

Whither Nuremberg?: Medicine's Continuing Nazi Heritage

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The medical crimes of the Hitler regime are commonly perceived to have been committed by a few demonic physicians working in isolation from the mainstream of the German medicine. The success of this myth has imperiled the value system of medicine today. The World Medical Association (WMA), established to address the ethical challenges arising from the German tragedy, has itself been compromised by this legacy. The leadership of the WMA has included doctors once associated with the Nazi SS terror organization and linked to crimes prosecuted at Nuremberg. Despite these recent revelations the WMA has yet to address the ethical issues raised by its own Nazi heritage or to pay homage to the victims of the Nazi regime. [M&GS 1995:148-157]

The history of medicine in Nazi Germany is important because Germany is the birthplace of modern medicine and medical science. That legacy is symbolized by the vocabulary of medicine, which includes the names of many distinguished German clinicians and scientists. German science and the German university accounted for many Nobel Prizes in the early part of this century. The German university served as a model for the reformation of medical education and thousands of physicians journeyed there to further their scientific medical training [1,2,3].

The same German universities and research institutes, however, played a decisive

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role in the dehumanization, exploitation, and destruction of human life during the Hitler period. The continuing failure of the German medical profession to confront its own history has had a corrosive effect worldwide as exemplified by the recent scandal involving the World Medical Association: the president-elect of the WMA for 1993-94 was to have been a German physician who had been a member of the dreaded SS organization and who was linked with the death of a child murdered in the Nazi euthanasia programs.

German Medicine and the Nazi State

The German medical profession played a critical role in the racist transformation of the Nazi state. Kater has documented that of all occupational groups in Germany at the time, the medical profession had the largest membership in the Nazi party (44.8% of all licensed physicians were party members) [4]. Nazi racial policies were derived, in large

part, from the medical profession itself. Proctor has pointed out that the German medical profession found in the Nazi movement a sympathetic ear to ideas of eugenics, race, and degeneration that had been developing within German medicine. The Nazi leadership found in medicine a scientifically legitimate vehicle for the achievement of their political goal of racial purification. This was central to the professional goal of population health or "volksgesundheit," which focused on race hygiene [5].

A milestone in the process of genetic and racial purification was the July 1933 sterilization law, which called for the enforced sterilization of people who had, or were considered to be, carriers of conditions that were deemed hereditary and undesirable [6]. The entire German health care system, including public health, was mobilized to support the sterilization program. Physicians were obligated to report patients with suspected hereditary conditions [7,8]. Sterilizations were performed in hospital under general anesthetic. Later, the sterilization of some women was carried out using X-rays [9,10].

Two years after the enactment of the sterilization law, the German parliament proclaimed the infamous Nuremberg Race Laws. With these laws race became a medical diagnosis requiring a physical examination. The laws called for a racial tribunal that included physicians as members [11]. The racial laws were formulated in part by a physician, Dr. Gerhard Wagner, a Munich general practitioner who was the Reichsfuhrer of physicians [12].

During the Third Reich the German faculties of medicine became the preeminent academic disciplines in all colleges and universities. Kater has documented that between 1933 and 1945, 59 percent of all university and college rectors in Germany were physicians. University rectors were appointed by the Nazis. Membership in the SS helped ensure an academic appointment [13]. By 1936 professorships in race hygiene had been established at ten universities. The subject of racial science was taught in all medical faculties irrespective of whether there was an established chair in the field [5]. The university institutes of race hygiene became referral centers for expert opinions on people being considered for sterilization under the 1933 law and for disputed cases before the racial tribunals established under the Nuremberg racial laws [14].

The third major step toward racial purification after the sterilization and racial laws was the program of medical murder known as the Aktion T-4 "euthanasia" campaign, which began in 1940 and continued until late 1941. Under the T-4 program, which

included a number of professors, an itinerant team of "euthanasia experts" traveled to mental institutions to select patients for killing. The ill fated patients were transported to one of six designated killing centers where they were killed in gas chambers disguised as showers [15]. The turning on of the gas was a designated medical act assigned to a physician [16]. Disposal of the remains usually took place in coal-fired cremation ovens [17].

