

The Rights and Responsibilities of
Human-Subject Research:
Through the Lens of Dr. Mengele's Experiments

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When I first came across this year's NHD theme, the first thing that came to my mind was the abuse of human-subjects' rights in Nazi Germany, by Dr. Josef Mengele. I started my research by first studying several articles which consisted of both primary and secondary sources, ranging from how Mengele's experiments came to be, to later reforms towards human-subject experimentation. Later on, I read several books on Mengele, including *The Nazis Doctors: Medical Killing and the Psychology of Genocide*, *Mengele: The Complete Story*, *Mein Kampf*, etc. These books significantly aided my understanding of how and why Mengele's experiments were conducted. In my quest for primary sources, I searched through the National Archives going through historical documents related to Mengele's experimentations, the Tuskegee Study, and even Nazi propaganda before WW2 against Jews. Some documents I found were written in German, which I could decipher easily because of my knowledge of the German language. During early months of research, I was engulfed by a fear of not being able to complete the paper on time. To combat that, I made a timetable which dictated my daily focus on different parts of my paper.

During the preliminary stages of writing my paper and well into a few months ago, I wrote hand-written notes in a notebook, along with the overall structure of the paper. In order to understand the history of unethical human-subject experimentation, I interviewed Dr. Palmer (Phd. from Yale), a professor of medical history from Fairfield University. The historical argument I wrote is about how the threat of unethical

human-subject experimentation continues even today, and that addressing it will require ending discrimination.

Dr. Mengele's experimentation on human-subjects were unethical due to the ignorance of the responsibility towards preserving human rights. After the experiments were condemned and labelled as unethical, reforms and laws like the Nuremberg Code and the Helsinki declaration were drafted to prevent this from happening in the future. However these laws and international guidelines were rendered futile after studies like the Tuskegee Syphilis Study and the Pfizer's 1996 Nigerian Study. Those studies compromised on human rights such as informed consent, yet again, for scientific advancement, clearly violating international human-subject experimental norms. The Tuskegee Syphilis Study started in 1932, and kept going on until 1972, years after the Nuremberg Code and Helsinki Declaration. Hence, if such experimentation were to be continued until just 50 years ago, I asked, what is the guarantee that humanity is safe from another unethical human-subject experimentation? And is it not true that these unethical experiments arise due to the inequality of humans?

My topic is significant in history, because it laid the foundations to modern experimentation standards on human-subjects. However, it pronounces the need to work on a solution to end unethical human-subject experimentation by ending inequality, to prevent such events from happening again. Hence this paper was not just about Mengele's experiments, but was about human-subject experimentation as a whole, from which Mengele's experiments was a lens to a bigger problem.

Paper

Introduction

Dr. Joseph Mengele's experiments on human-subjects during the 1940s resulted in countless deaths and needless suffering. In an era where rights were shaped by Nazi dogma, the responsibility for preserving those rights was altered. These experiments could not have taken place without the cooperation of a wide range of people who overlooked human rights to rationalize their actions. Mengele's horrific experiments shocked the world when revealed. As a result, ethical guidelines for human-subjects were created. Despite the progress made to protect the rights of human-subjects, unethical experiments continued well after the acceptance of codes of conduct regarding ethical human-subject experimentation. This disregard of codes of conduct suggests that in each case the people whose rights were being taken away, were people without power. While it was important to condemn Mengele's experiments, humanity addressed the symptom rather than the disease, the disease of systematic inequality. History has demonstrated that in order to protect the rights of human-subjects, and sustain the responsibility of researchers, it is necessary to end discrimination.

The Man on the Platform

*"Zwillinge, Zwillinge, Zwillinge!"*¹ "Twins, Twins, Twins!" called out Mengele on the platforms of Auschwitz. These twins were just one of the many groups of "interesting specimens,"² amongst hunchbacks, and triplets, of whom Mengele would use as guinea pigs in his unethical experiments. These experiments ranged from painful blood transfusions to

¹ Gerald L. Posner and John Ware, *Mengele : the Complete Story* (New York: Cooper Square Press, 2000), [Page 29]

² Lucette Lagnado and Sheila Cohn Dekel, *Children of the Flames : Dr. Josef Mengele and the Untold Story of the Twins of Auschwitz* (New York, N.Y.: Penguin Books, 1992), 71.

unprincipled ophthalmic research, on human-subjects who were stripped of their basic human rights, based solely on racial prejudice.³ Mengele's goal was to create a perfect German specimen, one that resembled the mythical Aryan race, down to blonde hair, blue eyes and strength.⁴ According to Dr. Miklos Nyiszli, Mengele's assistant pathologist, Mengele was "in search of a solution to the mystery of reproduction of the race. The great goal ... was to increase the birth rate of 'superhumans' who were destined to become the 'master race' ..."⁵ Consequently, to accomplish the idea of this "master race," Mengele used the inmates of Auschwitz as his human-subjects, and used them as "material" for his experiments. Mengele viewed himself as a revolutionary Nazi, committed to the task of remaking the German people by bringing science into the Nazi vision, which he tried to achieve by means of scientific progress.⁶ To achieve his goal, he resorted to conducting such unethical experiments.

Twin Experiments

Mengele experimented on twins in order to identify a method of producing suitable "Aryan" people to populate Germany. Comparative twin studies, with one twin in each pair used as a control, was his technique to establish the inherited traits of Jews and other "undesirable" races.⁷ One of the victims of the experiment remarked, "Some days they made cuts in to my body and left the wounds open for them to study. Most of the time there was nothing to eat. There was

³ Louise Palmer, e-mail interview by the author, Fairfield, CT.

⁴ David G. Marwell, *Mengele : Unmasking the 'Angel of Death'* (New York, NY: W. W. Norton & Company, 2020), 84.

⁵ Miklós. Nyiszli, "VIII," in *I Was Doctor Mengele's Assistant : the Memoirs of an Auschwitz Physician* (Oświęcim: Distribution, Frap-Books, n.d.), 44, <https://archive.org/details/iwasdoctormengel0000mikl/page/44/mode/2up>.

⁶ Robert Jay Lifton, *The Nazi Doctors : Medical Killing and the Psychology of Genocide : with a New Preface by the Author*, 4th ed. (New York: Basic Books, 2017), 377.

