammenarbeit mit der Bundesärztekammer (ed.), *Der Wert des Menschen; Medizin in Deutschland 1918-1945* (Berlin: Edition Hentrich, 1989)

Block 10 at Auschwitz held ca. 400 women of many nationalities: Greek, Belgian, German, Czech, Czech, and Slovak. Many were from Salonika and were as young as 17. They were used for X-ray sterilisations by the Nazi doctor Horst Schumann. Here, Greek men were also used as experimental subjects. Clauberg injected substances like diluted novocaine into the uterus. He subjected the women to X-rays. The process resulted in peritonitis, inflammation of the ovaries, and high fever. The ovaries were then removed, usually in two separate operations, and then sent to Berlin for further analysis. Most women who survived these terrible experiments ended up in the gas chambers. Wirths selected the women for cancer experiments.

Greek men and women were selected by anthropologists. They were measured alive. Then they were sent to Alsace. Here, the professor of anatomy, August Hirt, a Swiss-German, planned a Jewish skeleton collection. The SS Ancestral Research organisation, *Ahnenerbe*, gave support with the backing of Heinrich Himmler. The victims were killed by poison gas at the camp of Natzweiler-Struthoff, before their bodies were taken to the Strasbourg anatomical institute, where the anatomical preparations were never completed.⁸

Nationalities: Strassburg Jewish Skeleton Victims	Men	Women
Austrian		1
Belgian/ Belgian residents		3
French	1	
German/ German residents	23	5
Greek	23	20
Netherlands	3	
Norwegian	1	
Polish	6	
Totals	57	29

It is important to accord agency to victims who could disrupt human experiments, and protest in favour of their rights. Polish women whose legs were wounded and infected to test sulphonamide drugs against tetanus protested that experiments violated their rights as prisoners. On 4 March 1945 liberated Auschwitz prisoner doctors made an international declaration on how prisoners had been treated as experimental animals; they hoped that the Allies and neutral states would bring to trial those responsible. Their intention was that bringing the perpetrators to justice would mean that such atrocities should not recur in the future. Similar efforts to collect documentation were made in Dachau and Buchenwald:

⁸ Hans-Joachim Lang, *Die Namen der Nummern* (Hamburg: Hoffmann und Campe, 2004).

“International Investigation-Office for Medical SS-Crimes in the German Concentration Camps, Dachau every victim of any nationality can be interrogated and examined by a medical authority. Every case of death caused directly or indirectly by an SS-experiment can be properly established, so that widows and orphans can be put into the rights of legal heirs. Every case of total or partial invalidity can be treated in a proper way.”⁹

Survivors and witnesses of human experiments called for documentation of Nazi medical atrocities, justice and compensation. The released prisoners organised committees and issued newsletters about the experiments. By asking when the issue of unethical experiments was first raised, and by whom and in what circumstances, we find that the research subject, and medical understanding of the victim is at the core of the story.

VICTIMS OF NAZI PERSECUTION	NUMBERS AFFECTED	NUMBERS KILLED
JEWS		Ca. 6,000,000
ROMA/ SINTI “Gypsies”/“Travellers”	41,000 (Austrians & Germans)	25,000 90,000 (from lands under Nazi occupation)
SLAVS 1. SOVIET POWs 2. POLISH CIVILIANS		3,000,000 3,000,000
SLAVE LABOUR	12,000,000	2,500,000
HOMOSEXUALS	90,000 10,000-15,000 to concentration camps	5,000?
“A-SOCIALS”	10,000	?
CRIMINALS IN “PREVENTIVE DETENTION”	12,500	6000
STERILISED CASTRATED	475,000 2,000	5000? died as a result of the operation
EUTHANASIA		216,400 (including estimated 5,000 children) + 60/80,000 for territories under German occupation
VICTIMS OF MEDICAL RESEARCH -EUTHANASIA VICTIMS FOR MEDICAL RESEARCH	Estimate 16,000? -2040	Estimated 5000?