The T-4 program was but one of a number of medical killing programs that both preceded and succeeded that operation [16,18]. At Eglfing-Haar, in Bavaria, children were killed by starvation and/or the purposeful overdose of medication such as barbiturates and opiates as part of the so-called "wild" euthanasia program. SS members were provided with educational sessions by the staff of Eglfing-Haar where the killing continued until virtually the end of the war. In other institutions patients were killed by injection as well as by starvation or overdose of medication. The T-4 apparatus was used for killing inmates of concentration camps before those camps had acquired their own gas chambers and crematoria.

The T-4 action itself was stopped because of public protest -- in particular the public remonstrations of Cardinal von Galen of Munster in a sermon given on August 3rd, 1941:

If it is once accepted that people have the right to kill "unproductive" fellow humans -- and even if it only initially affects the poor defenceless mentally ill -- then as a matter of principle murder is permitted for all unproductive people, in other words for the incurably sick, the people who have become invalids through labour and war, for us when we become old, frail and there fore unproductive [15].

The Road From Euthanasia to Auschwitz

In January 1942, four months after the end of the T-4 action, 15 government officials (eight of whom held doctorates) met for 90 minutes over coffee and cognac to plan the implementation of the "Final Solution to the Jewish problem." The meeting, known as the Wannsee Conference after the villa where it was held, was chaired by the then head of the Gestapo, Reinhard Heydrich. One of the proposals was for mass sterilization to prevent racial contamination. That was considered impractical. The decision to use the gas chamber for mass killing, with disposal by cremation, was made a few weeks later in March with the opening of the death camp at Belzec and the final testing of the apparatus for mass extermination [19,20]. The antecedent medical T-4 "euthanasia" program had been the pilot project, a feasibility study, for the process of mass extermination.

The euthanasia apparatus, personnel, and equipment, of the T-4 action were transferred to German-occupied Poland where they formed the basis of the largest program of organized mass destruction of human life in recorded history. The first commandant of the extermination camp at Treblinka was a physician alumnus of the T-4 program, the psychiatrist Dr. Irmfried Eberl [16].

The medicalization of the destruction process extended to the railroad ramp at Auschwitz where the victims were met by a medical selection team responsible for deciding who was fit to be a slave laborer or who was "unworthy of life" and thus selected for killing. The SS physicians chosen for this sardonic duty were required to have a proper license for the practice of medicine with extra training in genetics [21].

The role of medicine included the exploitation of the victims for medical research. Having been defined as "life without value" the inmates of the concentration camps were considered appropriate subjects for deadly research. Medical science deemed the mass of humanity a unique research opportunity ready for exploitation.

The relationship of academia and research to the Nazi racial program is best exemplified by Professor Dr. Freiherr Otmar von Verschuer. A noted expert on genetics and twin studies, Verschuer was the founding director of the largest institute of genetics and race hygiene of the day at the University of Frankfurt. The institute was also responsible for the race hygiene curriculum for medical students at the University of Frankfurt [14].

Verschuer's first assistant at the Frankfurt institute was a Frankfurt medical student who had recently been awarded a Ph.D. in anthropology from the University of Munich -- Josef Mengele.

In 1942 Verschuer became the director of the prestigious Kaiser Wilhelm Institute of Anthropology in Berlin-Dahlem, where he applied to the German Research Council for a research grant for twin studies. The grant was awarded after peer review [21]. Verschuer's research assistant for this project was Mengele. The laboratory was the Birkenau death camp at Auschwitz. The research subjects were twins enslaved in Auschwitz. It is known that Mengele in Auschwitz collected specimens from his victim/subjects which were sent to Verschuer's institute in Dahlem. After the war Verschuer was permitted to resume his career and

became professor and head of genetics at the University of Munster. His postwar career was distinguished. Verschuer's work continues to be cited in the genetics literature [22].