⁷ Posner and Ware, *Mengele : the Complete*, 34.

no more skin left on my body for them to put injections or tubes.”⁸ When one of the twins would die from the experiments, Mengele would kill the other twin to dissect and compare the two corpses,⁹ plundering the twins’ bodies to remove organs and limbs.¹⁰

Ophthalmic Experiments

Another one of Mengele’s experiments were the eye experiments in which he attempted to change the pigmentation of the eye by injecting different colored dyes.¹¹ These ophthalmologic experiments triggered painful infections, sometimes even blindness. As stated by an inmate doctor, “ ... I saw a wooden table. On it were samples of eyes. They each had a number and a letter. The eyes were very pale yellow to bright blue, green and violet.”¹² After the experiments were finished, survivors were either killed in gas chambers or given a chloroform injection to the heart.¹³

Mengele also conducted experiments other than those related to the German super-race. He exposed Polish nuns to extreme X-rays for “research purposes,”¹⁴ and forced a mother to

⁸ "Personal Statements From Victims of Nazi Medical Experiments," Claims Conference, accessed January 7, 2025, <https://www.claimscon.org/about/history/closed-programs/medical-experiments/personal-statements-from-victims/#:~:text=%E2%80%9C%9C%20suffered%20immense%20pain%20and,because%20of%20them%20%20survived.>

⁹U.S. Department of Justice (Criminal Division), In the Matter of Josef Mengele: A Report to the Attorney General of the United States, Doc. (Oct. 1992). <https://www.justice.gov/sites/default/files/criminal-hrsp/legacy/2011/06/06/10-30-92mengele-exhibits.pdf>.

¹⁰ Lagnado and Dekel, *Children of the Flames*, 71.

¹¹ Bruno Halioua and Michael F. Marmor, "The Eyes of the Angel of Death: Ophthalmic Experiments of Josef Mengele," *Survey of Ophthalmology* 65, no. 6 (2020): [Page #], <https://doi.org/10.1016/j.survophthal.2020.04.007>.

¹² Posner and Ware, *Mengele : the Complete*, 34.

¹³ David G. Marwell, *Mengele : Unmasking the 'Angel of Death'* (New York, NY: W. W. Norton & Company, 2020), 144.

¹⁴ U.S. Department of Justice (Criminal Division), In the Matter of Josef Mengele: A Report to the Attorney General of the United States, Doc. (Oct. 1992). <https://www.justice.gov/sites/default/files/criminal-hrsp/legacy/2011/06/06/10-30-92mengele-exhibits.pdf>.

cover her breasts to see “ ... how long the baby could live without food.”¹⁵ According to another account, “Each day I was submerged in hot water. Whenever I tried to put my head out of the water in order to breathe I was forced back into the water by Dr. Josef Mengele’s stick. He was enjoying himself.”¹⁶

In Mengele’s experiments, rights such as voluntary consent, informed consent and the right to humane treatment were non-existent, in complete dismissal of ethical standards.¹⁷ One of the inmates at Auschwitz recalled, “Once I witnessed a stomach operation - Mengele was removing pieces from the stomach, but without any anesthesia.”¹⁸ These instances of Mengele’s brutish attitude towards his human-subjects highlight the fact that Mengele never viewed Jews as humans, but rather as dispensable test subjects.

Mengele abandoned his responsibility as a researcher, when he disregarded the rights of his human-subjects. It was his personal ambition to make some “important scientific discovery,”¹⁹ which was fueled by the permissible cruelty and discrimination towards Jews.

Historical Context

The Nazis believed that Jews were “*lebenswertes leben*,”²⁰ (life unworthy of life) who would lead the Aryan race to extinction.²¹ This perceived endangerment of the Nordic Race

¹⁵ *Mother Tells of Killing Her Newborn Baby at Auschwitz : Mock Trial of 'Angel of Death' Ends in Israel*, previously published in *Los Angeles Times* (Los Angeles, CA), February 7, 1985, <https://www.latimes.com/archives/la-xpm-1985-02-07-mn-5158-story.html>.

¹⁶ "Personal Statements," Claims Conference.

¹⁷ United States Holocaust Memorial Museum, "Josef Mengele," Holocaust Encyclopedia, last modified November 15, 2024, accessed January 7, 2025, <https://encyclopedia.ushmm.org/content/en/article/josef-mengele>.

¹⁸ Lagnado and Dekel, *Children of the Flames*, 70.

¹⁹ Lagnado and Dekel, *Children of the Flames*, 84.

²⁰ "Copy of an original letter signed by Adolf Hitler authorizing the T4 (Euthanasia) program.," United States Holocaust Museum, last modified September 1, 1939, <https://collections.ushmm.org/search/catalog/pa15074>.

²¹ Lifton, *The Nazi*, 24.

posed by the Jews was institutionalized Nazi propaganda to infuse anti-semitism among German people, leading to the public support of Jewish elimination. The Nazis tried to prove that the destruction of Jews “is not to be equated with other types of killing... but [is] an allowable, useful act.”²² Initially, discriminatory slogans such as "*Die Juden sind unser Unglück!*"²³ (“The Jews are our misfortune!”) became commonplace in Germany. Later, the implementation of the Nuremberg Race Laws revoked the German citizenship of Jews across Germany, legalizing the persecution of Jews.²⁴ These laws caused Kristallnacht,²⁵ during which the businesses, homes, and synagogues of German Jews were burned and destroyed. The environment of hatred fabricated by the Nazis against Jews not only rendered the Jews powerless but also numbed the German people to the plight of the Jews. Mengele eagerly exploited the situation. With the institutionalized support of the Nazis, it became effortless for individuals to acknowledge the false notion of Jewish inferiority, let alone social and symbolic disapproval. This environment of Nazi propaganda led Mengele to embrace Nazi dogmatism, which is evident in his comments of the book *Fundamentals in Genetics and Race Care* in which he explained, “The last chapter explains... the biological dangers that threaten the German people...it would have been desirable if a clearer analysis of the merits and unfavorable features of all European races had been made.”²⁶ Mengele’s review of another book hinted at his actions in Auschwitz, “Unfortunately the author did not use subjects where the diagnosis could be verified by an autopsy.”²⁷ During his

²² Alfred E. Hoche and Karl Binding, '*Die Freigabe Der Vernichtung Lebensunwerten Lebens*': *Beiträge Des Symposiums über Karl Binding und Alfred Hoche Am 2. Dezember 2004 in Leipzig*, 46-47, 54-58.

