



Jacob Heiss and the Gay Nobel Laureate: Homosexuality in Nazi Germany

Leonard F. Vernon¹, MA Sherman²

^{1,2} *College of Chiropractic Spartanburg*

Abstract

The historical and scientific literature is replete with the extraordinary story of the 1931 winner of the Nobel Prize in Medicine or Physiology, Otto Heinrich Warburg. What all publications have in common when telling the Warburg story are two main themes, his religion, and his theory as to the cause of cancer. A recent biography of Warburg that has garnered a great deal of attention in the media has again targeted his theory on cancer and the role glucose plays in tumor survival. Earlier biographers while addressing his personal life to some degree, have shied away from, or have only tangentially addressed the issue that Warburg was gay or in the vernacular of the era a homosexual.

In what has been called by some historians as the great intellectual migration 1500 Jewish scientists trained at some of the best institutions in the world fled for the United States or other safe havens following the ascension of Adolf Hitler. Among those who fled were physicists such as Albert Einstein, as well as numerous biologists, most of whom would go on to become Nobel laureates. While his Jewish colleagues fled Germany, Warburg opted to stay, where he not only survived the war, but thrived. While the story of the Jewish scientist who survived Nazi Germany is extraordinary and to this day leaves many unanswered questions, it is but half the story, it is the other half of the Warburg story that has all but been erased. While in no way an attempt to minimize what we now know about the ultimate plight of millions of Jews; I however, have chosen to focus the plight of gay men under Nazi rule and to point out that the 1931 winner of a Nobel Prize Otto Warburg was gay and the often-neglected fact that he was in a loving relationship with his partner, right-hand and on occasion his protector for over 50 years, Jacob Heiss.

Keywords: Oncometabolism, Cancer, Holocaust, Homosexuals, Jacob Heiss, Otto Warburg, Nazis

Otto Heinrich Warburg

The story of the Jewish scientist who not only survived Hitler's Germany but thrived scientifically and personally is without question an extraordinary one, and while his Jewishness is an important part of the story the often overlooked or marginalised part of the story is that this 1931 Nobel Prize winner was also gay. Based on Nazi racial laws of the time Otto Heinrich Warburg was without question a Jew. While his mother was a Protestant his father was a Jew and his father's parents were both Orthodox Jews.ⁱ Based on all available information it is clear, that while from a rabbinical standpoint Warburg was not Jewish there is no doubt under Nazi law he was. In addition to being Jewish Warburg was also gay and resided with Jacob Heiss who served as his personal aid, secretary, and administrative assistant.ⁱⁱ Warburg biographer Sam Appel described their relationship as a 'loving homosexual relationship'.ⁱⁱⁱ Heiss was not only an assistant and lover, but on numerous occasions Warburg's protector. Little if any of the life of Jacob Heiss is presented anywhere in the literature and when it is the significance of his role in the life of Otto Warburg is marginalised.

While never denying his Jewishness Otto Heinrich Warburg first and foremost considered himself a German, and with good reason. Born in 1883 in Freiburg Germany his DNA was flush with members of science and privilege, with family members that included scientists, philosophers, artists, financiers, and philanthropists. His father Emil Gabriel Warburg was a well-respected, well-known physicist and close friend of Albert Einstein, (who would later steer Otto's career choices). No doubt Otto's scientific genealogy aided in the development of what was described as a narcissistic personality, but his exposure to world class science and scientists in what was the epicentre of natural science made him much aware of his personal value as a scientist and no doubt contributed to this personality. It no doubt played a role in his decision, who unlike many of his Jewish colleagues in the scientific community such as Einstein who fled Germany, to instead remain, having reportedly said, 'I was here before Hitler'.^{iv}

Warburg received his doctorate in chemistry from the University of Berlin. Following his graduation from Berlin, Warburg went on to study at the University Heidelberg where in 1911 he obtained a medical degree (MD). He would then go on to study and do research at Stazione Zoologica in Naples (Naples Marine Biological Station, 1908-1914).^v Historians who have examined Warburg's time at the Institute have said that with the exception of Emil Fisher; 'Warburg is the best possible example of a German-trained chemist in the first decades of the past century'.^{vi} It is while at the institute that he developed his basis for his theory of how tumours grow and survive, and how they might ultimately be eliminated.