Exploiting the Fruits of Nazi Research

The Nazi program of dehumanization was exploited for the neuropathological collection of Professor Julius Hallervorden, a director of the famed Kaiser Wilhelm Institute of Brain Research at Berlin-Buch. Hallervorden is known to have capitalized on the T-4 killing in Brandenburg to acquire brains for his collection in the KW institute. In Hallervorden's own words, "There was wonderful material among those brains, beautiful mental defectives, malformations and early infantile diseases." Hallervorden has been immortalized through the eponym for a congenital neurological condition named after him and his colleague, Dr. Hugo Spatz; Hallervorden-Spatz Disease [23,24].

After the Soviet occupation of Berlin-Buch, the KW Institute of Brain Research was moved to Frankfurt. Renamed as one of the Max Planck Institutes, parts of its neuropathological collection were revealed in Germany in 1987 and 1988 to have derived from the T-4 killings. In 1990 the entire collection from the Hitler period was buried in the Forest Cemetery in Munich [25]. Along with the specimens from the Frankfurt institute were brain specimens from the collection of the Max Planck Institute of Psychiatry in Munich, which had been derived principally from children murdered at Eglfing-Haar [26].

In 1988 it was disclosed that the Institute of Anatomy at the University of Tubingen had in its collections specimens derived from victims of the Nazis. Also revealed was the fact that during the war the institute had received the cadavers of 429 victims of Nazi terror. Some of the victims were Russian and Polish prisoners of war exploited as slave laborers and executed for socializing with German women [27].

The University of Tubingen convened an independent commission of inquiry chaired by a leading lawyer and expert on medical ethics. The commission issued a formal report in the public domain [28]. All suspect specimens or specimens of uncertain origin were buried in a special section of the Tubingen cemetery reserved for the remains of subjects used for the teaching of anatomy [27,29].

The University of Tubingen is the only German institution to have conducted a proper inquiry into this matter with outside experts and a report in the public domain. Serious questions remain about some collec-

tions, in particular those of the Institute of Anatomy of the Ludwig Maximillian University of Munich, that of Professor Hermann Voss of the University of Jena, and that of Professor Hermann Stieve of the Charite Hospital in the former East Berlin. The Munich Institute reportedly has specimens of circumcized male subjects derived from people described by Institute officials as "criminals from wartime," but the University of Munich has declined to undertake a formal external investigation [30]. Voss is known to have sold body parts from Gestapo victims for profit. Stieve is known to have exploited the killing of young women in Gestapo prisons for his studies on the menstrual cycle [31].

While most of the perpetrators of Nazi medical crimes were able to avoid prosecution, 23 were tried in a postwar tribunal known as the "medical trial" The judgment of that trial (in which 16 physicians were convicted and 7 were released) established 10 principles for the conduct of human experimentation that are known collectively as the Nuremberg Code. The first and foremost principle of the Nuremberg Code is informed consent [32].

The Birth of the WMA

A year before the judgment of the Nuremberg medical tribunal, representatives of 32 national medical associations from around the world had met in London to establish the World Medical Association (WMA) in response to the horrors of Nazi medical crimes. One of the first acts of the WMA was to create a modern version of the Hippocratic Oath [33]. The moral challenges raised by medical practices during the Hitler period were recognized. The WMA was the first international organization to address medical ethics. The principle objective of the organization, however, was the advocacy of doctors' rights, not patients' rights.

In 1948 the General Assembly of the WMA adopted a statement documenting the medical crimes of the German medical profession. The WMA challenged the German medical profession to issue a declaration in the hope that it would "provide the German profession with an opportunity of giving a promise of their future good behavior." That same year the WMA was informed that the (West) German doctors' organization had taken positive initiatives to restore its international credibility. Those actions included:

1) the requirement that every (West) German doctor obtaining his or her license take the revised Hippocratic Oath;

2) the passing of a resolution condemning all crimes against humanity and all German physicians who had participated in such crimes; and

3 the reinstatement of all physicians persecuted by the Nazis.

Every (West) German doctor reportedly had been issued a copy of the report of the German doctors designated as official observers of the Nuremberg medical trial. The (West) German medical organization asserted that only a very small number of members of the profession were involved in the crimes. Responsibility was laid with a "criminal minority...entrusted with power over life and death" [33].