²³ *Der Stürmer* (Germany), March 1939, Slogan, <https://collections.ushmm.org/search/catalog/irn538808>.

²⁴ "Reichsbürgergesetz" [Citizen Law], National Archives, last modified September 15, 1935, <https://catalog.archives.gov/id/128215274>.

²⁵ Kurt Messerschmidt, interview, *Kurt Messerschmidt on Kristallnacht*, <https://sfi.usc.edu/content/kurt-messerschmidt-kristallnacht>.

²⁶ Posner and Ware, *Mengele : the Complete*, 15.

²⁷ Posner and Ware, *Mengele : the Complete*, 15.

time as a student, Mengele was heavily influenced by Dr. Ernst Rudin.²⁸ Rudin was a leading German figure in the theory that doctors should destroy “life devoid of value.”²⁹ This is evident in Mengele’s statement, “there are only two gifted people in the world, Germans and Jews... the Jews have to be destroyed.”³⁰ Rudin’s influence, combined with Mengele’s submission to Nazi propaganda, explains why Mengele treated his human-subjects like laboratory rats. Mengele fulfilled his own ambitions by taking the rights of his human-subjects, even though it violated the responsibilities of a doctor as a whole. Simply put, in a society adhering to radical discrimination, such as the German society in the Nazi era, responsibilities are redefined.

Disregarded Responsibilities

The foundation of medical ethics was first derived from the Hippocratic Oath, which outlined the moral and professional responsibilities of a physician, emphasizing ethical conduct and the patient’s autonomy.³¹ The Nazis reinterpreted the oath by characterizing Jews as “destroyers of culture,”³² as well as “germ carriers.”³³ This “parasite”³⁴ of the Aryan race had only one cure; the absolute elimination of the Jewish race, which according to the Nazis was “purely a healing work.”³⁵ When asked about the reconciliation with the Hippocratic Oath, an Auschwitz camp doctor replied, “... I am a doctor and I want to preserve life. And out of respect for human life, I would remove a gangrenous appendix from a diseased body. The Jew is the

²⁸ Beato Suwa, "History of Eugenics in Otorhinolaryngology: Ernst Rüdin and the International Eugenics Network," National Library of Medicine, <https://pmc.ncbi.nlm.nih.gov/articles/PMC11008944/>.

²⁹ John Cavanaugh-O'Keefe, "Introduction To Eugenics," Eternal Word Television Network, accessed February 12, 2025, <https://www.ewtn.com/catholicism/library/introduction-to-eugenics-12083>.

³⁰ Posner and Ware, *Mengele : the Complete*, 27.

³¹ "First, do no harm," *Harvard Health Blog*, <https://www.health.harvard.edu/blog/first-do-no-harm-201510138421>.

³² Adolf Hitler, *Mein Kampf*, trans. Ralph Manheim (Boston: Houghton Mifflin, 2002), 300-308.

³³ Hitler, *Mein Kampf*, 300-308.

³⁴ Hitler, *Mein Kampf*, 304.

³⁵ Hoche and Binding, '*Die Freigabe*, 19-25.

gangrenous appendix in the body of mankind.”³⁶ This attitude towards Jews hinted towards a treacherous mental apparatus of the Nazi state that Jews were not viewed as humans, but were looked upon as something inferior. The rationale of Jewish inferiority, combined with social upheaval against Jews across Germany, allowed for Mengele’s experiments to take place. Hence, it was not only Mengele’s responsibility to secure the rights of human-subjects but was also the collective responsibility of the German population to end discrimination which led to the abuse of human-subjects’ rights in the first place.

Efforts to Codify Rights and Responsibilities.

After the defeat of Nazi Germany, an American military tribunal held trials known as the “Doctors’ Trials” against German physicians.³⁷ The Germans explained that American scientists had attempted similar experiments before and since there were no international guidelines which differentiated ethical and unethical human experimentation, the experiments on human-subjects in the camps were justified.³⁸ In response, Dr. Leo Alexander, an American doctor contributing to the trial’s prosecution, presented the U.S. Counsel for War Crimes with a six-point memo that defined proper medical research, protecting rights such as voluntary consent, informed consent, and the right to humane treatment.³⁹ The original six-point memo was revised into a ten-point document, which became known as the Nuremberg Code.

The Nuremberg Code outlined the responsibilities of a researcher for conducting experiments on human-subjects and it emphasized the need for the rights of human-subjects in

³⁶ Lifton, *The Nazi*, 15-16.

³⁷ Douglas O. Linder, "The Nuremberg Trials: The Doctors Trial," Famous Trials, University of Missouri-Kansas City School of Law, <https://famous-trials.com/nuremberg/1903-doctortrial>.

³⁸ "The Nuremberg," United States Holocaust Memorial Museum.

³⁹ Pediatric Neurology, last modified April 15, 1947, [https://www.pedneur.com/article/S0887-8994\(21\)00242-3/fulltext#fig1](https://www.pedneur.com/article/S0887-8994(21)00242-3/fulltext#fig1).

experiments.⁴⁰ However, the Nuremberg Code, regarded as the first international code on human-subject experimentation, had numerous flaws. Essentially, it did not set the balance between advancing scientific interests of a researcher and safeguarding the rights of human-subjects. Moreover, the code had little effect in practice due to its association with Nazi war crimes⁴¹ and was difficult to impose, which left it as a mere symbolic document.⁴² Therefore, in 1964 the Helsinki Declaration was drafted to renew the way human-subject research was administered. Most importantly, the Declaration set the balance between scientific advancement and its relation with human-subjects, whilst maintaining the Code's charter.⁴³

In spite of the creation of the Nuremberg Code and the Helsinki Declaration, the efforts put forth to end unethical human-subject experimentation yielded no success after studies that violated the rights of human-subjects continued to surface.