Warburg's research would take a four-year hiatus, from 1914-1918 with the outbreak of WW I. A lifelong equestrian Warburg capitalised on his love and knowledge of horses when he applied for and was accepted into what has been described 'as a crack cavalry regiment' known as The Horse Guards at Potsdam.^{vii} While it has been reported that he saw combat service with this group other authors indicate was installed as a physician with this group.^{viii} What does not appear to be in dispute is that he served honourably and was wounded at some point during the war. Also, without contradiction is that he rose to the rank of lieutenant and received the Iron Cross, First Class.^{ix}

Following the war with the prodding from his fathers' close friend, Albert Einstein he returned to the Kaiser Wilhelm Institute for Biology in Berlin in 1918 where he would his stated research goal was to find a cure for cancer.^x Thirteen years later in 1931, Warburg would be awarded the Nobel Prize for Physiology or Medicine for the discovery of the Atmungsferment (iron oxygenase), the enzyme responsible the oxidative processes, a discovery that would eventually lead to his theory on how tumour metabolise glucose and the role this could play in eliminating cancer.^{xi}

Hitler takes power

To better understand how exceptional, the Otto Warburg, Jacob Heiss story is one must first understand what it was to live as a Jew and as a homosexual in Germany after the ascension of Adolf Hitler. In early 1933 the new Nazi regime was still on shaky ground and in relative terms remained somewhat mild in the actions it imposed. Among these were denying Jews the right to hold public office and the denaturalisation of Jewish immigrants as well as numerous employment restrictions. Within two years, the Nazi Party succeeded in creating a government completely subordinate to Hitler's personal will and the lives of Jews, homosexuals and others would forever change.^{xii}

On September 15, 1935, at a Nazi Party rally held in the German city of Nuremberg, the Reich Citizenship Law and the Law for the Protection of German Blood and German Honor were first announced, and commonly known as the Nuremberg Laws. While persecution of Jews was underway prior to this event the new laws would put in place a legal structure for the persecution Jews.^{xiii} German bureaucrats using the pretence of jurisprudence wasted no time in addressing the new laws which, because they contained criminal provisions, had the potential, without legal interpretation of causing a quagmire in the court system. What emerged was a legal definition of who was a Jew, a definition that contained unclear boundaries and contradictory definitions to describe non-Aryans.^{xiv}

Defining whether an individual was a half Jew or one quarter Jew or 100 per cent Jewish proved a bit of a challenge to law makers. For Hitler and the Nazis even conversion Christianity could not save you, all were considered Jews, however in the ever-changing world of the Nazi definition of a Jew, Christians who converted to Judaism were considered 100 per cent Jewish. Almost immediately there was confusion among government security police as to how to interpret the laws, this ambiguity at least for a short time worked to the advantage of those not considered 100 per cent Jewish.

Among those in the Reich who were frustrated with the law of defining a Jew was Hermann Goring, head of the Luftwaffe who in his frustration has been rumoured to have said, 'I'll decide who is a Jew!'.^{xv} Goring would go on to let several Mischlings, mostly people he knew firsthand to fly combat missions, three of whom would eventually become generals, including Luftwaffe strategist Lt. Gen. Helmut Wilberg. Goring so respected Wilberg's military knowledge and realising he was too valuable to lose obtained a certificate personally signed by Hitler 'Aryanizing' Wilberg.^{xvi}

While codifying the legal definition of who was a Jew the Nuremberg Laws also criminalised certain sexual acts such as the prohibition of sex between Jew and a Gentile, also included was the prohibition of sex between men (be they Jewish or gentile), thus meshing the Reich's rabid antisemitism with Germany's lengthy history of homophobia that began centuries earlier. To understand the genesis of Adolf Hitler's modern-day legal attacks on homosexuality a brief review of its historical roots is necessary.

The German history of homophobia

Most historians agree that the roots of sodomy-related laws in Western Civilization can be tied to the growth of Christianity during Late Antiquity (284 BCE–700 CE).^{xvii} However, Germany is unique in that it had established anti-sodomy laws before Christianity. In his book ‘Germania’ (originally titled: *On the Origin and Situation of the Germans*) Roman historian Publius Cornelius Tacitus records the execution of homosexuals.^{xviii} As Germany became increasingly Christianised the condemnation of homosexuality became more widely accepted. By 1532 the first body of German criminal law, ‘Constitutio Criminalis Carolina’ was accepted laying the foundation of how homosexuality was viewed throughout the Holy Roman Empire.^{xix}

It wouldn’t be until 1786 when changes to the law downgraded the penalty from death replacing it with prison and hard labour.^{xx} It is here that the law would stay relatively unchanged until 1869 when concerned political leaders and church officials feared that since the act of homosexuality did not endanger any legal interests it would eventually be dissolved.^{xxi} In an effort to prevent this, the German Empire would seek a scientific basis for justification of the law.^{xxii} A similar technique would later be used by the Nazis in an attempt to justify their categorisation of Jews and gays as subhuman, to be ‘weeded out, root and branch’.^{xxiii}

To accomplish this a Deputation für das Medizinalwesen (‘Deputation for medical knowledge’) would be assembled. After concluding no scientific grounding for the law, the government nonetheless on January 1, 1872, having failed in their charade, made any form of sexual intercourse between men a punishable offense. It would become part of the permanent penal code of the entire German Empire known as paragraph 175 of the penal code and would, in later years become the foundation from which all Reich anti-homosexual activity would arise.

