

On Otto Warburg, Nazi Bureaucracy and the difficulties of moral judgment

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Abstract

Twentieth-century photosynthesis research had strong roots in Germany, with the cell physiologist Otto H. Warburg being among its most influential figures. He was also one of the few scientists of Jewish ancestry who kept his post as a director of a research institution throughout the Nazi period. Based on archival sources, the paper investigates Warburg's fate during these years at selected episodes. He neither collaborated with the regime nor actively resisted; he was harassed by bureaucracy and denounced to the secret police, but saved by powerful figures in economy, politics, and science. Warburg reciprocated this favour with problematic testimonies of political integrity after 1945. Warburg's case, thus, defies well-established notions of how scientists in Germany lived and worked during the Nazi regime, and, therefore, helps provide a more nuanced perspective on this theme.

Additional key words: Otto Warburg (1883–1970); history of twentieth-century photosynthesis research; Nazi Germany.

Introduction¹

Otto Heinrich Warburg (1883–1970) is known as one of the most eminent scientists in the biomedical sciences of the twentieth century. In today's photosynthesis studies, his name is closely connected with the bitter controversy surrounding the maximum quantum yield of the process, in which Warburg's behaviour was close to scientific misconduct.² In the first half of the twentieth century, Warburg contributed to photosynthesis studies in much more constructive and greatly important ways, notably through the introduction of manometric techniques and a new experimental organism, the unicellular green alga *Chlorella*. Both became a part of the standard repertoire of photosynthesis laboratories up through the 1960s. In other communities, Warburg is famous for his theories on the origin of cancer. He also did foundational work in the study of cell respiration, which led to his Nobel Prize in Physiology or Medicine in 1931.³

However, Warburg is also famous as one of the few

scientists of Jewish ancestry in Germany who were able to retain their position throughout the Nazi regime. Although his father, the eminent physicist Emil Warburg, had converted to Protestantism, which was also his mother's religion, Otto Warburg was considered "half-Jewish" by the Nazis. Nevertheless, he remained in his position as Director of the Kaiser Wilhelm Institute (KWI) of Cell Physiology in Berlin-Dahlem (founded in 1931) until it was abolished by the Allied Forces in 1945. This treatment was surely exceptional, given the fact that so many other people of the same ancestry, regardless of their positions, were banished, deported or killed.⁴ Many people, particularly in the United States, suspected, therefore, that Warburg must have collaborated with the Nazis to some extent. Yet, no evidence for this assumption has come to the fore – unless one counts the lack of active and pronounced resistance as a form of collaboration.

There is, in fact, ample evidence that Warburg despised

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¹ This paper is dedicated to Govindjee, in admiration of his relentless efforts to make the history of photosynthesis research more widely known. Warburg's work has been one of his particular interests; this paper provides some biographical background which is little known in the United States. It also provides documentary material that so far had not been available in print. All translations were done by the author.

² For the hitherto most comprehensive account of this controversy, see Nickelsen and Govindjee (2011). Warburg's work in photosynthesis was also treated in Nickelsen (2015), as well as in Nickelsen (2016). For Warburg's early work, see also Nickelsen (2007), Nickelsen (2009).

³ On Warburg's biography, see, e.g. (in chronological order): Krebs (1972), Bücher (1983), Henning (1987), Werner (1988), Höxtermann and Sucker (1989), Werner (1991), Höxtermann (2001).

⁴ On the fate of other scientists in Warburg's discipline, see, e.g., Deichmann (2001). On the history of the Kaiser Wilhelm Society in the Nazi period, see also the series of seventeen volumes published in the years 2000–2007 by Wallstein Publishing, Göttingen (Germany), edited by Reinhard Rürup and Wolfgang Schieder. A list can be consulted online, see < <http://www.mpiwg-berlin.mpg.de/KWG/publications.htm> > (accessed 17 April 2017). The Society's lack of willingness to accept moral responsibility in the years after 1945 is dealt with in Schüring (2006a), and, more extensively, in Schüring (2006b).