Unethical Human-Subject Experimentation after Mengele:

- The Tuskegee Syphilis Study

Conducted between 1932 through 1972, the Tuskegee Syphilis Study aimed to examine the natural history of Syphilis in Black men. The organization leading the study, the United States Public Health Service, enrolled 600 impoverished Black sharecroppers as human-subjects, of whom 299 had contracted Syphilis.⁴⁴ Despite the fact that almost half of the men in the study had Syphilis, the men were neither informed of their state of health nor the true purpose of the

⁴⁰ University of Northern Iowa, accessed January 28, 2025, <https://rsp.uni.edu/irb-manual-ethical-principles#:~:text=The%20Nuremberg%20Code%20of%201947,.the%20person%20involved%20...>

⁴¹ Palmer, e-mail interview by the author.

⁴² National Library of Medicine, accessed January 28, 2025, <https://pmc.ncbi.nlm.nih.gov/articles/PMC3121268/>.

⁴³ "The Declaration of Helsinki," National Library of Medicine, last modified September 29, 2007, accessed January 28, 2025, <https://pmc.ncbi.nlm.nih.gov/articles/PMC1995496/>.

⁴⁴ "The Story," Voices For Our Fathers, <https://www.voicesforfathers.org/the-story>.

study. Instead, researchers told the men that they were being treated for “bad blood.”⁴⁵ The men never received treatment for Syphilis, even after Penicillin became the standard syphilis treatment.⁴⁶ Moreover, there is no evidence that the researchers had obtained informed consent from the participants.⁴⁷ By 1969, between 28 to around 100 men participating in the study died due to Syphilis.⁴⁸ Had this study not been leaked to the press, as it was in 1972,⁴⁹ more lives would have been lost. What was most shocking about this study was that it started almost 8 years before Auschwitz, well before Mengele’s experiments, and continued 25 years after the establishment of human-subject rights in the Nuremberg Code. The study took place in Alabama before the Civil Rights Act of 1964, a period of time referred to as the “Jim Crow South,”⁵⁰ when racial segregation was long standing and white supremacy was accepted as both legally and morally right.⁵¹ The study occurred primarily in an era where Black rights were virtually non-existent. The responsibility of preserving the rights of those human-subjects not only lay with the researchers working on the study but also with the American people who contributed to such discrimination in the first place, echoing the German people’s exercise of Jewish persecution.

⁴⁵ Susan Lederer, "Experimentation on Human Beings," *Oxford Journals*, 21.

⁴⁶ "About the USPHS Syphilis Study," Tuskegee University, <https://www.tuskegee.edu/about-us/centers-of-excellence/bioethics-center/about-the-usphs-syphilis-study>.

⁴⁷ Susan E. Lederer, *Subjected to Science : Human Experimentation in America before the Second World War*, Johns Hopkins paperbacks ed ed. (Baltimore: Johns Hopkins University Press, 1997)

⁴⁸ Elizabeth Nix, "Tuskegee Experiment: The Infamous Syphilis Study," History, A&E Television Networks, last modified June 13, 2023, <https://www.history.com/news/the-infamous-40-year-tuskegee-study>.

⁴⁹ "Memorandum Terminating the Tuskegee Syphilis Study," National Archives Catalog, last modified November 16, 1972, <https://catalog.archives.gov/id/650716?objectPanel=transcription>.

⁵⁰ *The Daily Bulletin*, February 5, 1945, <https://chroniclingamerica.loc.gov/lccn/sn84024221/1945-02-05/ed-1/seq-4/#date1=1756&index=9&rows=20&words=crow+jim+south&searchType=basic&sequence=0&state=&date2=1963&proxtext=Jim+Crow+South&y=0&x=0&dateFilterType=yearRange&page=>

⁵¹ Samuel Loewenberg, "Drug company trials come under increasing scrutiny," *The Lancet*

Pfizer's 1996 Nigeria Trovan Trial

The final years of the twentieth century witnessed yet another example of unethical experimentation. In 1996, Nigeria experienced a horrible meningitis epidemic, killing more than 11,000 people. At the same time, Pfizer, a U.S. based pharmaceutical company, launched a new drug: Trovan. To test the effectiveness of the drug, the company conducted medical trials on approximately 200 Nigerian children, 11 of whom died.⁵² The patients were not informed that previous animal studies showed that drugs similar to Trovan may have caused joint damage.⁵³ In contrast, American patients in the U.S. were told of the animal tests in a later Trovan trial.⁵⁴ Furthermore, the drug's license had been withdrawn in Europe due to its liver toxicity.⁵⁵ These deaths caused by the disregard of human-subjects' rights was evidence that Pfizer considered their subjects dispensable. Not only did Pfizer's experiments cause deaths, but also abandoned the responsibility in abiding by cornerstone codes on human-subjects' rights.⁵⁶ These actions suggest Pfizer discriminated against its human-subjects. The subjects' rights were of no concern to Pfizer, again an echo of Mengele's lack of concern towards his human-subjects.

Mengele was condemned for his actions in Auschwitz and was blamed for the human suffering he caused. In spite of that, the task of preventing the abuse of human-subjects' rights utterly stalled. True, Mengele's experiments were unethical, but the cause of such events was

⁵² Tinker Ready, "Pfizer in 'unethical' trial suit," *Nature Medicine* 7 (October 1, 2001): 1077, <https://www.nature.com/articles/nm1001-1077c>.

⁵³ "Pfizer accused of testing new drug without ethical approval," National Institute of Health, <https://pmc.ncbi.nlm.nih.gov/articles/PMC1119465/#:~:text=To%20test%20the%20efficacy%20of,six%20who%20were%20given%20ceftriaxone>.

⁵⁴ "Pfizer accused," National Institute of Health.

⁵⁵ "Secret report surfaces showing that Pfizer was at fault in Nigerian drug tests," National Institute of Health, <https://pmc.ncbi.nlm.nih.gov/articles/PMC1471980/>.

⁵⁶ Ayodele S. Jegede, "Understanding Informed Consent for Participation in International Health Research," *Developing World Bioethics* 9, no. 2 (2009): <https://doi.org/10.1111/j.1471-8847.2008.00238.x>.

more than just the chase for scientific knowledge, it was discrimination. Humanity failed to address the problem of discrimination, the result of which stemmed in experiments such as Mengele's, the Tuskegee Syphilis Study, and the Pfizer Study. The rights of human-subjects were disregarded, and the responsibility towards protecting them were infringed, rendering the Nuremberg Code, and the Helsinki Declaration useless, shattering the very shield that was supposed to protect humanity from unethical human-subject research.