II. Medical War Crimes, and Ethical Safeguards

Allied scientific intelligence forces entering Germany searched for atomic, chemical and biological weapons of mass destruction. Their mission was broadened to collecting information on German wartime scientific and

⁹ Paul Weindling, *Nazi Medicine and the Nuremberg Trials: From Medical War Crimes to Informed Consent* (Basingstoke, Palgrave-Macmillan, 2004).

medical research. Neither the Allied command or any international agency like the UN War Crimes Commission had any plans for a trial of medical atrocities, and the International Committee of the Red Cross suppressed details of medical atrocities. In November 1945 a scientific intelligence officer, John West Thompson, introduced the concept of a “medical war crime”. He defined what scientific practices were criminal, and where and when the criminality occurred. He concluded that 90% of the work of leading German clinicians and researchers was criminal. He was the first to identify the human experiments as “Medical War Crimes” – this new term provided a basis for joint medical and legal investigations.¹⁰

Thompson revealed that “the sacrifice of humans as experimental subjects” was widespread in Germany. He demanded comprehensive documentation and ethical analysis. He was convinced that inaction would condone the experiments, and that “there is equally a danger that these practices may continue in Germany or spread to other countries.”¹¹ Thompson’s efforts led to a meeting at the Pasteur Institute on July 31 and August 1, 1946 pursued the issue of experimentation without consent. The American physiologist, Ivy stressed that animal research was a fundamental prerequisite for clinical research on human subjects.

Ivy’s draft code contained the germ of the principle of providing experimental subjects with information on hazards: SLIDE
 “OUTLINE OF PRINCIPLES AND RULES OF EXPERIMENTATION ON HUMAN SUBJECTS”

- I. Consent of the subject is required; i.e. only volunteers should be used.
 - (a) The volunteers before giving their consent, should be told of the hazards, if any.
 - (b) Insurance against an accident should be provided, if it is possible to secure it.
- II. The experiment to be performed should be so designed and based on the results of animal experimentation, that the anticipated results will justify the performance of the experiment; that is, the experiment must be useful and be as such to yield results for the good of society.
- III. The experiment should be conducted
 - (a) So as to avoid unnecessary physical and mental suffering and injury, and
 - (b) by scientifically qualified persons
 - (c) The experiment should not be conducted if there is a prior reason to believe that death or disabling injury will occur.”¹²

¹⁰ Paul Weindling, *John Thompson, Psychiatrist in the Shadow of the Holocaust* (Rochester: Rochester University Press), in press.

¹¹ *Ibid.*

¹² TNA WO 309/ 471 Minutes of Meeting to Discuss War Crimes of a Medical Nature Executed in Germany under the Nazi Regime, Appendix B.

The requirement that volunteers should be told of hazards before giving their consent represented an important step towards the principle of informed consent.

Ivy briefed the legal staff of General Taylor on the ethics of experimenting on prisoners. His concern was that the public should not lose confidence in “ethical experimentation.” One of the accused, the bacteriologist Rose argued that U.S. doctors extensively experimented on inmates of penal institutions and asylums, especially with malaria, equating a concentration camp with a penitentiary or asylum. Rose’s counter-attack on the ethics of U.S. research spurred Ivy to find additional support for his code on human experiments. In December 1946 he submitted a set of rules to the Judicial Council of the American Medical Association. These required that: “Before volunteering the subjects have been informed of the hazards, if any.” He elaborated criteria allowing the pursuit of experiments as “the method for doing good”, and argued that the Hippocratic precepts of benefiting the sick, and not giving any deadly medicine, and of a duty of confidentiality to the patient “cannot be maintained if experimentation on human subjects without their consent is condoned.”¹³

The American Medical Association promulgated Principles of Medical Ethics. It has previously been assumed that these principles represented the views of Ivy. However, the AMA Principles demanded far less than Ivy’s original formulation of “voluntary consent”, which for Ivy was contingent on information on potential hazards. The AMA required:

1. The voluntary consent of the individual on whom the experiment must be performed must be obtained
2. The danger of each experiment must be previously investigated by animal experimentation
3. The experiment must be performed under proper medical protection and management.¹⁴

Appearing discreetly in small print and without comment in *JAMA, Journal of the American Medical Association* a regime of discretionary controls by the physician replaced Ivy’s postulates of informing the subject of the hazards, and the notion of the good of society; the requirement of avoiding suffering, injury, and disability was attenuated.

Victims came forward to testify and give evidence as to their ordeals. The Americans broadcast appeals for testimonies. Telford Taylor began the prosecution at the Nuremberg Medical Trial on 9 December 1946 with the statement:

¹³ Ivy, Report on War Crimes of a Medical Nature, AMA Archives, pp. 10, 13, 14. Paul Weindling, *Nazi Medicine and the Nuremberg Trials: From Medical War Crimes to Informed Consent* (Basingstoke, Palgrave-Macmillan, 2004).

¹⁴ *JAMA*, 1946, 133: 35.