the new government, which he largely tried to ignore, in line with many of his colleagues among the conservative upper-middle class. Warburg repeatedly emphasised that he would not be dispelled “by a handful of random criminals” and that he would continue to work in his institute as long as possible (which he did).⁵ However, Warburg, always weary of too much attention, refused to partake in visible dissent.⁶ This is how Warburg’s sister, Lotte, described the situation in her diary, which was published in 1989:

“He [Warburg] turns a deaf ear to all the newly issued laws. When all sorts of things started to be written about vivisection, and animal experiments were banned, the young woman who inoculates the rats for him once asked: May I still use these animals for experimentation? He: Why not? She: But the newspaper says it is illegal. Otto: You should stop reading the newspaper. This is how he resolves everything. He had a Jewish assistant. Someone called him [Warburg] and told him to fire that person. To which he replied: Regrettably, he was unable to fire this assistant because this person’s work was needed. This was the end of the Aryan ancestry paragraph (*Arierparagraph*) in his institute. Several times, he was asked whether his institute was integrated into the [National Socialist] Factory Cell Organisation (*Betriebszellenorganisation*). He said no, and when a Nazi came, [Warburg] explained very politely that his employees had to work and had no time to spare on politics; thereupon the man left. There is no swastika flag on Otto’s institute, and anyway: flags are run up only for people killed in action and on similar occasions. But no flags are flying on days honouring Hitler (*Hitlertage*). I am curious how long Otto will succeed living as a foreigner in the Third Reich” (Rüskamp 1989, p. 213).⁷

Warburg knew very well that his presence in Germany was useful to the Nazi regime. In 1938, he told his sister that he had made “a sort of a devil’s bargain with the Government, a very indecent, evil one” (Rüskamp 1989, p. 300). Lotte wrote:

“They keep him for the purpose of propaganda in foreign countries, and they pay him foreign currency and

everything he wants, they even raise his budget, but they completely ignore him inside the country. There, they pretend that he does not exist. He is never asked to give a presentation. He says he can well imagine that in the registers, which they keep of all people, there is an additional note to his name: retain another ten years for propaganda purposes” (*ibid.*).

After 1945, Warburg repeatedly pointed out that Hitler, who was highly afraid of cancer, wanted him to continue his research. It is, however, hard to evaluate the veracity of this claim.⁸ This paper rather argues, in line with other scholars, that, in the end, Warburg survived because of the continuous efforts of a number of influential friends in the fields of politics, economics, and science, who repeatedly managed to rescue him from difficult situations. Warburg was supported, for instance, by Friedrich Glum, who, until 1937, was Secretary General of the Kaiser Wilhelm Society’s administrative wing (Werner 1991).⁹ It was Glum who in 1933 pointed out that the infamous racial laws of the new government did not apply to the Warburg’s institute, since it was financed mostly by the American Rockefeller Foundation.¹⁰ As a World War I veteran, Warburg was exempted from the infamous “Law for the Restoration of the Professional Civil Service”, issued on 7 April, 1933, which dismissed persons “who are not of Aryan descent” from office. (This exemption clause was only valid until the Reich citizenship law – *Reichsbürgergesetz* – was issued as a part of the so-called Nuremberg laws in 1935.) But also Jewish members of Warburg’s staff were able to retain their positions after 1933, in contrast to the situation at other institutes of the KWS.¹¹

However, there were a number of occasions in which Warburg’s position (and life) was in serious danger. This paper recounts Warburg’s fate during the years of the Nazi regime along some of these episodes, which are reconstructed from German archival material that has not yet received much attention (and is translated here into English for the first time). From the personal and institutional records, it transpires that Warburg repeatedly collided with the increasingly powerful bureaucracy of the

⁵ Allegedly, Warburg said this in 1935; see Rüskamp (1989, p. 252). This quote is also cited in Werner (1991, p. 285). Unless stated otherwise, all translations from German are mine.

⁶ Warburg refused, for example, to support his relatives, because he did not want to draw attention to his own Jewish ancestry; see, e.g., Werner (1991). On the other hand, his sister reported that Warburg resigned for reasons of solidarity from the German Physical Society, after Albert Einstein had his name removed from the society’s register of members; see Rüskamp (1989, p. 2477).