The code it specified:

Unnatural fornication, whether between persons of the male sex or of humans with beasts, is punished with imprisonment, with the further punishment of a prompt loss of civil rights.^{xxiv}

Between 1919 and 1929 serious efforts were made to repeal paragraph 175, however lacking a majority in the Reichstag the attempts failed. In 1925 the centre-right party attempted to increase the penalties, although they came closer, they failed. In 1929 with multiple attempts by both sides, one attempting to broaden the definition of homosexual acts and criminalise such acts a mutual masturbation and the other side wanting a complete rescinding of the law the year would end without any changes.

When in 1933 Hitler officially became the Chancellor of Germany laws formulated by the new government, the so-called Aryan Paragraph, designed to exclude Jews from professions and other aspects of public life, would also be used for repression of gay men and lesbians.^{xxv} It wouldn’t be long before the once thriving gay culture in Berlin was gone.

The Nazi’s first show of force against Germany’s LGBTQ community occurred on May 6th, 1933, when Nazis looted and plundered The Institute for Sexual Science and setting ablaze its extensive library on Berlin’s Opera Square. An institution founded to provide counselling and treatment for ‘physical and psychological sexual disorders’ as well as, in particular, for ‘sexual transitions’, a term Institutes founder Magnus Hirschfeld used for homosexuals, transvestites and hermaphrodites. Widely known in Berlin, the institute housed the main offices of both the Scientific Humanitarian Committee – the first homosexual organisation – and the World League for Sexual Reform.^{xxvi}

Hirschfeld, both Jewish and gay is widely accepted as the first legitimate scientist to attempt to normalise homosexuality. The new government found the institute ‘offensive for public morals’, a rather ironic statement based on the fact that this group would be responsible for the murder of millions of German citizens. Seeing the handwriting on the wall and with rising fears unknown numbers of German gay men and lesbians fled abroad, and others entered into marriages in order to appear to conform to Nazi ideological norms, experiencing severe psychological trauma.^{xxvii}

In 1934 a power struggle within the Nazi party began as well as within the military who feared that the Nazi para-military forces known as the Brownshirts, headed Ernst Röhm would take control of the army. Additionally, Röhm was among those who Hitler perceived as a rival to his position. In a plot organised by Himmler and Hitler Röhm was killed. It was a well-known ‘secret’ that Röhm was gay, and Nazi propaganda wasted no time publicising the murders as a preventive measure against an alleged imminent coup by the Brownshirts under Röhm. This execution and that of others has been dubbed the ‘Night of the Long Knives’. Hitler was able to escape public criticism by utilising his well-oiled propaganda machine and playing on much of the German population’s prejudice against same-sex sexuality saying that Rohm’s homosexuality did not conform to the Nazi way of life.^{xxviii}

While paragraph 175 was strengthened in 1935 naming specific sexual acts between men as criminal and with it more severe penalties, formal enforcement would begin in earnest in 1936 when Heinrich Himmler who has been called one of Nazi Germany’s most rabid advocates of ‘the complete extermination of homosexuals’

established the Reich Central Office for the Combating of Homosexuality and Abortion. Himmler saw both homosexuality and abortion as threats to the German birth rate and thus to the fate of the German people.^{xxxix} It was Himmler whom Hitler entrusted with the planning and implementation of the 'Final Solution'.^{xxx} By the end of 1936, conditions were in place for the Nazi regime to intensify its campaign against homosexuality.^{xxxi} The Nazi dictatorship policed, prosecuted, and ultimately murdered thousands of gay men during its 12 years of rule over 100,000 gay men would be arrested under the guise of violating paragraph 175 of the German criminal code. Eventually upward of 15,000 gay men would be sent to concentration camps, which amounted to a death sentence.^{xxxii}

Catholic journalist Eugen Kogon, a survivor of Buchenwald in 1946 penned a description of what it was like to be a gay man in a Nazi concentration Camp. 'The fate of homosexuals in the concentration camps', wrote Kogon, 'can only be described as ghastly. They were often segregated in special barracks and work details. Such segregation offered ample opportunities for unscrupulous elements in positions of power to engage in extortion and maltreatment'.^{xxxiii} Sterilisation, castration, imprisonment, were among the other methods utilised on gay men.

