

Educators' Guide

“Books, Bones and Bodies: The Legacies of Nazi Anatomy for Bioethics Today”

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This essay is suitable for anatomy and bioethics courses, and for the following teaching formats:

1. Self-study and reflection
2. Small group seminar (ideally 10 students or fewer)

Introductory note:

This essay provides a glimpse into the relevance of the history of anatomy for present day bioethics. Using the example of Nazi anatomy and the question of the ethics of the continued use of Nazi data, the presence of unethically obtained resources in current anatomy education is discussed. Such resources include anatomical knowledge in general; also: books, bones and human bodies. More specifically, the essay elaborates on one example of an unethically obtained resource, the Pernkopf atlas, and describes a modern productive response to a long-standing ethical quandary, the Vienna Protocol.

Learning objectives:

After reading, reflecting on and discussing this essay, the learner should be able to:

1. Understand the history of anatomy as a rich background on which to examine present day questions in bioethics.
2. Discuss the legacies and continuities from Nazi anatomy include the Pernkopf atlas, as one example among many.
3. Describe how unethically obtained knowledge and materials are still created in the present day and need to be critically examined.
4. Discuss how responses to ethical questions in anatomy can be productively generated through interdisciplinary work.

Guiding questions:

1. Where do you see equivalents to the history of Nazi-anatomy in the history of anatomy in your country?
2. Where do you see unethical knowledge-gain, materials, practices in anatomy in your environment?

3. What consequences do you draw from such an insight? Is it enough to remove unethically obtained materials? Should they be removed? Can unethically obtained knowledge be “removed”? Should eponyms be removed?

Questions for self-assessment:

1. What did you know about the history of anatomy before reading this essay?
2. Has your idea of the history of anatomy changed, and if so, how?
3. Name two present-day examples of the legacies of the history of Nazi anatomy.
4. How – if at all – will this insight change your work?
5. Name examples of recently unethically sourced human remains in medical research and education.
6. Which current ongoing medical research do you think might be questioned as potentially unethical in the future?
7. How do you think interdisciplinary work could enrich your learning/ thinking/ practice, and with which disciplines would you like to connect?

Further resources, podcasts, presentations and webinars 2020:

Podcast from January 2020: The Da Vinci Pursuit: Lessons Learned: A Look at the Art, Science and Ethics from Auschwitz. <https://www.thedavincipursuit.com/2020/03/28/lessons-learned/>

The Pernkopf Symposium, Toronto 11/10/2019: Presentation Videos from THE VIENNA PROTOCOL: Medicine's Confrontation with Continuing Legacies of its Nazi Past
<https://www.leilalax.ca/research/pernkopf-symposium>

Video Presentation 4/7/2020 at Washington University School of Medicine in St. Louis: Anatomy in National Socialist Germany Hildebrandt.mp4
<https://wustl.box.com/s/ao085wd5f12ufc6h9a2dsj97wctq22vg>

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Books, Bones and Bodies: The Legacies of Nazi Anatomy for Bioethics Today

By Sabine Hildebrandt, MD

Abstract:

After decades of denial, German academic medicine was reluctant to accept responsibility for its complex collaboration with the Nazi regime. Anatomy as a clearly defined field of medical research can serve as an instructive example in specifying the involvement of medical professionals in the Holocaust. Systematic historical analysis of anatomy in Nazi Germany has revealed that legacies from this history still exist in the form of “Books, Bones and Bodies.” Specifically, this concerns the legacies of anatomists’ use of bodies of Nazi victims in teaching and research, as “data” have become anatomical knowledge and specimens from victims continue to be discovered. The *Pernkopf Atlas of Human Anatomy* represents an example of the legacy of Nazi medicine, as it includes images from Nazi victims. Nevertheless, its accuracy in specific areas of anatomy still makes it a valued source in surgery. The *Vienna Protocol* is a new halachic responsum on the question of what to do with newly discovered remains from Nazi victims and their data, and can provide guidance in the ethical reasoning on whether to use the Pernkopf atlas. Insights from the history of Nazi anatomy shine a clear light on current questions of ethics and the human body in medicine.