⁷ Although the diary’s reliability may be disputed, episodes that are documented in the archives, as this paper demonstrates, confirm the general attitude of Warburg that his sister describes in this paragraph; the passage is also cited in Werner (1991, p. 286).

⁸ On the extensive Nazi cancer research programme, see Proctor (1999).

⁹ On the KWS’s administration in the Nazi regime, see Hachtmann (2007).

¹⁰ See on this point, e.g., Macrakis (1993). On the relationship between the Rockefeller Foundation, which not only funded Warburg’s institute, and the Kaiser Wilhelm Society in the Nazi years, see Schüring (2006b).

¹¹ An English translation of the law in question is provided, e.g., in Hentschel and Hentschel (1996). Warburg even offered his former co-worker Hans Krebs a position in the KWI’s laboratory, after Krebs was dismissed, based on this first racial law, from his job in Freiburg/Breisgau; however, Warburg also advised Krebs to rather accept a position, e.g., in Great Britain (which Krebs did). See Warburg’s letter to Krebs of 26 April, 1933, transcribed in Werner (1991, p. 283–284). On the dismissal of Jewish scientists in the KWS, see, e.g., Macrakis (1993), Ch. 3, and the contributions in Heim, Sachse, and Walker (2009).

new government; that he was formally dismissed from his position in 1941; and that, in 1943 and 1944, he was denounced twice by several of his employees who pointed not only to Warburg's Jewish origin and his "defeatist behaviour", but also to his alleged homosexuality.¹² Warburg was extremely fortunate to have survived all of these occurrences thanks to support from various quarters; and he reciprocated this help after 1945 by testifying in the denazification process his supporters' political integrity, even though some of them were known to have been involved in crimes against humanity. In view of all this, Warburg may not serve well as a "typical" example. However, his case is noteworthy, I suggest, exactly because it fundamentally defies our expectations and, therefore, helps us develop a more nuanced perspective on

the life and work of scientists in Germany during the Nazi regime.

The paper starts with an incident in 1934, in which Warburg came into conflict with Berlin's main customs office. It is reconstructed in detail from the archival documents, in order to reveal the full extent and absurdity of everyday discrimination against "Jews" already in the early years of the Nazi regime. The situation was settled by Warburg's superiors, but the episode nicely exemplifies both Warburg's obstinate attitude towards bureaucracy, which in the Nazi period could have been fatal for him, and the appeasement policy that was then characteristic of the leaders of the Kaiser Wilhelm Society (KWS), namely the society's President, Max Planck, and its General Secretary, Friedrich Glum.¹³

The Customs Official's Bodily Odours

On 13 February, 1934, Warburg was summoned by Max Planck with the following note:

"Honoured Professor. The President asks you to appear for a consultation on Friday, 16th of this month, 12 o'clock at noon, here at the palace. *Heil Hitler!*" (AMPS¹⁴; Abt. I, Rep. 1A, 2799, folio 47)

Prior to this request, the KWS had received a letter from the main customs office, dated 10 February, which filed a complaint against Warburg (*ibid.*, folio 41). According to this letter, Warburg had insulted a custom official named Tesch (no first name mentioned) and prevented him from fulfilling his duties. Tesch, therefore, required "full compensation" ("*volle Satisfaktion*") from Warburg's part, which the main customs office strongly supported (*ibid.*, folio 43; *vs.*). Based on the extended correspondence on this incident, the pertinent episode can be reconstructed in detail.

The incident began with new regulations for the purchase of laboratory spirit – or "*Branntwein*", as it is referred to in the correspondence. Starting in 1934, a new and specific licence was required to purchase alcohol of all kinds within the German Reich; and Warburg's laboratory had applied for this licence on 10 January, 1934. "In order to deal with this application", the main customs office's letter to the KWS stated, "a number of forms had to be completed, among others a declaration of Aryan descent of the plenipotentiary in charge. This declaration is required pursuant to the law on the admission of tax consultants, issued on 6 May, 1933 (*Reichsgesetzblatt* I, p. 257), which does not allow for exceptions of any sort" (AMPS; Abt. I, Rep. 1A, 2799, folio 41). It was, in other words, a new form of harassment that prevented "non-Aryans" from

purchasing alcohol in any form. The additional information that this rule was issued in reference to regulations for the admission of tax consultants seems absurd only in hindsight – although, quite fittingly in this instance, Warburg is reported as having said, in the same year, 1934 (when the Nazi threat was still underestimated by many), that "80 per cent of the Third Reich are comical and around 20 per cent tragic" – to which his sister immediately added, in her diary notes, "Probably, one can only fully appreciate these 80 per cent of comedy if one has made it across the border" (Rüskamp 1989, pp. 213–214).