Within concentration camps the categories of prisoners were easily identified by a marking system combining a coloured inverted triangle with lettering. The badges sewn onto prisoner uniforms enabled SS guards to identify the grounds for incarceration. Homosexuals were identified with pink triangles

Who was Jacob Heiss?

As one can see living as a gay man in Nazi Germany was a perilous position to be in, so much so one would assume that secrecy and discretion would be paramount. This was not case with Otto Warburg and Jacob Heiss whose behaviour at times bordered on recklessness.

While much has been written about his famous partner little is known about Jacob Heiss. While this is not unusual among gay relationships involving a celebrity and their significant other, caution during the reign of the Third Reich would make secretive nature of such a relationship all the more important. Shortly following the end of WW, I, Warburg who was residing in the affluent German town Lichterfelde was in need of a live-in assistant, upon the recommendation from friends with whom he served in the military he interviewed a young man by the name of Jacob Heiss. What is not known is whether this recommendation was made because they knew of Warburg's homosexuality or because they believed that Heiss would be a good fit for the position. While we will never know why Heiss was steered to Warburg he was nonetheless hired and for the next fifty years the two would rarely be apart.

Born in the German town of Kirn, Heiss was 15 years Warburg's junior. Heiss shared Warburg's appreciation for finer things and like Walburg who wore a cardigan or tailored sport coat under his lab coat, Heiss to, was meticulous about his dress favouring fedoras and checkered sports coats.^{xxxiv}

While the Nazis had not yet taken power the arrangement of a single male with a live in male companion was uncommon and homosexuality was a punishable crime. Despite the potential dangers Warburg and Heiss while not flaunting their relationship didn't go to extreme lengths to hide it. In another example of the relationship between Warburg and Heiss when in the 1930's Otto's invited his cousin, banker and financier Eric Warburg to lunch. The lunch was served by Heiss, whom Eric would describe as Otto's 'man-servant'. During the course of the lunch Ottos asked his cousin if he would advise selling his shares in Deutsch Bank, Eric responded since the dividend had been paid, he should in fact sell, Otto remained sceptical and following lunch the conversation would continue with Heiss seated in a chair against a wall giving the impression he was not allowed at the table. To his cousin's surprise Otto then asked Heiss the same question, his response was so detailed that Eric left lunch later commenting that Heiss 'was as well informed in financial matters as our whole investment department'.^{xxxv}

Not all of Warburg's family were so welcoming of their relationship. Warburg's sister Lotte noted that many were saying that Warburg was 'a homo and in the hands of Jacob'. 'Sometimes I almost believe it', Lotte continued, 'because his nature has changed too much. He is spiteful against all, vicious and unreliable'.^{xxxvi} Additional evidence that Warburg did not attempt to hide his homosexuality can be gleaned from a 1931 letter his mother Elisabeth Warburg wrote to his sister Lotte. In it she said she was aware of his sexuality and that it bothered her very much, she expressed her concern that Warburg wasn't living according to 'regular family relations' and would never pass on his genius to any offspring. When on one occasion his mother pressured him to find a wife, Otto said that he did not want to end up with a wealthy woman in a marriage motivated by reason rather than love.^{xxxvii}

What is abundantly clear from the documents available is that Jacob Heiss loved Otto Warburg. One example of Heiss's loyalty occurred After Warburg fell off his horse in 1924 and fractured his pelvis, Heiss would not allow Warburg to ride again unless he rode with him.^{xxxviii} It would be during the Hitler years, just when you would think that a pair with the backgrounds, they had would lay low that Heiss's dedication and love for Otto would teeter on what could only be described as reckless. On one such occasion when Warburg attempted to purchase alcohol for his laboratory, he was hampered by one of the ever-increasing laws against

Jews. Starting in 1934, a new and specific license was required to purchase alcohol of all kinds within the German Reich; and Warburg's laboratory had applied for this license on January 10th, 1934. Among the requirements of the new law was the completion of a number of forms one of which included a declaration of Aryan descent of the plenipotentiary in charge. It was, one more form of harassment that prevented 'non-Aryans' from purchasing alcohol in any form. In an effort to secure the signed documents the customs office sent an officer to the Kaiser Wilhelm Institute (KWI) for Cell Physiology where Warburg was conducting his research. When the individual who greeted the officer indicated that Warburg was not around to complete or sign them, they were left with instructions to have them returned to customs office within a day or two, when this did not occur after three days a call was placed to Warburg, it was reported that Warburg responded, '...I will rather source my alcohol from abroad'.^{xxxix}