Conclusion

Mengele's experiments horrified the world but were a lens through which a fundamental problem could be examined: discrimination. His experimentation resulted in countless deaths and spurred the world's concern to codify scientists' ethical responsibilities to their human-subjects. International guidelines such as the Nuremberg Code and the Helsinki Declaration were the result of this concern. However, these documents failed to protect the rights of human-subjects because of the sentiment of inequality embedded in societies across the world in the past and the present. This sentiment of inequality harmed, whether it be the Jews in Europe, African Americans in North America or impoverished Nigerians in Africa. Humanity must recognize the responsibility towards human rights to prevent more deaths at the hands of unethical human-subject experimentation. Without the vigilance of humanity to end discrimination, these violations will continue. As a consequence, living up to our responsibilities in protecting human-subject rights is crucial in order to prevent such experiments from recurring, because when the responsibility of providing the right to equality is disregarded, it sets the stage for having rights abused. Unless we continue to fight the disease of perceived inequality, its symptoms will continue to surface.

Annotated Bibliography

Primary Sources

"Ad Hoc committee meeting to examine data from the Tuskegee Syphilis Study and offer advice on continuance of this Study." National Archives Catalog. Last modified February 6, 1969. <https://catalog.archives.gov/id/281641?objectPanel=transcription&objectPage=13>. This report published in 1969 gave me an overview of the Tuskegee Study in the first few pages, and was mostly about why the study should keep going. This source helped me to understand that the researchers conducting the study were well motivated even though the means of conducting them were wrong.

"Besprechungsprotokoll" [Meeting Protocol]. Holocaust Education and Archive Research Team. Last modified January 20, 1942. <http://www.holocaustresearchproject.org/holoprelude/Wannsee/wannsee/Protokoll%20-%20page%201.jpg>.

This was a document related to the Wannsee Conference. Even though I did not use this as a footnote in my paper, I understood which parts of the Nazi party were involved in the Holocaust by identifying the people taking part in the conference.

"Copy of an original letter signed by Adolf Hitler authorizing the T4 (Euthanasia) program." United States Holocaust Museum. Last modified September 1, 1939. <https://collections.ushmm.org/search/catalog/pa15074>.

This document helped me learn that the Nazis considered Jews to be "Life Unworthy of Life." I used very powerful and every quote in my historical context.

The Daily Bulletin, February 5, 1945.

<https://chroniclingamerica.loc.gov/lccn/sn84024221/1945-02-05/ed-1/seq-4/#date1=1756&index=9&rows=20&words=crow+jim+south&searchType=basic&sequence=0&state=&date2=1963&proxtext=Jim+Crow+South&y=0&x=0&dateFilterType=yearRange&page=1>.

This newspaper briefly explains what the Jim Crow South was. This was one of the first definitions of the Jim Crow South I read during my research.

Der Stürmer (Germany), March 1939. <https://collections.ushmm.org/search/catalog/irn538808>.

This newspaper's slogan "Die Juden sind unser Unglück!" which translated to "The Jews are our misfortune", was very useful in showing the dehumanization of Jews in Nazi Germany. I also used the paper to understand the various different tactics the Nazis used to spread misinformation, propaganda newspapers like these being one of them.

Eitzen, Kurt Hilmar. "Ten Responses to Jewish Lackeys." German Propaganda Archive. Calvin University. Last modified 1936.

<https://research.calvin.edu/german-propaganda-archive/responses.htm>.

This source provided me with anti-semitic beliefs the Nazis commonly used to spread anti-semitism. One of those beliefs was that Jewish businessmen sell junk, which proved how the Nazis dehumanize the Jews for the smallest of things.

"Gesetz zum Schutze des deutschen Blutes und der deutschen Ehre" [Law for the Protection of German Blood and German Honor.] National Archives. Last modified September 15, 1935. <https://catalog.archives.gov/id/128214798?objectPage=2>.

This source was essential for me to understand how brutally the Nazis treated Jewish people. Since I read German, I could decipher the laws and interpret the laws easily, understanding how much the Nazis hated Jewish blood.

Goebbels, Joseph. "The Jews Are Guilty!" Calvin University. Last modified November 16, 1941.

This source was valuable to me because it was an article written by Joseph Goebbels, which helped me to learn about how Jews were dehumanized in Germany. This was useful for my historical context section.

Hitler, Adolf. *Mein Kampf*. Translated by Ralph Manheim. Boston: Houghton Mifflin, 2002.

Mein Kampf, written by Hitler himself, was a great source which gave me an insight of how the Nazi mind worked. It was a great primary source which helped me in my historical context.

———. Speech presented at Reichstag, Berlin, Germany, January 30, 1939. Holocaust

Encyclopedia.

<https://encyclopedia.ushmm.org/content/en/film/hitler-speaks-before-the-reichstag-german-parliament>.

This source is of Hitler speaking in the German Parliament regarding the annihilation of European Jewry. He specifically stated "Finance Jewry" which develops a connection between Jews and the stereotype of them taking over Germany's reparation money, leading me to learn another reason why Hitler wanted to eradicate the Jews.

Hoche, Alfred E., and Karl Binding. *'Die Freigabe Der Vernichtung Lebensunwerten Lebens' :*

Beiträge des Symposiums über Karl Binding und Alfred Hoche Am 2. Dezember 2004 in Leipzig.

I was aided with great quotes from this book, and this book gives an insight into the Nazi vision of "racial purity." This was originally published in 1920.

"Memorandum Terminating the Tuskegee Syphilis Study." National Archives Catalog. Last modified November 16, 1972.

<https://catalog.archives.gov/id/650716?objectPanel=transcription>.

This was a memorandum to initiate the termination of the Tuskegee Syphilis Study. It was from this source that I found out about how the Tuskegee Study was closed, and I used this source as a footnote to represent the end of the study.

Messerschmidt, Kurt. Interview. *Kurt Messerschmidt on Kristallnacht*.

<https://sfj.usc.edu/content/kurt-messerschmidt-kristallnacht>.

This was a video with Kurt Messerschmidt, a Holocaust survivor, on the events that took place during Kristallnacht. I used this source to learn about Kristallnacht, and to understand what happened, and how the events unfolded on that fateful day.

Nyiszli, Miklós. "VIII." In *I Was Doctor Mengele's Assistant : the Memoirs of an Auschwitz Physician*, 44. Oświęcim: Distribution, Frap-Books, n.d.