In order to secure the pertinent documents, the custom official in charge, Tesch, came to the KWI for Cell Physiology on 16 January, 1934. Tesch handed the forms to one of Warburg's employees, Walter Christian, who felt unable to complete them without consulting with Warburg – no surprise, given that Warburg was considered half-Jewish by the Nazis, which the custom official likely knew very well. Hence, "custom official Tesch arranged with Mr. Christian that the forms shall be completed and sent to the customs office in charge, Berlin-Zehlendorf, within 1–2 days" (AMPS; Abt. I, Rep. 1A, 2799, folio 41 *vs.*).

However, when Tesch had not received anything by 19 January, that is, *three* days after his first visit, he called the KWI on the phone and asked for the documents. Christian immediately handed the phone to Warburg. In his account of the incident, Tesch reported the following:

"Some Mr. Warburg picked up the telephone and said "What did you present me with? I have fought in the war and have been an p, it is out of question that I will sign this form; I will rather source my alcohol from abroad". Then

¹² Since he had returned from the war in 1918, Warburg lived with Jacob Heiss, who had been Warburg's stableman during the years of war. Heiss henceforth shared housing with Warburg, acted as his secretary and valet, and accompanied Warburg on his travels.

¹³ The incident has been mentioned in some of the German biographical literature on Warburg – see, e.g., Werner (1988), but without archival references and without the juicy details, which provide impressive documentation of Warburg's behaviour in these years and are worth presenting to an international audience.

¹⁴ AMPS = Archive of the Max Planck Society.

the gentleman asked: "What is your superior administrative authority?" I named the main custom office Berlin-Kurfürst, providing its address and its phone number. Thereafter, the call was ended" (*ibid.*, folio 45 vs.).

On the next day, 20 January, Warburg called the main customs office Berlin-Kurfürst, where the new regulations were reiterated to him (*ibid.*, folio 41 vs.). Two days later, the office received another call, presumably from a secretary of Warburg's, who finished the conversation by 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. When she was confronted with our amazement in view of this rather disconcerting behaviour, and was requested to explain the reasons that brought Professor W. to behave in this manner towards a custom official, who legitimately executed his duty, 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. The institute, however, had to ensure a meticulous level of cleanliness" (*ibid.*, folio 42).

Neither the customs office, nor Tesch personally, failed to notice the insult. However, before he learned about his lack of bodily hygiene, Tesch started his second attempt (on the same 22 January) to get hold of the forms that he had left with Christian. According to Tesch's report, which is worth quoting at length, this is what transpired:

"The door was opened by a servant who knew me from other official duties (inspection of a distiller), and when I expressed my wish to see Mr. Christian, he explained: "You should deal with this matter in writing." To which I replied: "In this case, I need to get back the forms that I have handed over to Mr. Chr." During this conversation, I accompanied the servant upstairs to the corridor and stopped at the entrance of a laboratory. Several gentlemen stood in this laboratory. The servant went up to one of these gentlemen and talked to him. The gentleman then approached me. I greeted him with the German salute, which the gentleman did *not* reciprocate. When the gentleman came closer, I stated my name and official capacity. The gentleman walked past, ignoring me. I said to him: "With whom do I have the pleasure of speaking?" Said gentleman turned round halfway, and briefly said "Warburg", then proceeded and pointed to the door, saying "This is the door, leave the building!" Upon which I said: "Professor, in this case I need to get back the forms that I left with Mr. Christian." Prof. W. said, in a manner that was utterly incomprehensible to me: "I demand you a second time to leave the building, or I will report you for trespassing." I repeated my request to hand over the forms. This renewed approach also went unheeded by Prof. W., who instead replied: "I demand, for the third time, that you

leave the building, or I will call the cops." (*ibid.*, folio 45 vs./46)