Following the incident which had been reported to the KWI additional pressure was brought on Warburg from officials of the KWI and Warburg called the customs office Berlin-Kurfürst, where the new regulations were reiterated to him. Two days later, the customs office received a call from an individual whom by most reports indicates was Jacob Heiss, who finished the conversation saying that; '... Professor Warburg did not wish to see again the custom official, who had delivered the forms, and, if necessary, would have him removed from the building'. The customs office was told the reason was that the employee claimed that the official had been unshaven when he had visited the institute and had spread unpleasant odours around him, that presumably originated from an unclean body. Heiss went on to explain that the institute, 'had to ensure a meticulous level of cleanliness' This was but one occasion where under normal circumstances any other individual, yet alone a gay Jewish scientist and his gay partner would have been incarcerated or worse. There is much speculation as to what transpired behind the scenes to spare both Warburg and Heiss any punishment, in all likelihood, Warburg reached out to one of the many friends he continued to have in Germany including Walter J. V. Schoeller, head of the main research laboratory of Schering, the German pharmaceutical company. Warburg and Schoeller never broke ties, and, prompted by this friendship, Warburg even started a long-term collaboration with Schering in search of a cancer remedy, some have speculated Schoeller and biochemist Adolf Butenandt reached out to Goering who arranged for 'a re-calculation' of Warburg's ancestry' and thus 'aryanised', by means of a complicated and largely arbitrary and unpredictable bureaucratic process.^{xl} Others have speculated that this occurrence was still early in the rise of the Third Reich when the Nazi threat was still underestimated by many, however as pointed out by German historian Kärin Nickelsen this behaviour was not an isolated incident.^{xli}

Heiss's protection of Warburg was no doubt reciprocated on many occasions however the most significant pay back to his partner occurred when Warburg reached out to his contacts in the upper echelon of the Reich. Theodore Bucher a biochemist who worked for Warburg during the war and conscripted into the military while serving Warburg is reported to have continued to correspond with his former employer who would provide him with coffee and cigarettes, which otherwise were unavailable. Theodore's father was councillor Hermann Bucher, then chairman of AEG, one of the largest companies in Germany, and member of the Board of Directors of many others, such as the highly influential Krupp AG. In 1942, Bucher also became a member of the newly founded German Reich *Rüstungsrat* ('Military Armament Council'), headed by Reich Minister of Armaments and War Production, Albert Speer.

During the last months of the war boys as young as 16 were being conscripted into either the regular army or the *Volkssturm*; a national militia established by Nazi Germany it is believed that Warburg reached out to Hermann Bucher through his son for help, he would ask for and was granted an exemption for Jacob Heiss. Whether or not it was Bucher, the fact is that Warburg had enough connections and more than likely saved his partner's life.^{xlii}

Erased from history

While Holocaust study and remembrance has become an integral part of most education systems in the United States and many other countries its focus is as it should be has been on the wholesale extermination of Jews. In discussing the Holocaust other ethnic groups are often mentioned however, extraordinarily little attention has been paid to members of the LGBTQ community and its persecution under the Nazis. Sadly, even with a robust educational program aimed at the non-LGBTQ community there remain many within the LGBTQ community who are totally unaware of the historical significance of the pink triangle and the plight of gay men during the reign of the Third Reich.^{xliii} But why this lack of attention to this group? As Time magazine reporter Andrea Carlo has stated; 'This, however, isn't the consequence of an accidental historical oversight. The truth is that for the queer survivors of Nazi oppression, 1945 did not bring about any kind of liberation; rather, it marked the beginning of a systematic process of persecution and wilful suppression—one that would result in their erasure from the pages of popular history'.^{xliii}