<https://archive.org/details/iwasdoctormengel0000mikl/page/44/mode/2up>.

This was a digital copy of the book, *I Was Doctor Mengele's Assistant*. As I read the book, I learnt how Mengele conducted his research, and learnt the motive behind the experimentation.

Pediatric Neurology. Last modified April 15, 1947.

[https://www.pedneur.com/article/S0887-8994\(21\)00242-3/fulltext#fig1](https://www.pedneur.com/article/S0887-8994(21)00242-3/fulltext#fig1).

This source led me to the original 6 points Dr. Leo Alexander wrote to define ethical experimentation, before the 6 points were later revised into the 10 point Nuremberg Code. I used this source to provide evidence for the historical significance part of the paper.

"Personal Statements From Victims of Nazi Medical Experiments." Claims Conference.

Accessed January 7, 2025.

<https://www.claimscon.org/about/history/closed-programs/medical-experiments/personal-statements-from-victims/#:~:text=%E2%80%9CI%20suffered%20immense%20pain%20and,because%20of%20them%20I%20survived.>

This site was a great help to me to obtain quotes to show the brutality of the Holocaust. It helped me to gain useful primary texts from Holocaust survivors themselves, making this a great piece of evidence which I used in my paper.

"Reichsbürgergesetz" [Citizen Law]. National Archives. Last modified September 15, 1935.

[https://catalog.archives.gov/id/128215274.](https://catalog.archives.gov/id/128215274)

This source was very important because the document contained the law which stripped Jewish people from their German citizenship. I used this source as a footnote in my paper.

"Table depicting number of participants in the Tuskegee Syphilis Study showing number of patients with syphilis and number of controlled non-syphilitic patients." National Archives Catalog. Last modified February 4, 1969.

[http://catalog.archives.gov/id/281642?objectPanel=transcription.](http://catalog.archives.gov/id/281642?objectPanel=transcription)

This source showed how many patients contracted syphilis and how many were used as control subjects. I used this source to understand how officials conducting this experiment recorded information regarding human-subjects, and this source helped a lot.

A victim of a Nazi medical experiment. Photograph. Holocaust Encyclopedia.

<https://encyclopedia.ushmm.org/content/en/photo/a-victim-of-a-nazi-medical-experiment>.

This was a picture of a Jewish inmate, upon whom hypothermia experiments were being conducted. I learnt from this image that hypothermia experiments took place in camps.

The Washington Times (Washington D.C.). "Goering Spurs New Fight On Jews." April 28, 1938.

<https://chroniclingamerica.loc.gov/lccn/sn84026749/1938-04-28/ed-1/seq-5/#date1=1756&index=0&rows=20&words=code+Code+Nuremberg&searchType=basic&sequence=0&state=&date2=1963&proxtext=Nuremberg+Code&y=0&x=0&dateFilterType=yearRange&page=1>.

This newspaper strengthened my overall understanding of the Nuremberg Codes. Though not used in paper, it was a part of my numerous sources which helped me understand the basis of Nazi anti-semitism in Germany during the 1930s.

Secondary Sources

"About the USPHS Syphilis Study." Tuskegee University.

<https://www.tuskegee.edu/about-us/centers-of-excellence/bioethics-center/about-the-usphs-syphilis-study>.

This source was crucial for me, since it was from this website that I learnt that Penicillin was withheld from the participants of the Syphilis study, even though it became a standard cure for Syphilis. It also taught me that the men were never informed of their

condition, which was a violation of the international guidelines put forth to prevent such unethical experimentation.

American Urological Association. "Mengele's Medical Experiments." The William P. Didusch Center for Urologic History. Accessed January 7, 2025.

<https://www.urologichistory.museum/the-scope-of-urology-newsletter/issue-1-spring-2020/mengeles-experiments>.

This article taught me a lot about Joseph Mengele. It was from this article that I learned that Mengele not only experimented with Jews, but also with Gypsies and Roma people.

Beato Suwa. "History of Eugenics in Otorhinolaryngology: Ernst Rüdin and the International Eugenics Network." National Library of Medicine.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC11008944/>.

The website helped me greatly in understanding the relation between the accomplished eugenicists of the Nazi Germany. It mainly helped me to understand how Mengele was influenced by Ernst Rudin.

Benno, Müller-Hill. "The Blood from Auschwitz and the Silence of the Scholars**A German

Version of This Article Has Appeared in 'Geschichte Der KWG Im Nationalsozialismus', Ed. by D. Kaufmann, Wallstein Verlag, Göttingen, Vol. 1, 189–227, 2000. Reprinted with Permission from the History and Philosophy of the Life Sciences, Vol. 21.0308-7298/90

\$ 3.00 © 1999 Taylor and Francis Ltd." *Comprehensive Biochemistry*, 2003, 502-47.

Accessed January 19, 2025. [https://doi.org/10.1016/s0069-8032\(03\)42015-9](https://doi.org/10.1016/s0069-8032(03)42015-9).

This article was principal for me, since I wanted to learn the relation between Mengele and the Kaiser Wilhelm Institute of Anthropology (KWI-A). This helped me understand that Mengele used the experiments as an academic way to prove the fanatical ideas of Nazi-Germany, like the degenerative ness of Jews.

Britannica. "Josef Mengele." Britannica. Accessed January 20, 2025.

<https://www.britannica.com/biography/Josef-Mengele>.

This source was crucial for me to learn the background of Joseph Mengele. I needed a source to prove Mengele's job before being the chief doctor at Auschwitz and this was the source to use.

"Dachau: High Altitude Experiments." Jewish Virtual Library. Accessed January 20, 2025.

<https://www.jewishvirtuallibrary.org/high-altitude-experiments>.

This article helped me to gather and understand information about the Dachau concentration camp. It was useful primarily as a footnote.

"The Declaration of Helsinki." National Library of Medicine. Last modified September 29, 2007.

Accessed January 28, 2025. <https://pmc.ncbi.nlm.nih.gov/articles/PMC1995496/>.

This source was very resourceful and provided me with excellent information about the Helsinki Declaration. However, it was mainly useful when explaining why there had to

be another declaration on human-subject research even when the Nuremberg Code existed.

"First, do no harm." *Harvard Health Blog*.