This back and forth exchange went on for a while, before Tesch eventually left, without having achieved anything. At the end of his report, Tesch declared:

"Prof. W.'s behaviour cannot be justified by any means. In my view, he displayed an outrageous disregard of a civil servant, that is a representative of the national socialist state, and grossly insulted me personally. The disregard of the German salute is, in my opinion, characteristic of Prof. Warburg's attitude toward the current State" (*ibid.*, folio 46 vs.).

Tesch was right; and in hindsight, we know that this attitude together with Warburg's unshaken belief in his own superior status was highly dangerous and, in the long run, invited revenge from the formerly underprivileged. However, by the time of this letter, Warburg had also filled a complaint against Tesch with the main custom office, reporting that one of the office's employees "entered our institute against the janitor's instruction", and would only leave after he had been warned no less than six times that he was trespassing. Apparently, Warburg wrote, this customs official wanted to collect some forms at the institute. "These forms are no longer in our possession", Warburg maintained, and added: "The institute is no longer in need of alcohol supplies" (*ibid.*, folio 44). Warburg's secretary made the same complaint in a phone call, while she also asked what the customs office was planning to do, if the declaration of descent was not dispatched. When the office replied that, in this case, the main administration of the KWS would be contacted, the secretary replied, ...

"... using a tone of derision, that this procedure had little prospect of success, because the institute received its funding from a third party and was, therefore, independent. Given this situation, one could assume with a probability of 50 per cent that the Institute for Cell Physiology would not follow the Kaiser Wilhelm Society's instructions" (*ibid.*, folio 42 vs.).

In the document, this paragraph is marked on the margin, presumably by Glum, while the last sentence additionally received a pronounced question mark. Warburg's secretary obviously had gone very far in this conversation. At the same time, Tesch was asked to give his view of the incident, which he did in great detail (and full of indignation). The main customs office added that if Warburg did not apologise, the office would consider taking further steps against him (*ibid.*, folio 43 vs.).

Eventually, the matter was resolved without further consequences. In handwriting, Planck remarked on the margin of one of these letters: "Communication that the difficulty is best dealt with by purchasing the chemicals *via* the KWS. Planck" (*ibid.*, folio 48).¹⁵ This was a pragmatic solution that did not force the KWS to explicitly

¹⁵ This note was written by Planck on Warburg's letter that is quoted below.

take a stand regarding Warburg's declaration of descent. Planck and Glum, furthermore, assured the main customs office that they strongly disapproved of Warburg's behaviour and had informed Warburg accordingly.¹⁶ Apparently, the customs office was willing to count this as "full compensation".

Warburg, however, was far from satisfied. On 18 February, he wrote an addendum to the conversation he had had with Planck, in which he asked him, given the unbearable situation, to issue a new set of rules for the KWS according to which non-Aryan directors, who were legally in office, were to be treated like Aryans. Warburg even suggested a possible formulation (*ibid.*, folio 48). However, his superiors obviously considered this a misjudgement of the situation, as a handwritten remark on the margin of this letter of Warburg's, presumably by Glum, makes clear: "Seems absolutely futile, see law on Aryan descent" (*i.e.*, "*Ariergesetz*").

Warburg was fortunate that both Planck and Glum supported him in this case, as well as in other situations, particularly, as they largely complied with Nazi policies,

Dismissal and denunciations: the 1940s

On 24 April, 1941, a letter from the Reich Ministry of Education, issued by the influential policy maker Rudolf Mentzel, reached the KWS, stating that the Institute for Cell Physiology was henceforth required to serve other purposes, notably cancer research, and that, therefore, Warburg had to resign his position as director by 30 June of the same year. Although the General Secretary, Ernst Telschow, immediately notified the Vice President of the KWS, Carl Friedrich von Siemens, who tried to file a protest, the KWS eventually had to inform Warburg of his dismissal. This was a strong blow that could have ended not only Warburg's directorship, but also his life.¹⁷ However, on 5 July of the same year, the dismissal was withdrawn. According to the documents, an alternative building had been identified to host the envisaged central institute for cancer research, notably after repeated conversations with Victor Brack from the Reich Chancellery and others, so that the premises of the KWI for Cell Physiology were no longer required. Warburg, in turn, was reinstated as its director (AMPS, Abt. III, Rep. 1, No. 47).¹⁸ What happened behind the scenes?