Not only was the Third Reich the most brutal regime in modern history it was also the most homophobic regime, yet there are few first-hand accounts of Nazi violence against gay men in either West or East Germany before the early 1970s. The earliest known report is from the Catholic journalist Eugen Kogon, whose detailed description of what it was like to be a homosexual prisoner in a Nazi concentration camp is detailed earlier in this

paper. In 1980 Josef Kohout, who used the pen name Heinz Heger, authored *The Men with the Pink Triangle*, the first published account of a gay survivor of the Nazi camps.^{xiv} In 1994, the United States Holocaust Museum acquired the complete collection of Josef Kohout concentration camp documents that included a letter from his mother and father to the camp commandant of Flossenbürg to ask to visit their son, Josef, who was imprisoned as a homosexual. The Flossenbürg concentration camp was a forced labour camp of prisoners used in the production of granite for Nazi architecture. By 1943, the bulk of prisoners switched to producing Messerschmitt Bf 109 fighter planes and other armaments for Germany's war effort.^{xlv}

Other attempts at obtaining public recognition of the persecution of gay men by the Nazi's fell on deaf ears as did attempts to secure compensation from the German government (both East and West). In 1950 German Democratic Republic (East Germany) in a small mainly symbolic consolation to those persecuted repealed the changes to paragraph 175 that were added by the Nazis.

The issue of recognising gay men as victims of the Third Reich is not without controversy. In May 1993, Washington D.C. Holocaust Museum historian Klaus Muller chastised 'some gay groups and researchers' for 'inventing' massive numbers of homosexual 'victims' and 'misusing the Holocaust as merely a "dramatic metaphor" thereby hurting the efforts of legitimate researchers to have the history of the persecution of gay men included in museum exhibitions.^{xlvii} What Muller was saying is the truth speaks for itself and the story is a sad one, there is no need to embellish. The other side of that argument is, if no one is listening something needs to be done to make them listen.

In 1987 gay activist Marshal Kirk partnered with Hunter Madsen (writing under the penname 'Erastes Pill') to write an essay, 'The Overhauling of Straight America', which was published in *Guide* magazine.^{xlviii} They argued that gays must portray themselves in a positive way to straight America, and that the main aim of making homosexuality acceptable could be achieved by getting Americans 'to think that it is just another thing, with a shrug of their shoulders'. Then 'your battle for legal and social rights is virtually won'. The pair developed their argument in the 1989 book *After the Ball: How America Will Conquer Its Fear and Hatred of Gays in the '90s*. The book outlined a public relations strategy for the LGBT movement; 'In any campaign to win over the public, gays must be cast as victims in need of protection so that straights will be inclined by reflex to assume the role of protector. If gays are presented, instead, as a strong and prideful tribe promoting a rigidly nonconformist and deviant lifestyle, they are more likely to be seen as a public menace that justifies resistance and oppression. For that reason, we must forego the temptation to strut our gay pride publicly when it conflicts with the "Gay Victim" image'.

Dr Judith Reisman, co-author of *Kinsey, Sex and Fraud*, who is not well known outside the LGBT community and who has been labelled as an 'LGBTQ conspiracy theorist' by LGBTQ organisations has endorsed the book 'The Pink Swastika', which challenges the 'myths' that gays were victimised in Nazi Germany. The Nazi Party and the Holocaust itself, she writes, were the creation of 'the German homosexual movement'. She has also stated 'the data does not sustain claims of homosexual martyrdom'.^{xlix}

Today, thanks to efforts of people like Klaus Muller United States Holocaust Memorial Museum in Washington, DC has established a permanent exhibit entitled, The Nazi Persecution of Homosexuals: 1933-1945 and with it perhaps the world can now know the story of the men forced to wear the pink triangle.¹

ⁱ George M. Weisz, 'Dr. Otto Heinrich Warburg-Survivor of Ethical Storms', *Rambam Maimonides Medical Journal* 6 (2015), p. e0008. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4327324/>

ⁱⁱ Angela M. Otto, 'Warburg Effect(s)-a Biographical Sketch of Otto Warburg and His Impacts on Tumor Metabolism', *Cancer & Metabolism* 4 (2016), p. 5. Doi: 10.1186/s40170-016-0145-9 <https://cancerandmetabolism.biomedcentral.com/articles/10.1186/s40170-016-0145-9>

ⁱⁱⁱ Sam Apple, *Ravenous: Otto Warburg, the Nazis, and the Search for the Cancer-Diet Connection* (New York, NY: Liveright, 2021).

^{iv} Richard A. Brand, 'Biographical Sketch: Otto Heinrich Warburg, PhD, MD', *Clinical Orthopaedics and Related Research* 468 (2010), pp. 2831–2. doi: 10.1007/s11999-010-1533-z

^v Christiane Groeben and Fabio de Sio, 'Nobel Laureates at the *Stazione Zoologica Anton Dohrn*: Phenomenology and Paths to Discovery in Neuroscience', *Journal of the History of the Neurosciences* 15 (2006), pp. 376–95. doi: 10.1080/09647040600811455

^{vi} 'Otto Heinrich Warburg', The Royal Society, London (2022), <https://royalsocietypublishing.org/doi/pdf/10.1098/rsbm.1972.0023>.