<https://www.health.harvard.edu/blog/first-do-no-harm-201510138421>.

This source was the first source I used to understand what the Hippocratic Oath was. It also diversified my bibliography, making it a great source.

Goldhagen, Daniel Jonah. *Hitler's Willing Executioners : Ordinary Germans and the Holocaust*.

New York: Vintage eBooks, 2010.

This book had great information regarding the experiments conducted in the holocaust, and the events that lead up to it. The part that was most useful to me was the German peoples' sway towards Jewish persecution.

Grodin, Micheal A., Erin L. Miller, and Johnathan I. Kelly. "The Nazi Physicians as Leaders in

Eugenics and 'Euthanasia': Lessons for Today." National Library of Medicine. Last modified January 2018. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5719686/>.

This source gave me key information on euthanasia in Nazi Germany. It set my basic understanding on eugenics, and why it mainly came into attention during the Nazi period.

Halioua, Bruno. *Human Experiments on Hepatitis During the Nuremberg Doctors' Trial*.

<https://jajgastrohepto.org/wp-content/uploads/2021/03/JJGH-v6-1508.pdf>.

This source gives me information on the hepatitis information conducted on Jewish inmates during the Holocaust. It gave me the doctor's name who conducted it, Dr. Arnold Dohmen, which I used as a footnote in my paper.

Halioua, Bruno, and Michael F. Marmor. "The Eyes of the Angel of Death: Ophthalmic Experiments of Josef Mengele." *Survey of Ophthalmology* 65, no. 6 (2020): 744-48. <https://doi.org/10.1016/j.survophthal.2020.04.007>.

This source helped me to understand the methods and way of how Mengele conducted his eye experiments. This source was used as a footnote in my paper.

Harran, Marilyn J., and David Aretha. *The Holocaust Chronicle*. Lincolnwood, Ill.: Legacy Pub. : Division of Publications International, 2009.

This book gave exceptional information about the different time periods in the persecution of Jews. It also gave details about experimentations in different camps.

Jegade, Ayodele S. "Understanding Informed Consent for Participation in International Health Research." *Developing World Bioethics* 9, no. 2 (2009): 81-87. <https://doi.org/10.1111/j.1471-8847.2008.00238.x>.

This journal gave me a complete overview of the Pfizer study, and helped me understand different aspects I had to consider before writing about it. Most importantly, it helped me understand what ethical principles Pfizer violated, especially the informed and voluntary consent, which are cornerstone human rights in my paper.

John Cavanaugh-O'Keefe. "Introduction To Eugenics." Eternal Word Television Network.

Accessed February 12, 2025.

<https://www.ewtn.com/catholicism/library/introduction-to-eugenics-12083>.

When I started my research, I could not understand what Eugenics means, and what connection it had to Ernst Rudin, Mengele's professor, until I found this source. I used this article as evidence for Rudin's beliefs in Eugenics.

Lagnado, Lucette, and Sheila Cohn Dekel. *Children of the Flames : Dr. Josef Mengele and the Untold Story of the Twins of Auschwitz*. New York, N.Y.: Penguin Books, 1992.

This book was a great resource to me because it provided first hand experiences of Mengele's numerous human-subjects. I used it to cite sources as footnotes.

Lederer, Susan. "Experimentation on Human Beings." *Oxford Journals*, 20-22.

This journal was one of the first explanations of unethical human-subject experimentations in the world. It laid the foundations for my research of the Tuskegee Syphilis Study.

Lederer, Susan E. *Subjected to Science : Human Experimentation in America before the Second World War*. Johns Hopkins paperbacks ed ed. Baltimore: Johns Hopkins University Press, 1997.

This book by Susan E. Lederer was something I looked into after my state finals. It was a great source to diversify my research about the Tuskegee Syphilis Study in specific.

Lifton, Robert Jay. *The Nazi Doctors : Medical Killing and the Psychology of Genocide : with a New Preface by the Author*. 4th ed. New York: Basic Books, 2017.

This book was very influential to me while writing this paper. It provided me with useful quotes, further strengthening my paper's argument.

Linder, Douglas O. "The Nuremberg Trials: The Doctors Trial." Famous Trials. University of Missouri-Kansas City School of Law.

<https://famous-trials.com/nuremberg/1903-doctortrial>.

This article was very useful to me due to its information on the Doctor's Trials. This document explained how throughout the Doctor's Trials, Dr. Leo Alexander proved that the Nazis were guilty of crimes due to experiments on human-subjects.

Loewenberg, Samuel. "Drug company trials come under increasing scrutiny." *The Lancet*, Volume 371, Issue 9608 (January 19, 2008): 191-92.

This source helped me to understand what the Pfizer study was in detail. Its explanation was easy to understand, as compared to other sources.

Marwell, David G. *Mengele : Unmasking the 'Angel of Death'*. New York, NY: W. W. Norton & Company, 2020.

This part of the book was incredibly useful to me because I found evidence of Mengele giving a chloroform injection to kill his test subjects for their bodies to be further studied.

Memorial and Museum Auschwitz-Birkenau. Accessed January 24, 2025.

<https://www.auschwitz.org/en/history/liberation/day-of-liberation/#:~:text=Before%20and%20soon%20after%20January,of%20the%20472nd%20regiment%2C%20Col.>

This source taught me what happened on the liberation day of Auschwitz. I used this source as evidence while writing the Soviet discovery of Auschwitz.

In Mother Tells of Killing Her Newborn Baby at Auschwitz : Mock Trial of 'Angel of Death' Ends in Israel. Previously published in *Los Angeles Times* (Los Angeles, CA), February 7, 1985. <https://www.latimes.com/archives/la-xpm-1985-02-07-mn-5158-story.html>.

This source helped me to learn Mengele's other experiments other than experiments on twins and eyes. It explained the harsh reality of events which happened in Auschwitz solely for the purpose of pseudo-scientific advancement.

National Library of Medicine. Accessed January 28, 2025.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC3121268/>.

This source was key in understanding the flaws of the Nuremberg Code. I used this source to cite evidence for pointing out the flaws of the Nuremberg Code.

Nix, Elizabeth. "Tuskegee Experiment: The Infamous Syphilis Study." History. A&E Television Networks. Last modified June 13, 2023.

<https://www.history.com/news/the-infamous-40-year-tuskegee-study>.