The first postwar leader of the (West) German medical association was an alumnus of both the Nazi Party and S.A. brownshirts, Dr. Karl Haedekamp. Haedekamp had worked as a party functionary in implementing racial policy [34]. In 1951 the WMA accepted the Federal Chamber of Physicians of (West) Germany as a member organization.

The WMA has assumed the role of issuing ethical declarations that have become the inter national standard for the conduct of human experimentation (Helsinki Declarations) and the treatment of prisoners in custody (Tokyo Declaration). In the WMA's declarations on human experimentation the principle of informed consent has been relegated to ninth position [35]. The WMA felt that the Nuremberg Codes applied to Nazi crimes and that its declarations corrected that "error" [36]. Another interpretation is that the WMA has itself been compromised by its own Nazi legacy, which may have compromised the ethical principles on which the world body is established [37,38,39].

The Sewering Controversy

The moral vacuity of the WMA was exposed by the 1992 election of Dr. Hans Sewering of Dachau, Germany, to the position of WMA president-elect. The 1992 announcement of Dr. Sewering's WMA appointment omitted mention of his membership (#143,000) in the SS terror organization and in the Nazi party (#1,858,805) [37,40]. Also omitted was the fact, reported in Germany in 1978, that Dr. Sewering had been linked to the death of a 14 year old mentally handicapped girl killed in the "wild" euthanasia program. That child, Babette Frowis, was sent on Sewering's order from the Schonbrunn Hospital, where Sewering then practiced, to the killing center at Eglfing-Haar.

Schonbrunn is an institution for handi-

capped children near the town of Dachau that is operated by a Catholic women's order. The order transferring Babette Frowis from Schonbrunn to Eglfing-Haar had been signed by Dr. Sewering on Tuesday, October 26, 1943. In that transfer order Dr. Sewering wrote that he considered Babette to be "no longer suitable for Schonbrunn; she will be sent to Eglfing Haar, the healing institution responsible for her." Babette Frowis died three weeks later. The probable cause of her death was murder by poisoning with an overdose of barbiturate [41].

While Sewering's tarnished history was well known in Germany, it did not become widely known outside Germany until January of 1993 [42]. In response Sewering initially claimed that the euthanasia campaign ended in 1941, two years before he worked at Schonbrunn [43]. He also claimed that nothing was done at Schonbrunn without the authority of the nuns and that the fateful document would only have been signed with the full agreement of the nuns. According to an interview given to a leading German newspaper, Suddeutschen Zeitung, Sewering implied that the sisters of Schonbrunn did not know the fate awaiting patients transferred to Eglfing Haar and that they -- and by implication he -- had acted in good faith. The day following Sewering's published interview, officials of the Schonbrunn institution, with the authorization of the Archbishop of Munich, issued a statement disclaiming Sewering's assertion. According to the Schonbrunn statement:

- * Between January 1943 and June 1945, 444 patients were starved to death in "hunger houses" at Eglfing-Haar;
- * Between 1940 and 1944 there was a planned transfer of patients out of Schonbrunn and the sisters knew that the children were to be destroyed as "unworthy life" as part of the "euthanasia" killings;
- * Between 1940 and 1944, 909 children from Schonbrunn were "transferred out";
- * In 1943, 203 children from Schonbrunn were sent to Eglfing Haar, 179 of them three days before Christmas;
- * The sisters would not have authorized or approved the transfer of these children to a place where they would be killed;
- * The sisters did whatever was in their means to protect the victims from planned destruction but were powerless to prevent the forceful removal of people;

* Five decades after the event the four surviving sisters continue to be tormented by their memories of what happened [44].

The following day, January 23, 1993, the Federal Chamber of Physicians of Germany issued a press release announcing that Dr. Sewering was stepping aside from the WMA office. According to this statement Sewering said, "After I spent 25 years building up this world organization of doctors, including 20 years as its treasurer, it is now my duty to protect the World Medical Association from severe damage that could result from the threats of the Jewish World Congress." In the same press release the president of the German Physicians' Chamber, Dr. Karsten Vilmar, issued a statement of support for Dr. Sewering [45].