For the most part they are nameless dead. To their murderers, these wretched people were not individuals at all. They came in wholesale lots and were treated worse than animals. They were 200 Jews in good physical condition, 50 Gypsies, 500 tubercular Poles, or 1,000 Russians. The victims of these crimes are numbered among the anonymous millions who met death at the hands of the Nazis and whose fate is a hideous blot on the page of modern history.¹⁵ Taylor conveyed the variety of victims in terms of their ethnic background, and also their sheer anonymity.

The US prosecutors at Nuremberg viewed medical experiments as hands-on murder. It meant that criteria had to be drawn up to distinguish legitimate experiments from criminal homicide. Taylor argued that well-established laws concerning murder, manslaughter, assault and battery were sufficient for the trial. The Trial was at two levels: first, the level of the legal accusations, and at a second level concerned with ethical violations.

The prosecution identified the defendants as links in a chain stretching from Hitler and Himmler to the base executors of medical war crimes. We find that four defendants were not Nazi Party members (Handloser, Schröder, Pokorny and Schäfer). But only seven of the doctors were SS officers. The group aged between 43 and 38 were SS officers, and it was these who were sentenced to death. The religious belief of the defendants was mainly Protestant with seventeen Protestants to six Roman Catholics.

Name	Born	Age at trial	NSDAP (Nazi Party)	SA	SS	Sentence
Gebhardt	1897	49	1933	-	1935	Death
Poppendick	1902	44	1932	-	1932	10 years
Hoven	1903	43	1937	-	1934	Death
Brack	1904	42	1929	1923-27	1929	Death
Brandt,K.	1904	41	1932	1932	1934	Death
Mrugowsky	1905	41	1930	1930	1931	Death
Sievers	1905	41	1928	-	1935	Death
Beiglbock	1905	40	1933	1934	-	15 (10 years)
Ruff	1907	38	1938	-	-	Acquitted
Brandt,R.	1909	37	1932	-	1933	Death
Becker-Freyseng	1910	36	1933	SA	-	20 (10 years)
Oberheuser	1911	36	1937	-	-	20 (10 years)

¹⁵ Taylor in Katz, 'Experimentation'.

III. The Accused

The defendants were decidedly German nationalist in outlook. We also find that one – Beiglboeck – originally Austrian (and an illegal Nazi), and Pokorny was Czech. Karl Brandt – later Hitler's escort surgeon, and Schaefer were born in Alsace and might have opted for French nationality. Brandt had contemplated working with the inspirational Albert Schweitzer in French colonial Africa.

Hoven had dubious medical qualifications, and his MD thesis had been written for him by a prisoner at the camp of Buchenwald. But most accused had a strong academic profile. Twelve had teaching or clinical posts with the Medical Faculty of Berlin, two at Munich and one at Vienna.

Herta Oberheuser felt that as the one woman on trial at Nuremberg, she was unjustifiably vilified.¹⁶ Her Bonn MD meticulously analysed the effects of narcotics, that later on her victims would so often be denied.¹⁷ But she had wounded and infected the legs of up to 80 Polish women.

How the judges evaluated the proceedings in an ethical framework can be seen when they asked Karl Brandt on 4 February 1947 about the experiments. They were curious whether the prosecution had over-done its condemnation of the poor quality of the scientific work. Brandt – who had to answer the charge of poison gas experiments in 1944 - felt that experiments were justified by the military emergency.¹⁸ Judge Sebring posed the question whether the skeleton collection or the shooting of tubercular Poles had a military necessity. Brandt conceded there was no military rationale for the skeleton collection, and condemned the shootings.

Brandt drew attention to the difficulties of conducting research during the war: of obtaining monkeys for experiments on chemical warfare, and that Swiss currency reserves had to be drawn on for this.¹⁹ He insisted that human experiments were justified for diseases when there was no clear animal transmission model, and at times of war to avoid greater loss of life, but that the experiments should be on as small a scale as possible.

¹⁶ NARA M 1019/50 Oberheuser interrogation 28 Dec. 1946, p. 18. Kater, *Doctors*, 89-93, 109-10 mistakenly identifies Oberheuser as a paediatrician.

¹⁷ Herta Oberheuser, 'Zuckungs- und Wulstschwelle des musculus rectus abdominalis des Frosches und ihre Beeinflussung durch die Narkose', *Med Diss Bonn* 22 März 1937 'Aus dem physiologischen Institut der Univ Bonn'.