^{vii} Brand, 'Biographical Sketch'.

^{viii} Otto, 'Warburg Effect(s)', p. 5.

^{ix} Hans Adolf Krebs, 'Otto Heinrich Warburg, 1883-1970', *Biographical Memoirs of Fellows of the Royal Society* 18 (1972), pp. 628–99. <http://chrome-extension://efaidnbmnnnibpcajpegblefindmkaj/https://royalsocietypublishing.org/doi/pdf/10.1098/rsbm.1972.0023>

^x Otto Warburg, 'Prefatory Chapter', *Annual Review of Biochemistry* 33 (1964), pp. 1–13. doi: 10.1080/09647040600811455

- ^{xi} Groeben and de Sio, 'Nobel Laureates'; 'Otto Heinrich Warburg', The Royal Society.
- ^{xii} Greg Bradsher, 'The Nuremberg Laws, Archives Receives Original Nazi Documents That Legalized Persecution of Jews', *Prologue Magazine* 42 (2010).
- ^{xiii} Jennifer Hight, 'The Nuremberg Laws: Creating the Road to the T-4 Program' (unpublished doctoral thesis, Western Oregon University, 2016). https://digitalcommons.wou.edu/honors_theses/99
- ^{xiv} Thomas Pegelow Kaplan, 'Toward the Eradication of the "Impossible, Untenable Category of 'German Jews'": Enforcing and Contesting Racial Difference, 1935–1938', in Thomas Pegelow Kaplan (ed), *The Language of Nazi Genocide: Linguistic Violence and the Struggle of Germans of Jewish Ancestry* (Cambridge: Cambridge University Press, 2009), pp. 102–59. <https://repository.library.georgetown.edu/handle/10822/952476>
- ^{xv} A. Abrams, *Special Treatment. The Untold Story of the Survival of Thousands of Jews in Hitler's Third Reich* (Secaucus: Lyle Stuart, 1987).
- ^{xvi} Stephen Budiansky, 'The Jewish General Behind the Luftwaffe', HistoryNet (2018), <https://www.historynet.com/jewish-general-behind-luftwaffe/>.
- ^{xvii} William N. Eskridge, *Gaylaw: Challenging the Apartheid of the Closet* (Harvard University Press, 2009).
- ^{xviii} Kari Ellen Gade, 'Homosexuality and Rape of Males in Old Norse Law and Literature', *Scandinavian Studies* 58 (1986), pp. 124–41; 'Tacitus Germania', University of Richmond (), <https://facultystaff.richmond.edu/~wstevens/history331texts/barbarians.html>
- ^{xix} 'A Legal History of Queer Sexualities in the Holy Roman Empire: The Constitutio Criminalis Carolina Spectrum South', *The Voice of the Queer South* (2019), <https://www.spectrumsouth.com/constitutio-criminalis-carolina/>.
- ^{xx} Hans Görän Franck and Klas Nyman, *The Barbaric Punishment: Abolishing the Death Penalty* (The Hague: Kluwer Law International, 2003), vol. 12, .
- ^{xxi} Michael Schwartz, 'Homosexuelle im Modernen Deutschland: Eine Langzeitperspektive auf Historische Transformationen', *Vierteljahrshefte für Zeitgeschichte* 69 (2021), pp. 402–03. <http://www.hsozkult.de/journal/id/z6ann-112030>
- ^{xxii} Katrin Weigmann, 'In the Name of Science. The Role of Biologists in Nazi Atrocities: Lessons for Today's Scientists', *EMBO Reports* 2 (2001), pp. 871–5. doi: 10.1093/embo-reports/kve217
- ^{xxiii} Richard Plant, *The Pink Triangle: The Nazi War Against Homosexuals* (New York City: Holt paperbacks, 1988). 10.1093/embo-reports/kve217
- ^{xxiv} Pink Triangle, 'The History of the Gay Male and Lesbian Experience During World War II', <http://www.pink-triangle.org/>
- ^{xxv} Oliver Hilmes, 'Gay Life Flourished in Berlin Before Nazi's Snuffed It Out', *Advocate*, Los Angeles (2018), <https://www.advocate.com/commentary/2018/2/15/gay-life-flourished-berlin-nazis-snuffed-it-out>.
- ^{xxvi} Ralf Dose, *Magnus Hirschfeld: The Origins of the Gay Liberation Movement* (New York: NYU Press, 2014).