No mention was made of the allegations against Sewering or the murdered children of Schonbrunn and Eglfing-Haar.

In April 1993 the Council of the WMA met in Turkey at the Istanbul Hilton. At that meeting Dr. Vilmar issued an official statement of support for Dr. Sewering. The WMA Council was addressed by a close friend of Sewering, the WMA executive treasurer, Adolf Hallmayr. Concerning the death of Babette Frowis, Hallmayr stated: "... With regard to the papers (Sewering) signed transferring a 14-year-old epileptic girl to a Nazi euthanasia clinic near Dachau, the policy was that when disabled people became aggressive, they became dangerous and were no longer allowed to live in the convent" [46].

Sixty years after Hitler's rise to power, 55 years after the start of the euthanasia programs, and 50 years after the murder of Babette Frowis, the death of an innocent handicapped girl in the Nazi terror state was justified with the assertion that disabled people who are aggressive are dangerous!

Programs of Medical Murder

If Sewering had become president of the WMA he would not have been the first SS alumnus to have occupied that office. That honor was held by Dr. Ernst Fromm, an alumnus of both the SA and the SS, who was WMA president from 1973-74. Dr. Fromm preceded Sewering as both president of the German medical chamber and treasurer of the World Medical Association [34,47].

The WMA and the German doctors chamber have a long standing close relationship. The German doctors organization is responsible for both the purse and the press of the world body. The journal of the WMA is published in Cologne by a subsidiary organization of the Federal Chamber. The publica-

tion office for the WMA is in the headquarters of the German medical organization. The editorial staff of the WMA journal are principally associated with the German medical organization. The WMA bank is the same bank as the German doctors group. The Federal Chamber is the second largest contributor, after the AMA, to the WMA treasury [38,39]. The WMA position of treasurer has traditionally been held by a representative from Germany. Sewering, during his tenure as WMA treasurer, guaranteed a loan to the WMA after the American Medical Association temporarily withdrew from the world body from 1973-79 over issues relating to budget and voting power [48].

The Federal Chamber of Physicians of Germany has a reputation for turning a blind eye to the physicians who participated in the programs of medical murder. The Chamber permitted doctors associated with the 'euthanasia" programs to continue to practice medicine while facing accusations of having murdered thousands of patients -- accusa-

tions that were proven in court [49].

In contrast with its treatment of people implicated in Nazi crimes, the Federal Chamber has publicly chastised those who have had the temerity to challenge the medical establishment and its view of history. In 1987 a German medical student was publicly rebuked by Dr. Vilmar because she had criticized the Federal Chamber for permitting the euthanasia doctors to continue to practice [49]. One year earlier, in 1986, Dr. Vilmar and the Federal Chamber took swift action against the author of an article published in The Lancet in August of that year. In that article the author, a German physician named Dr. Hartmut Hanauske-Abel, described the role of the German medical profession during the Third Reich and raised questions about the social responsibility of physicians in the nuclear age [50]. Three weeks after the publication of the Lancet paper, the author's license to practice medicine in Germany was suspended. In contradistinction to the doctors linked to the killing of patients, that German doctor was excommunicated from medical practice in Germany. He is now practicing in New York [51].

Today, the Federal Chamber of Physicians is extending its hegemony from the World Medical Association to encompass medical education in Europe. The Secretariat for the European Academy for Medical (Europaische Akademie Training Arztliche Fort bildung or EAMF) is the Federal Chamber of Physicians of Germany. The president of that organization is Dr. Karsten Vilmar. This organization for medical education in Europe takes on added importance given the establishment of the European Community.

Contemporary Lessons and a **Spate of Questions**

There are disquieting lessons for all of us. The physicians in Nazi Germany were not much different from physicians elsewhere, nor were they different from physicians today. They were scientifically competent, diligent, intelligent, earnest professionals. The pressures that affected them are no different than those factors that determine the professional and academic lives and careers of physicians else where, namely, economic survival, intellectual fashion, professional power, academic tenure and promotion, research grants, publication, and political pressure. What set the German physicians apart was the fact they functioned in a system devoid of humane values and distorted by the prevailing political and scientific view that some human lives were considered to have no value. There was no underlying system of values that protected the life and dignity of vulnerable human beings. There was no accountability other than to the Nazi party and the Hitler state. Physicians in Germany at that time, in general, accommodated to that accountability.