Warburg relied on his personal network of friends and

including the dismissal of a great many Jewish scientists from KWS institutes, in the (futile) attempt to save some autonomy for the society. Recent literature has investigated this attitude and its consequences in detail (Renn *et al.* 2001; Kohl 2002; Heilbron 2006). By 1937, when Glum left the KWS, even Warburg was largely disillusioned by the leaders of the KWS. As his sister noted in her diary:

"Otto says that, if he is done with somebody in terms of morals, he is no longer able to listen to him when he speaks. "Take, for example, Planck. First, when he met me, he started to talk to me. But now he has realised that I do not listen anymore, and he stopped talking to me. Now, when he sees me, he no longer says anything" (Rüskamp 1989, p. 295).

It should be added, however, that Warburg was quite idiosyncratic with respect to whom he was "done with in terms of morals", as will become clear later in this paper. The next section, however, turns to events in the 1940s, when things became far more difficult for Warburg.

acquaintances. In later years, Warburg stated that he first turned to the renowned physician and surgeon, Ferdinand Sauerbruch, who, despite his successful career in the Nazi regime, continued to hold ties with some of his Jewish friends.¹⁹ Likely more crucial for Warburg's protection in this case was his close friendship with Walter J. V. Schoeller, head of the main research laboratory of Schering, the German pharmaceutical company. Schoeller was friends with Warburg from the time they both had been graduate students at the Berlin laboratory of the eminent chemist Emil Fischer. 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 (Werner 1988, 1991). While Schoeller's own influence did not suffice, his wife, née Paula de Crignis, happened to be the sister-in-law of Victor Bouhler, head of Hitler's Reich Chancellery. According to Warburg's declaration under oath after 1945, it was this connection that saved him. Warburg stated that Bouhler immediately instructed "his chief of staff Viktor Brack to appeal my case". And, so Warburg stated, within four weeks, Brack succeeded in persuading the Ministry of

¹⁶ See letter Glum to Planck in this matter, 20 February 1934, (AMPS; Abt. I, Rep. 1A, 2799, folio 49); and Planck's letter to the main customs office of the same day (*ibid.*, folio 50).

¹⁷ This incident was reconstructed in detail by the Max Planck Society's archivist Eckart Henning, *see, e.g.*, the introduction to the inventory of Warburg's papers (dated 1985), which can be consulted in the Archive of the Max Planck Society (Abt. III., Rep. 1. pp. 4-29). *See also* the published accounts in Henning (1987), Werner (1988, pp. 259-264), and Werner (1991, pp. 305-310).

¹⁸ Title of document: "Neubesetzung der Stelle des Direktors vom KWI für Zellphysiologie, 1941. Brief vom Reichsminister für Wissenschaft, Erziehung und Volksbildung, 5. Juli 1941."

¹⁹ On Sauerbruch, *see, e.g.*, Eckart (2016). Warburg's statement in favour of Sauerbruch, dated 1947, is quoted in Werner (1991, p. 308, reference given on p. 424).

Education to withdraw the dismissal.²⁰ As a precaution resulting from this episode, Warburg's institute was declared to be of military importance ("*Wehrinstitut*") in early 1942, which not only implied a substantial gain of reputation, but also an enormous increase in budget. Thanks to Schoeller's support, Warburg furthermore was able to submit a petition of equal treatment, regardless of his Jewish ancestry, which was also supported by another figure of high reputation in Nazi Germany, the biochemist Adolf Butenandt.²¹ By these means, Warburg became one of the very few Germans whose descent was officially "arianised", by means of a complicated and largely arbitrary and unpredictable bureaucratic process.²²