This source aided me with information about the number of deaths due to the study. I used that statistic in my paper, to show the barbarism of the study.

"The Nuremberg Code." United States Holocaust Memorial Museum. Accessed January 24, 2025. <https://encyclopedia.ushmm.org/content/en/article/the-nuremberg-code>.

This was perhaps the most important article I read on the Nuremberg Code, which made a significant contribution to my paper. It was important since I finally found out why the Nuremberg Code was made and how it was made, and this was the only website which provided me with that information.

Palmer, Louise. E-mail interview by the author. Fairfield, CT.

I conducted this interview to get an input from someone already experienced in the field of medical history, hence I chose Dr. Palmer, a professor of medical history at Fairfield University, who got her PhD. from Yale. This interview outlined my principle concepts in my paper which helped me understand my topic deeper.

"Pfizer accused of testing a new drug without ethical approval." National Institute of Health.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC1119465/#:~:text=To%20test%20the%20efficacy%20of,six%20who%20were%20given%20ceftriaxone>.

This source gave me the ethical aspect of the 1996 Nigerian Pfizer Study. This source was extremely useful because of its facts on the animal studies, and the U.S. patient trials by Pfizer, and its strong contrast with its studies in Nigeria.

Posner, Gerald L., and John Ware. *Mengele : the Complete Story*. New York: Cooper Square Press, 2000.

The book was incredibly useful to me in numerous different ways. It helped me set up my historical background for Josef Mengele, and also helped me in finding out the key details of Mengele's life which are important to my paper.

Ready, Tinker. "Pfizer in 'unethical' trial suit." *Nature Medicine* 7 (October 1, 2001): 1077.

<https://www.nature.com/articles/nm1001-1077c>.

This source was very useful to me in terms of understanding why the Pfizer study was conducted. I used this as a basis to understand the whole of the Pfizer study.

"Secret report surfaces showing that Pfizer was at fault in Nigerian drug tests." National Institute of Health. <https://pmc.ncbi.nlm.nih.gov/articles/PMC1471980/>.

This was another source I accessed which provided me with a lot of information regarding the Pfizer drug trials.

"The Story." Voices For Our Fathers. <https://www.voicesforfathers.org/the-story>.

This source was the first source I used to learn about the Tuskegee Syphilis Study. This source guided me in terms of understanding how the 600 men were misinformed about their condition, and were used as pawns to advance scientific goals.

United States Holocaust Memorial Museum. "Antisemitism in History: World War I." Holocaust Encyclopedia.

<https://encyclopedia.ushmm.org/content/en/article/antisemitism-in-history-world-war-i>.

This article had a profound impact on my paper. Due to this article, I learnt exactly why Jewish people were dehumanized.

———. "Hitler Comes to Power." Holocaust Encyclopedia. Accessed February 12, 2025.

<https://encyclopedia.ushmm.org/content/en/article/hitler-comes-to-power>.

This website was important to me because of its information about the rise of Adolf Hitler. This website was crucial for me to get information on how progressively Hitler gained power, starting from Munich.

———. "Josef Mengele." Holocaust Encyclopedia. Last modified November 15, 2024. Accessed January 7, 2025. <https://encyclopedia.ushmm.org/content/en/article/josef-mengele>.

This source was crucial for understanding the context of what I was going to write. This source also provided excellent quotes to use in the paper.

United States Holocaust Museum. Nazi Medical Experiments. Last modified August 30, 2006.

Accessed January 20, 2025.

<https://encyclopedia.ushmm.org/content/en/article/nazi-medical-experiments>.

This source was principal for me in order to understand the reasons behind the unethical experimentation of "undesirable" races and why they happened.

I understood and answered essential questions that later guided me to build through my paper, thanks to this article.

The University of North Carolina at Chapel Hill. "Nuremberg Code." UNC Research. Accessed

January 24, 2025.

https://research.unc.edu/human-research-ethics/resources/ccm3_019064/.

This source provided me with the fundamentals of the Nuremberg Codes. It was from this source that I could briefly understand how the Nuremberg Codes came into being, from which I started learning about the Nuremberg Trials.

University of Northern Iowa. Accessed January 28, 2025.

<https://rsp.uni.edu/irb-manual-ethical-principles#:~:text=The%20Nuremberg%20Code%20of%201947,,the%20person%20involved%20...>

This source gave me tremendous amounts of information on the 3 main codes which helped set the rights and responsibilities of human subject research. The source is from a credible website too, making it a great candidate for research purposes.

u.s. Department of Justice (Criminal Division), In the Matter of Josef Mengele: A Report to the Attorney General of the United States, Doc. (Oct. 1992).

<https://www.justice.gov/sites/default/files/criminal-hrsp/legacy/2011/06/06/10-30-92mengele-exhibits.pdf>.

This was a detailed report by the U.S. Department of Justice on Josef Mengele. The part which was most useful to me was where Mengele's experiments were numbered down, and a detailed description of each experiment was provided, which helped me to write the first few pages of my paper.

Weindling, Paul, Anna von Villiez, Aleksandra Loewenau, and Nichola Farron. "The Victims of Unethical Human Experiments and Coerced Research under National Socialism."

Endeavour 40, no. 1 (2016): 1-6. <https://doi.org/10.1016/j.endeavour.2015.10.005>.

This journal helped me to understand the broad context of unethical human-subject experiments in Nazi Germany. What was the most beautiful thing about this journal was that it did not focus only on Mengele, but focused on many aspects of unethical human-subject research, something rare to find without Mengele tainted in it.

"What do Pfizer's 1996 drug trials in Nigeria teach us about vaccine hesitancy?" Brookings. Last modified December 3, 2021.

<https://www.brookings.edu/articles/what-do-pfizers-1996-drug-trials-in-nigeria-teach-us-about-vaccine-hesitancy/>.

This was the first source which helped me to understand what the 1996 Pfizer study was.

This was the first website which provided me with great information about Pfizer's studies.

The Wiener Holocaust Library. "How did the Holocaust happen?" The Holocaust Explained.

<https://www.theholocaustexplained.org/how-and-why/how/the-wannsee-conference/>.

This source was one of the first sources I stumbled upon while trying to find out what the Wannsee Conference was. This helped me to learn about how the 6 extermination camps came under operation.