Reformulating a question

One of the many controversies surrounding the history of medicine during the Holocaust has been *whether it is ethical to use data from Nazi research*, especially when performed on victims of the Nazi regime (e.g. Caplan 1992; recent comments: Hildebrandt and Seidelman, 2017; Caplan, 2019). However, the reality is that Nazi research results have never *not* been used, which is apparent not only in the postwar ‘Operation Paperclip’ that brought scientists such as physicists from Nazi Germany to the US (Jacobsen, 2014), but also in the field of medicine. One example is the use of an atlas of anatomy created by the Nazi anatomist Eduard Pernkopf based on the bodies of executed Nazi victims. Another example is the founder of US bioethics Henry Beecher, who in 1945 was among experts asked to evaluate the results from Nazi experiments on the use of mescaline, a mind-altering drug (U.S. Naval Technical Mission in Europe, Technical report no. 331-45, 1945; Mashour, 2007). Beecher himself subsequently performed research on hallucinogenic drugs, and then in 1966 wrote his famous article on the need for ethical regulations in clinical research (Beecher, 1966; Moreno, 2016).

However, quite apart from any postwar ‘mining’ of secret Nazi research, the results from research on victims of the Nazi regime had been published in the 1930s and 1940s in journals that were read around the world. In consequence, the question of *whether to use* Nazi data has to be reformulated to *how they can be recognized*, and *which criteria* should be used in deciding whether to continue using them or not.

The recognition of data as derived from the Nazi context relies on scholarly historical research on medicine during the Holocaust and on the teaching of this history in medical curricula. After the identification of the research as Nazi derived, criteria need to be discussed for each set of data

separately, within a stringent ethical frameworks. Here the example of anatomical research in Nazi Germany and the *Vienna Protocol* shall be discussed.

Why anatomy?

After the decades-long denial by medical professionals of any complicity with practices of Nazi politics, analyses of the history of medicine during the Holocaust gained momentum since the 1980s. Anatomy came first into the focus of investigations in the 1990s (Seidelman, 2012). As a clearly defined research field, the systematic study of anatomy's history in Nazi Germany has led to new insights about the interactions of medical scientists with the Nazi regime (Hildebrandt, 2016). Thus anatomy can serve as an instructive example of the involvement of medical professionals in the Holocaust.

Anatomists who remained in Germany and the occupied territories joined the Nazi party in large numbers and supported Nazi ideology through their work as racial hygienists. They used the bodies of Nazi victims within their legal body procurement and seized the opportunity provided by rising numbers of executions following civilian and military trials to perform research on the many bodies of executed Nazi victims. Publications of these studies increased during the war years, and even after the war anatomists used their collections of tissues from the executed for their work, collating their results in book publications (Hildebrandt, 2013a).

Books, Bones and Bodies

Some of these books are still in use, most prominently among them the Pernkopf atlas, popular among anatomists and surgeons for its detail (Yee et al., 2019a). After publication of the abridged American edition in 1963 questions were raised about the political background of the authors and the persons depicted in the atlas, as some of the images included signatures with Swastikas and SS lightning bolt runes. After initial historical inquiries in the 1980s (Weissman, 1985; Williams, 1988), a public debate evolved in the 1990s around the question whether it was ethical to continue using the atlas, as its author, the Austrian anatomist Eduard Pernkopf, was a Nazi ideologue and had used the bodies of Nazi victims for his work (Israel and Seidelman, 1996; Angetter, 2000; Hildebrandt, 2006). Further publication of the atlas ceased, but the book itself and digital copies remain in circulation. Also, the story of the Pernkopf atlas has become an object lesson for debates on bioethics and Nazi medicine (Mages and Lohr, 2017; Hartsock and Beckman, 2019).