¹⁸ *The Nuremberg Medical Trial 1946/47. Transcripts, Material of the Prosecution and Defense. Related Documents*. English Edition, On Behalf of the Stiftung für Sozialgeschichte des 20. Jahrhunderts, Edited by Klaus Dörner, Angelika Ebbinghaus and Karsten Linne, in cooperation with Karlheinz Roth and Paul Weindling. Microfiche Edition (Munich: Saur 1999), (hereafter NMT) 2/2458 4 Feb 1947

¹⁹ NMT 2/2453, 4 Feb 1947.

His awareness of the evolving Code is shown by his comment that: “It will probably be necessary to settle these questions basically, probably on an international basis; ...every state is guilty”.²⁰ These sentiments show how ideas that state power was potentially genocidal and inhumane: any antidote had to come either through an international body of physicians, or a judiciary untrammelled by dependence on any state interests.

Blome accused of chemical warfare experiments, turned against his fellow accused. He suggested that an expert medical commission should authorise all experiments. It should establish:

1. that the experimenter is qualified
2. that the experiment is scientifically justified
3. that the numbers and type of experiment is appropriate
4. that the subject be protected
5. that the research should be supervised
6. that prisoners should always be volunteers and receive a reduction of sentence or an amnesty. (This justified the US prison experiments while condemning those of the Germans). Political prisoners and prisoners of war should not be subjected to experiments.
7. That volunteers should be used whenever possible.
8. Children and the mentally ill can be experimented on with permission from their guardian, but never when pain or danger is involved.

This was one of a series of Codes offered by the defendants or their expert witnesses.

The onslaught on American science focused on coercive experimentation and on research into weapons of mass destruction. Karl Brandt and Gebhardt attacked the criminality of all involved in the research, manufacture, and dropping of atomic bombs on Hiroshima and Nagasaki. If the Allies claimed that atomic weapons were justified by the war, why not also the human experiments on chemical weapons and sulphonamides, which had a strategic rationale?²¹

Survivors of experiments were key prosecution witnesses at the Nuremberg Medical Trial. They included four of the Ravensbrück Rabbits, and Roman Catholic priests. The Roma victim of a Dachau sea water experiment, Karl Hoellenrainer, punched the experimenter Beiglboeck. The survivors' voice was heard strongly. The Nuremberg prosecutors had appealed in the press and on the radio for victims' testimony. The resulting evidence brought out links to euthanasia and genocide.

²⁰ NMT 2/2455-8, 4 Feb 1947.

²¹ NARA M 1019/20 Impact of atomic bomb of Gebhardt interrogation 3 Dec 1946 by Alexander, 24-5. Final plea for Brandt by Servatius, quoted in Katz, *Experimentation*, 302-3.

The German Medical observer, Alexander Mitscherlich reflected on what was the human component in doctor-patient relations? Mitscherlich declared that every doctor needs to recognise what happens when the individual suffering human being becomes an object or a case – “einen Fall”.²²

IV. Genocide

The Polish-Jewish émigré to the United States, Raphael Lemkin took the view that the experiments were genocidal. Lemkin’s concern was the vulnerability of ethnic minorities to coercive state power. Christians in Iraq or Jews in the new Central European states were equally vulnerable. He drew the conclusion that minorities required special protection.²³

Lemkin linked mass murder to biological and medical strategies to eradicate ethnic groups and cultures. His analysis of the biology of annihilation was especially significant for war crimes prosecutions of medical atrocities. He condemned preventing births as a means of physically destroying any ethnic, racial or religious group, and the forcible transfer of children to another group – both key features of Nazi racial and population policy.²⁴ In January 1947 Lemkin recommended a special trial on the abduction of women into prostitution by the SS.²⁵ Lemkin highlighted the racial dimensions of family and population policy, in which medical experts were massively involved.

Lemkin became disillusioned with the Nuremberg Trials because the judges took the view that genocide was only punishable when linked to the waging of aggressive war. He condemned the judges for not going beyond the constraints of a military tribunal, and dealing with Nazi atrocities in peacetime conditions – this would have meant compulsory sterilisation (especially illegal measures as against the mulatto Rhineland children) from 1933, and numerous acts of persecution against gypsies, Jews and other racial undesirables. The legal quibbling over the punctuation of the Allied agreement excluded pre-war Nazi crimes, and the generic phrasing of “crimes against humanity”. The upshot was to weaken the preventive value of the crime of genocide, as lawyers found it difficult to define aggression.²⁶ Lemkin campaigned for the Nuremberg Trials to tackle issues concerned

²² Alexander Mitscherlich, ‘Der Arzt und die Humanität. Erste Bemerkungen zum Nürnberger Ärzteprozeß’, *Die Neue Zeitung* (20 December 1946).