Physicians today need to ask themselves if they are any less fallible, any less vulnerable, any wiser, any stronger? Are they less susceptible to the seduction of what is fashionable, the temptation of money, or the coercion of power? Are they any less judgmental of patients and colleagues? Are they any less guileless as they struggle for research grants? Are their patients any less defenseless? To what values does the profession adhere that will protect the interests of their patients and prevent physicians from temptation, coercion, or pressure? How tolerant is the system of students and of colleagues who make mistakes? How tolerant are people of patients who are poor, unattractive, incontinent, unwashed, insensible, insane, incoherent, or

The lessons from the Nazi period also raise the fundamental question of selection. Who defines what is good and what is bad? Who gives the power to select? Who defines that power? Is that power appropriate for a profession or a group that has its own inherent biases and preferences? What is the role of the public? What is the role of the individual? What is the role of the state?

The recent breast cancer research scandal involving Canadian and American investigators [52] raises the fundamental issue addressed in the Nuremberg Codes, namely that of the inherent conflict in the role of physician as clinician and the physician as researcher when the research subject is his or her own patient. The issue -- then and now -- was and is informed consent without duress. In the Nuremberg Codes informed consent was supreme. It remains the supreme concern today.

Today medicine is contemplating a new paradigm embracing the concept of population health. Population health incorporates determinants of health that take into consideration such variables as income, education, and social class. Modern statistical and analytical methods demonstrate the correlation of income, education, and social class with health status. Can we also demonstrate the existence of an underlying value system that ensures that the most vulnerable among us are protected from the prejudices that have traditionally discriminated against them? Will the new "volksgesundheit" promote the health of the poor or will it reinforce age old prejudices against the disadvantaged? What effect will economic and political influences have on the increasingly scarce resources required to address the needs of those with the greatest burden of illness?

A New Ethical Spirit That Acknowledges Errors

Medicine must build on its German professional heritage, and the unresolved legacy of the Hitler period, to seize the opportunity to inaugurate a new ethical spirit -- an ethical spirit that acknowledges that health professionals are vulnerable, imperfect human beings. That ethos, based on mutual respect and a desire to improve the lot of patients, was elegantly enunciated by the English physician Neil McIntyre and the late philosopher Sir Karl Popper:

We are all fallible and we therefore should doubt that which appears to us to be true, and should question even those moral and ethical principles which we hold dear. But in questioning them we should be searching for something better. Truth may be hard to come by, but we must recognize that if we acknowledge our errors we may, with effort, get nearer to the truth, and we may be able to prevent such errors in future [53].

The new ethical spirit should begin with an acknowledgment of our errors by commemorating the victims of medical abuse -- those human beings such as the 909 children from Schonbrunn and the hundreds killed at Eglfing-Haar whose bodies, souls, and lives were exploited by medical science and sacrificed in pursuit of a politically defined "higher" good. The German medical profession, rather than obscuring the past, can help the medical profession of the world perceive, on

the basis of their own tragic experience, the risks and the vulnerabilities of power.

The country and the culture which, a century ago, gave birth to the golden age of medical science, can now help the world medical community face the daunting challenges of the 21st century where the questions remain the same: namely, the value of human life and the responsibilities of the physician for human life and dignity. The Federal Chamber of Physicians of Germany should follow the example of the German Society for Gynecology and Obstetrics and German Society for Psychiatry, Psychotherapy, and Neurology which, last year, "publicly accepted responsibility for dealing with the horrors committed by their medical colleagues in the past" [54].

As a consequence of the Sewering Affair there is no credible international organization that serves as guardian for patient rights. There is no credible defender of the rights enunciated in the Nuremberg Code. There is no credible protector of the rights of subjects of human experimentation [55].