Apart from books by Nazi anatomists, bodies of Nazi victims were used in German and Austrian anatomy departments in education and research for many years after the war (Hildebrandt, 2013b). Specimens are still being held in collections, despite a proclaimed 'cleansing' in the 1990s (Weindling, 2012), and many of them are currently under investigation, including at the Free University of Berlin and at the Max-Planck-Institutes for Neuroscience and Psychiatry. The Berlin investigations followed an incident in 2014, when during routine excavations on a property of the university in Dahlem bone fragments were found. This excavation was located behind the former Kaiser-Wilhelm-Institute for Anthropology, Human Heredity and Eugenics, which during Nazi times had been directed by Otmar von Verschuer, an internationally respected twin-researcher. He was also the mentor of Josef Mengele, who sent specimens from Auschwitz to von Verschuer. This historical significance was overlooked at the time and the bone fragments were handled

routinely and incinerated, leading to worldwide protests and a follow-up investigation (Pollock and Cyrus, 2018). Around the same time it was discovered that brain-specimens from victims of the Nazi “euthanasia” program were still kept in archival collections of various Max-Planck-Institutes (the post-war successors of the Kaiser-Wilhelm-Institutes), despite previous statements that such specimens had all been removed from the collections and buried (MPI brain research, 2015).

These events led to discussions by medical historians on the need for a formal protocol of standard for the handling of human remains from potential Holocaust victims. While several guidelines concerning collections and incidental discoveries of human remains from the Nazi period existed (e.g. Bundesärztekammer, 2003; Deutscher Museumsbund, 2013), these were discipline-focused and did not include the voice of victims of the Holocaust. Thus in May 2017 an interdisciplinary international symposium was organized at Yad Vashem, the Holocaust Martyrs Authority in Jerusalem, with experts on the Jewish perspective, archeologists, anthropologists and medical historians. Here the *Vienna Protocol* was formulated. (Elie Wiesel Center for Jewish Studies, 2017).

The *Vienna Protocol* and its meaning

The *Vienna Protocol* starts with *Recommendations on How to Deal With Holocaust Era Human Remains*, which consist of practical guidelines that prioritize the identification, burial and documentation of the remains of individual victims, in order to aid their dignified commemoration. The recommendations include a rabbinical (halachic) responsum - a scholarly legal and ethical evaluation in the Jewish tradition - on the question of what to do *when Jewish or possibly-Jewish human remains are discovered*, by Rabbi Joseph Polak of Boston. He is Chief Justice of the Rabbinical Court of New England and a childhood survivor of the concentration camps Westerbork and Bergen-Belsen. Together with Holocaust scholar Michael Grodin Rabbi Polak studied this question within the framework of Jewish medical ethics. The protocol evaluates not only the handling of physical human remains, but is also the first one on the use of data derived from victims of the Holocaust, data such as the Pernkopf images. It states that the use of these images is permitted by most authorities to help save life (*piku'ach nefesh*), but that this use “requires making it known to one and all just exactly what these drawings are. In this way, the dead are accorded at least some of the dignity to which they are entitled” (Polak, 2018:S241). This section of the *Vienna Protocol* goes back to the question ‘whether it was allowed to use the atlas from the victims’ point of view’, which was asked by Susan Mackinnon, a peripheral nerve surgeon, who has been using the atlas since 1981 in complex surgical cases and knew about its history. Based on the *Vienna Protocol*, Mackinnon and colleagues have now presented a clinical case study, which provides a historic and ethical framework for questions concerning the use of the Pernkopf atlas in the management of anatomically complex and difficult surgical cases, with special attention to implications for medical ethics drawn from Jewish law (Yee et al., 2019b).

“.... and brokers” - patterns from the past in the present

The example of anatomy and the Pernkopf atlas demonstrates the use of the results from scholarly historical analysis in the formulation of questions concerning the ethics of the use of Nazi data, and a response that is specific to this set of Nazi data based on a stringent ethical framework.

Furthermore, the *Vienna Protocol* is formulated in a manner that makes it widely applicable beyond the Jewish context, in other instances of human remains and data from crimes against humanity or genocide.

Patterns of abusive and coercive medical practices can become apparent through systematic historical analysis, and the example of Nazi anatomy shines a clear light on current unethical body practices in anatomy. Foremost among them is the for-profit trade of human bodies by US private institutions known as body brokers (Reuters, 2017). These have created private body donation programs that prey on the indigent by providing free ‘burials’. The bodies or body parts are then shipped throughout the US and internationally, without any guarantee for ethical handling (Champney et al., 2019).

Thus, insights from the history of Nazi anatomy lead to critical questions that need to be contemplated by all medical professionals, especially those who work with human tissues:

- Where do the bodies come from?
- Where do the tissues come from?
- Where do the images and data come from?
- Where does the knowledge come from?

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