²³ New York Public Library (NYPL) Lemkin papers reel 2, Autobiography, 2. Samantha Power, *A Problem from Hell. America and the Age of Genocide* (Perennial, 2003), 51.

²⁴ *Ibid.*, xi-xii.

²⁵ Archives de France (AdeF) BB/35/263 Gunn forwards memo of Dr Lemkin of 21 Jan 1947 “Planning of a Special Trial on Abduction of Women into Prostitution”, memo submitted to McHaney 29 Jan 1947.

²⁶ New York Public Library Lemkin papers, reel 2 Autobiography, 4-5. Steven L. Jacobs (ed), ‘Not Guilty. Raphael Lemkin’s Thoughts on Nazi Genocide’ (Mellen, 1992).

with racial annihilation.²⁷ Lemkin lobbied UN delegates (notably from Cuba, India and Panama) to the UN Economic and Social Council to condemn genocide as a crime under international law on December 11, 1946 - just two days after the Medical Trial opened.²⁸

V. “Enlightened Consent”

Leo Alexander, expert witness to the prosecution - realised that the legal basis of the trial – the prosecution of war crimes as crimes against humanity - was too narrow. He tried to broaden the basis of the trial by applying the genocide concept. He argued that the experiments were designed not to sustain life but as experiments in how to destroy it, calling this “Thanatology as a Scientific Technique of Genocide”. He argued that the German research represented killing methods for a criminal state”, and as “an aggressive weapon of war”.²⁹

As in Ivy’s draft Code of 31 July 1946, Alexander required consent, and voluntary participation of the experimental subject. While Ivy required the experiment to be useful, Alexander preferred a more generalised viewpoint, that the experiment should not be unnecessary; both concurred that results should be for the good of society. Alexander amplified the concept of consent, as based on understanding the exact nature and consequences of the experiment. A doctor or medical student was most likely to have the capacity for full understanding. The degree of risk was justified by the importance of the experiment, and the readiness of the experimenter to risk his own life. Overall, Alexander produced a more rigorous set of requirements than either Ivy or the minimalist AMA code.³⁰

Alexander as a neurologist had a greater psychological understanding than Ivy, when he defined what constituted “enlightened consent”. His criteria were “legally valid voluntary consent of the experimental subject” requiring

A. The absence of duress.

²⁷ Raphael Lemkin, ‘Genocide – a Modern Crime’, *Free World*, no. 9 (April 1945), 39-43. ‘Le crime de génocide’, *Revue de droit international*, vol. 24 (Oct.-Dec. 1946), 213-223. ‘Genocide as a Crime under International Law’, *American Journal of International Law*, vol. 41 (Jan. 1947), 145-51.

²⁸ UN Economic and Social Council, ‘Prevention and Punishment of Genocide. Historical Summary 2 Nov 1946-20 Jan 1947’, E/621 (26 Jan 1948). Lawrence J. LeBlanc, *The United States and the Genocide Convention* (Durham NC, 1991), 19-23. The Convention was adopted by the United Nations General Assembly in Paris on 9 December 1948. The United States ratified the Convention in 1988. *The United Nations and Human Rights 1945-1995* (New York: United Nations, 1995), 18-22.

²⁹ Alexander Papers, Durham NC 4/34 Memorandum to Taylor, McHaney and Hardy, “The Fundamental Purpose and Meaning of the Experiments in Human Beings of which the Accused in Military Tribunal No. 1, Case No. 1) have been Indicted: Thanatology as a Scientific Technique of Genocide”.

³⁰ Leo Alexander, “Ethics of Human Experimentation”, *Psychiatric Journal of the University of Ottawa*, 1976, 1: 40-6.

B. Sufficient disclosure on the part of the experimenter and sufficient understanding of the exact nature and consequences of the experiment for which he volunteers, to permit an enlightened consent on the part of the experimental subject.” The idea of an enlightened consent gave the subject greater agency than being merely a recipient of passive information.

His principles required:

1. experiments should be humanitarian “with the ultimate aim to cure, treat or prevent illness, and not concerned with killing or sterilization.
2. No experiment is permissible when there is the probability that death or disabling injury of the experimental subject will occur.
3. A high degree of skill and care of the experimenting physician is required.
4. The degree of risk taken should never exceed that determined by the humanitarian importance of the problem. Ethically permissible to perform experiments involving significant risks only if not accessible by other means and if he is willing to risk his own life.
5. ...the experiment must be such as to yield results for the good of society and not be random and unnecessary in nature.”