In the summer of 1943, and after heavy bombardment, Warburg's institute, like many others, was moved from Berlin-Dahlem into the city's surroundings. Adequate premises were found in a Brandenburg manor ("*Schloss Seehaus*"), which was located in the small town of Liebenberg and completely refurbished in view of its new purpose.²³ Most of Warburg's long-standing collaborators and employees were still working in the institute at this time and were moved to Liebenberg, together with the apparatus. These included Erwin Negelein, Fritz Kubowitz, Walter and Marianne Christian, Theodor Bücher, Wilhelm and Luise Lüttgens, and the two brothers Richard and Alfred Triebener. Negelein, Kubowitz, and Christian had been working for Warburg since his years at the KWI for Biology, starting in 1913. This continuity of its staff was one of the more remarkable features of Warburg's institute (Bücher 1983, pp. 6-7).²⁴ While the institute was being moved, Warburg himself decided to spend most of the time at his summer cottage in Nonnevitze, on the island of Rügen. While at his cottage, he worked on a book, "Heavy Metals as Prosthetic Groups and Enzyme Action", which he hoped to publish after Germany's capitulation. (The book eventually came out as Warburg 1946). Warburg had

no particular interest in the refurbishment of *Schloss Seehaus* – Theodor Bücher, a former PhD student of Warburg and one of his closest collaborators in these years, reported that, by 1944, Warburg expected (and hoped for) the German defeat any day (Bücher 1983, p. 24). Nevertheless, Warburg apparently called his staff in Liebenberg almost daily.

Yet, in December 1943, shortly after the institute was moved, the situation again became highly dangerous for Warburg – even more dangerous than in 1941. An anonymous letter had reached the German Secret State Police (*Gestapo*), which accused Warburg of driving a car (which had become illegal for "non-Aryans" since 1938), of defeatist talk and behaviour, of Germanophobia and Anglophilia. The intimate knowledge of Warburg's way of living indicated that somebody from his inner circle of staff members had written this letter. That the letter had been mailed from Zehdenick, a small town in the vicinity of Liebenberg, also suggested that it was the work of a member of Warburg's staff. The situation was further aggravated when another incriminating letter, signed by Fritz Kubowitz, was sent to the Secretary General of the KWS in February 1944. Among other things, the letter raised additional allegations of Warburg's homosexuality.²⁵ It is not clear in all details how this situation was resolved. Bücher later mentioned that secret investigations of Warburg were allegedly stopped when a high party official, who was close to Hitler, was brought to Liebenberg and could personally be convinced of Warburg's ability and willingness to work (Höxtermann 1989).

Warburg was saved, but he no longer trusted anybody in the institute, and the atmosphere became almost unbearable (Bücher 1983).²⁶ In personal notes in the form of a diary (written in the back part of one of his laboratory notebooks), Warburg stated that he was unprepared to be

²⁰ The document is cited in Macrakis (1993, p. 64).

²¹ See Macrakis (1993, p. 226), footnote 55, which refers to a document preserved in the Siemens Archive, Munich. On Butenandt, see, e.g., Ebbinghaus and Roth (2002), Schieder and Trunk (2004), Schieder (2009).

²² Exceptions from the Nuremberg laws, in view of individuals of particular reputation or merit, were possible by filing a petition with the Ministry of the Interior, which also consulted with the Reich Chancellery, while, in the end, Hitler personally had to sign the eventual document. Hermann Göring is reported to have been in charge of this process, which presumably also led Hans Krebs to assume that Göring "arranged for a re-calculation of Warburg's ancestry" (Krebs 1972, p. 663). While it is unclear whether or not Göring was involved in this particular case – he is reported to have helped, e.g., actors and other artists, technically the decision whether or not to grant a petition, rested with Hitler alone. See on this process of "arianisation", e.g., Steiner (1998), see also Abrams (1985).

²³ The following description relies strongly on the accounts provided in Henning (1987), Werner (1991), and Höxtermann and Sucker (1989). A valuable source concerning Warburg's life during these years is provided by Theodor Bücher's autobiography, see Bücher (1983).