If the WMA aspires to become a respected forum for ethical issues it must:

- 1. Formally dissociate itself from the January 23rd 1993 press release of the Federal Chamber of Physicians of Germany;
- 2. Undertake a proper objective investigation of how physicians linked with Nazi terror organizations and with Nazi medical crimes could assume positions of influence within the WMA;
- 3. Pay tribute to the memory of the murdered children of Schonbrunn and Eglfing-Haar.

References

- 1. Bonner TN. American doctors and German universities. Lincoln: University of Nebraska. 1963.
- 2. Flexner A. I remember. New York: Simon and Schuster. 1940.
- 3. Wheatley W. The politics of philanthropy. Madison: University of Wisconsin Press. 1988.
- 4. Kater M. The Nazi party. Cambridge, Mass: Harvard University Press. 1983. 5. Proctor R. Racial hygiene. Cambridge, Mass: Harvard University Press. 1988. 6. Reichsausschuss fur volksgesundheitsdienst (Law for the prevention of hereditarily diseased offspring). (Approved translation of Gesetz zurverhutung erbkranken nachwuchses). Berlin: Archives du Centre de Documentation Juive Contemporaine, Paris. Document s.15.076. 1935. 7. JAMA 1937;109:1212.
- 8. JAMA 1938;111:638-9.

- 9. JAMA 1936;106:1582-3.
- 10. JAMA 1939;113:1823-24.
- 11. JAMA 1936;106:1214-15.
- 12. Bracher KD. The German dictatorship; the origins, structure, and effects of national socialism. New York: Praeger. 1970.
- 13. Kater M. Doctors under Hitler. Chapel Hill: University of North Carolina Press. 1989.
- 14. JAMA 1935;105:1051-53.
- 15. Burleigh M, Wippermann W. The racial state: Germany 1933-1945. Cambridge: Cambridge University Press. 1991.
- 16. Burleigh M. Death and deliverance: "Euthanasia" in Germany 1900-1945. Cambridge: Cambridge University Press. 1994. 17. "Verlegt nach Hadamar." Die geschichte einer NS-"euthanasie"-anstalt. Eine Ausstellung des Landeswohlfahrtsverbandes Hessen Historische Schriftenreihe des Landeswohlfahrtsverbande Hessen, Kataloge Band 2. Kassel: Eigenverlag des LWV Hessen.
- 18. Weindling P. Health, race and German politics between national unification and Nazism, 1870 1945. Cambridge: Cambridge University Press. 1989.
- 19 Davidowicz L, editor. A holocaust reader. New York: Behrman House. 1976. 20. Browning C. Fateful months: Essays on the emergence of the final solution. New York: Holmes & Meier. 1985
- 21. Muller-Hill B. Murderous science. Oxford: Oxford University Press. 1988. 22. Seidelman W. Mengele medicus: Medicine's Nazi heritage. Milbank Quarterly 1988; 66:221-39.
- 23. Alexander L. Neuropathology and neurophysiology, including electroencephalography, in wartime Germany. Washington, DC: Combined Intelligence Objectives Sub-Committee G-2 Division SHAEF (rear) APO 413. National Archives. Document No.1-170 cont'd. 1945
- 24. Shevell M. Racial hygiene, active euthanasia, and Julius Hallervorden. Neurology 1992; 42:2214-2219.
- 25. Dickman S. Memorial ceremony to be held. Nature 1990;345:192.
- 26. Personal communication with Prof. G. Kreutzberg, Max Planck Institute of Psychiatry. Munich. March 20, 1991.
- 27. Peiffer J. Neuropathology in the third reich: Memorial to those victims of national-socialist atrocities in Germany who were used by medical science. Brain Pathology 1991;1:125-131.
- 28. Berichte: der Kommission zur Uberprufung der Praparatesammlungen in den medizinischen Einrichtungen der Universitat Tubingen im Hinblick auf Opfer des Nationalsozialismus. Herausgegeben vom Prasidenten der Eberhard Karls-Universitat Tubingen Abdruck -- auch auszugweise -- nur mit Genehmigung des Herausgebers. 1990.