Finally, to protect the research subject, Alexander included special provisions to protect mentally ill patients, requiring where possible the consent of the patient in addition to the next of kin or guardian. This provision was not included in the eventual Code.

The judges adopted Ivy’s notion of voluntary consent, which was less comprehensive than Alexander’s enlightened consent:

“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.

The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs, or engages in the

experiment. It is a personal duty and responsibility which may not be delegated to another with impunity.”

But the judges shifted the focus from the physician to the research subject. What was novel was the right to withdraw from the experiment. Ivy had required far less when he called for informing the subject of potential hazards. The view that the Code “grew out of the Trial itself” omits the formative preliminary period, and the crucial inter-Allied discussions.³¹ While the Code was not applied in sentencing, the judges followed Ivy in intending that it should prevent future abuses.

Alexander and Ivy cited the Hippocratic notion of the doctor’s duty of care for a patient. Hippocratic ideas were open to different interpretations given the problems of translation and interpreting the semi-mythical Hippocrates. They became subsumed in the political ideology of totalitarianism. Medical opposition to interference in the doctor-patient relationship meant that – in Ivy’s words “We must oppose any political theory which would regiment the profession under a totalitarian authority or insidiously strangle its independence.”³²

Ivy found support in the medical press. An editorial in the *British Medical Journal* diagnosed the problem as political: “the surrender, in fact, of the individual conscience to the mass mind of the totalitarian State.”³³ The *Journal of the American Medical Association* (JAMA) linked the evidence on compulsory sickness insurance to the deterioration of the ethics of the German medical profession.³⁴ Physicians turned the abuses of Nazi medicine into a rallying cry against the socialisation of medical services. The autonomy of science reflected a situation of doctors opposing central state planning and the welfare state. The scales of justice were heavily tilted by the weight of Cold War requirements for strategically relevant clinical research, and by professional defence of autonomy of the individual practitioner.

The Secretary of the World Medical Association was Charles Hill, an opponent of the new British National Health Service. Concern for doctor-patient relations marked resistance to the socialisation of medicine. In June 1947 the British Medical Association issued a statement on War Crimes and Medicine, diagnosing that the corruption of medicine arose from its becoming “an instrument in the hands of the state to be applied in any way

³¹ Evelyne Shuster, ‘Fifty Years Later: the Significance of the Nuremberg Code’, *The New England Journal of Medicine*, 1997, 1436 – 1440, 1437. Shuster, ‘The Nuremberg Code: Hippocratic Ethics and Human Rights’, *Lancet*, vol. 351 (1998) 974-77.

³² A.C. Ivy, “Nazi War Crimes of a Medical Nature,” *Phi Lambda Kappa Quarterly*, 1948, 22/4: 5-12.

³³ “Doctors on Trial,” *British Medical Journal*, (25 Jan. 1947), 143.

³⁴ Beals Papers, Box 1 folder 16 Fishbein to Beals May 20 1947.

desired by its rulers.” The view conveniently absolved physicians from primary guilt.³⁵ The WMA has remained the main international body setting international standards on human experimentation; it was first at the WMA that voluntary and enlightened consent became “informed consent”.

It can be concluded that the Nuremberg Code arose from the concerns of Allied medical war crimes investigators as they encountered the survivors of the human experiments and gathered the records of medical atrocities in concentration camps and clinics. Thompson took a crucial initiative in convening an international committee of forensic pathologists and other medical and legal investigators. The debates on research provided the basis for a code of experimental ethics.

The scheme for a Code arose from Thompson’s concern with medical war crimes. Thompson became concerned with a new epistemological basis for medicine – that of the whole person, rather than physical and chemical data. He recommended the teaching of medicine without animal experiments. He found inspiration in the mystic Jewish philosopher Martin Buber whose “I –Thou” concept of a communing relationship replaced an “I-It” relations of objective knowledge.

Medical researchers like Ivy warned how the evils of bureaucratized and unethical Nazi science could recur. The lesson Ivy drew from Nuremberg was that it was necessary to sustain clinical freedom for the medical researcher. While unveiled to the public as a coherent set of principles, the different interests in the origins of the Code can now be identified. The question remains, whether the mission to legitimate clinical research rendered the Code too permissive in what it condoned, and too weak in the provision of safeguards for the patient?

³⁵ *War Crimes and Medicine. Statement by the Council of the Association for Submission to the World Medical Association* (London: BMA, June 1947).