- ^{xxvii} Heather Panter, 'LGBT+Genocide', in Yarin Eski (ed), *Genocide and Victimology* (London: Routledge, 2020).
- ^{xxviii} Plant, *The Pink Triangle*.
- ^{xxix} Eliot H. Boden, 'The Enemy Within: Homosexuality in the Third Reich, 1933-1945', *Constructing the Past* 12 (2011), p. 4.
- ^{xxx} Richard Breitman, 'Plans for the Final Solution in Early 1941', *German Studies Review* 17 (1994), pp. 483–93.
- ^{xxxi} 'Homosexuals Exhibit Booklet', United States Holocaust Memorial Museum, Washington, DC (2022), <https://www.ushmm.org/m/pdfs/2000926-Homosexuals.pdf>.
- ^{xxxii} Jim Park, 'The Nazi Persecution of Homosexuals: Gay Men and Everyday Life in the Third Reich' (unpublished master's thesis, California State University, 2018); 'Gay People', Holocaust Memorial Day Trust, London (2022), <https://www.hmd.org.uk/learn-about-the-holocaust-and-genocides/nazi-persecution/gay-people/>.
- ^{xxxiii} Eugen Kogon, *The Theory and Practice of Hell: The German Concentration Camps and the System Behind Them* (New York: Farrar, Straus and Giroux, 2006).
- ^{xxxiv} Apple, *Ravenous*.
- ^{xxxv} Eric M. Warburg, *Times and Tides: A Log-Book* (Hamburg: Hans-Christian Druckerei, 1983); Wieland Gevers, *Personality, Creativity and Achievement in Science* (Cape Town: University of Cape Town, 1978).
- ^{xxxvi} Krebs, 'Otto Heinrich Warburg'; L. Warburg, Eine vollkommene Närrin, p. 141
- ^{xxxvii} Apple, *Ravenous*.
- ^{xxxviii} David Nachmansohn, *German-Jewish Pioneers in Science 1900–1933: Highlights in Atomic Physics, Chemistry, and Biochemistry* (New York: Springer, 1979).
- ^{xxxix} Kärin Nickelsen, 'On Otto Warburg, Nazi Bureaucracy and the Difficulties of Moral Judgment', *Photosynthetica* 56 (2018), pp. 75-85. doi: 10.1007/s11099-018-0773-0
- ^{xl} Krebs, 'Otto Heinrich Warburg', p. 663.
- ^{xli} Nickelsen, 'On Otto Warburg'.
- ^{xlii} Th Bücher, 'Otto Warburg: A Personal Recollection', in Horst Sund and Volker Ullrich (eds), *Biological Oxidations: 34. Colloquium, 14.-16. April 1983 - Colloquium der Gesellschaft für Biologische Chemie in Mosbach Baden 34* (Berlin: Springer, 1983).
- ^{xliiii} Erik N. Jensen, 'The Pink Triangle and Political Consciousness: Gays, Lesbians, and the Memory of Nazi Persecution', *Journal of the History of Sexuality* 11 (2002), pp. 319–49. <http://www.jstor.org/stable/3704560>
- ^{xliv} Andrea Carlo, 'Why It Took Decades for LGBTQ Stories to be Included in Holocaust History', *Time USA* (2021), <https://time.com/5953047/lgbtq-holocaust-stories/>.

^{xlv} Heinz Heger, *The Men with the Pink Triangle: The True Life-and-Death Story of Homosexuals in the Nazi Death Camps* (Boston: Alyson Publications, 1994).

^{xlvi} 'Flossenbürg', United States Holocaust Memorial Museum, Washington, DC (2022), <https://encyclopedia.ushmm.org/content/en/article/flossenbuerg>.

^{xlvii} Kevin E. Abrams, 'The Other Side of the Pink Triangle', wthrockmorton.com (1994), <https://www.wthrockmorton.com/wp-content/uploads/2009/06/the-other-side-of-the-pink-triangle.pdf>.

^{xlviii} Marshall Kirk and Erastes Pill, 'The Overhauling of Straight America', *Guide Magazine*, November 1987, pp. 7–14.

^{xlix} Daniel Radosh, 'Why Know', *The New Yorker* (2004), <https://www.newyorker.com/magazine/2004/12/06/why-know>.

^l 'Nazi Persecution of Homosexuals 1933–1945', United States Holocaust Memorial Museum, Washington, DC (2022), <https://www.ushmm.org/exhibition/persecution-of-homosexuals/>.