- 29. Dickman S. Graves desecrated. Nature 1990:346:306.
- 30. Seidelman W. Correspondence with B. Witte and R. von Treskow (Foreign Office of the Federal Republic of Germany) and R. Putz (Institute of Anatomy of Ludwig Maximillian University of Munich) 1991-1993.
- 31. Pross C. Nazi doctors, German medicine and historical truth. In Annas G, Grodin M, editor. The Nazi doctors and the Nuremberg code: Human rights in human experimentation. New York: Oxford Press. 1992.
- 32. Perley S, Fluss S, Bankowski Z, Simon F. The Nuremberg code: An international overview. In Annas G, Grodin M, editor. The Nazi doctors and the Nuremberg code: Human rights in human experimentation. New York: Oxford Press. 1992.
- 33. World Medical Association Bulletin. 1949;1:1-20.
- 34. Kater M. The burden of the past: Problems of a modern historiography of physicians and medicine in Nazi Germany. German Studies Review 1987;X:31-56.
- 35. Katz J. The consent principle of the Nuremberg code: Its significance then and now. In Annas G, Grodin M, editor. The Nazi doctors and the Nuremberg code: Human rights in human experimentation. New York: Oxford Press. 1992. 36. Fatturosso V, editor. Biomedical science and the dilemma of human experimentation, CIOMOS round table conference. Paris: CIOMS. 1967. As cited in: Refsauge W. The place for international standards in conducting research on humans. Proceedings of the International Conference on the Role of the Individual and the Community in the Research, Development, and Use of Biologicals. Supplement 2 to Vol. 55 of the Bulletin of the World Health Organization 1977:133-139.
- 37. Beck W. The World Medical Association and South Africa. The Lancet 1989:1441-2.
- 38. Beck W. The World Medical Association serves apartheid. Int J Hlth Services 1990;20:185-191.
- 39. Richards T. The World Medical Association: Can hope triumph over experience? BMJ 1994;308:262-6.
- 40. Deutsches Arzteblatt. Oct. 30, 1992;89:p.c.2072
- 41. Der Spiegel. June 19,1978:84-88.
- 42. Whitney CR. Top German doctor admits SS past. New York Times. January 16, 1993:3. 43. The Washington Post. January 24, 1993:A20.
- 44. Die pressestelle des ordinariates Munchen meldet: Stellungnahme der leitung der behinderteneinrichtung Schonbrunn zu ausserungen von Professor Sewering in einem interview mit den lokalnachrichten der "Suddeutschen Zeitung" fur den Landkreis Dachau. Schonbrunn (Dachau). January 22, 1993.
- 45. Pressestelle der Deutschen Arzteschaft.

Cologne. January 23, 1993.

- 46. Professor Sewering's resignation from WMA president-elect. World Medical Journal 1993;39:22-23.
- 47. The 27th World Medical Assembly. World Medical Journal. 1973;21:4-9.
- 48. Wolinsky H. WMA's ex-president-elect. Physician's Weekly. 1993;10:22.
- 49. Klee E. "Turning the tap on was no big deal": The gassing doctors during the Nazi period and afterwards. In Benz W, Distel B (ed.). Dachau Review 2. History of Nazi concentration camps studies, reports, documents. Vol. 2. Brussels: Comite International de Dachau. 1990:46-66.
- 50. Hanauske-Abel H. From Nazi holocaust to nuclear holocaust: A lesson to learn? Lancet 1986:271-3.
- 51. Hanauske-Abel H. Personal communication. January 9, 1993.
- 52. Mueller CB. The lumpectomy fraud: Poisson, the national surgical adjuvant breast project, and the crisis of ethics. Archives of Surgery 1994;129:1001-1003. 53. McIntyre N, Popper L. The critical attitude in medicine: The need for a new ethics. BMJ 1983;287:1919-1923.
- 54. Tuffs A. Lancet 1994;344:808
- 55. Grodin M, Annas G, Glantz, L. Medicine and human rights: A proposal for international action. Hastings Center Report 1993;238-12.