²⁴ See Bücher (1983) for further details on Kubowitz, Negelein, and Christian. Among other things, Bücher emphasises that all three of them were frequently, but unjustly regarded as being part of Warburg's "technical staff" only: their research was, in fact, of high quality and compared well to the work of other respected biochemists of the time.

²⁵ A detailed description is provided in, e.g., the introduction to the archival inventory, Henning (1985). The letter by Kubowitz is preserved in the archives of the Max Planck Society. On this episode, see also: Werner (1991, p. 316); Höxtermann and Sucker (1989, p. 143).

²⁶ Bücher also mentioned Kubowitz's role in the denunciation: "Not without some fault on his own side, this outstanding man of firm character [= Kubowitz] got caught in the net of Gestapo inquiries about Otto Warburg. This extremely dangerous incident happened in the course of the removal of the Institute to Fürst Eulenburg's Schloss Seehaus in Liebenberg. It was finally suppressed by very great efforts, but nevertheless weighted heavily on the working climate in the group."

of help to anybody whom he suspected to have been involved in this matter – not even in order to save them from almost certain death in the *Volkssturm* (“people’s storm”) — in the last months of the war, all males who were not yet in military service, from ages 16–60, were conscripted. In addition to Kubowitz, this also concerned Negelein and Christian.²⁷ Because Warburg is reported to have personally destroyed his *Gestapo* files, when they were handed to him in 1945 by the Soviets, it is difficult to clarify these incidents (Henning 1987, p. 102). However, the letters denouncing Warburg and Warburg’s subsequent bitterness and sense of betrayal help explain how Warburg related to most of his employees after 1944.

At this time, the biochemist Theodor Bücher, well known for his scientific achievements in later years, was the only academic employee in the institute. Bücher had joined the laboratory as late as 1938 for his dissertation project – a rather courageous move at the time – and he worked in the laboratory until he was conscripted in 1939. However, Bücher stayed in touch with Warburg and is reported to have provided him with coffee and cigarettes, which otherwise were unavailable to Warburg. Bücher’s family background was quite remarkable. His father, privy councillor Hermann Bücher, was then chairman of AEG, one of the largest companies in Germany, and part of the Board of Directors of many others, such as the highly influential Krupp AG. In 1942, Bücher 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. Warburg did not hesitate to use these excellent connections and asked Hermann Bücher for help, in order to exempt some of his employees from military service. Warburg’s request to exempt Theodor Bücher was rejected, but Warburg was able to obtain an extended leave of service for him. Bücher later thought that Warburg’s support and this leave of absence had saved his life (Werner 1991; Bücher 1983; Höxtermann and Sucker 1989). Warburg also was able to exempt his long-standing companion and, presumably, partner, Jacob Heiss, from military service and the *Volkssturm*; it is unclear, however, whether or not Hermann Bücher was involved in this request.

The aforementioned diary notes of Warburg started in February 1945.²⁸ At this time, only Lüttgens and his wife were still living permanently in Schloss Seehaus, while the Russian front was approaching quickly. At intervals, Theodor Bücher joined them in Liebenberg. Warburg, still in Nonnevit, noted on 24 February that he had been asked by the Kaiser Wilhelm Society to hand in a list of his employees and their conscription status. At the time,

Kubowitz and Negelein were in *Volkssturm I*, the more dangerous division, whereas the others were enlisted in *Volkssturm II*.²⁹ As Warburg wrote, Kubowitz already then was at the front near Frankfurt/Oder and had asked Warburg for help – in order to return to Liebenberg – in vain. “You cannot today denounce a superior and ask him tomorrow to save your life”, Warburg wrote in his diary, and continued: “I did nothing” (Nickelsen 2008, p. 108). Bücher and Lüttgens were the only persons in Warburg’s group who still, apparently, enjoyed his confidence. “Lüttgens and his wife are the first whom I am going to re-employ – if I am going to have the means to employ anybody at all”, Warburg wrote on 7 March (*ibid.*, p. 108).

On 17 March, Negelein’s wife came to Liebenberg, “completely emaciated”, as Warburg wrote, and pleaded if Warburg could not recall her husband to the lab and send another person to military service instead. She added that, apparently, Warburg would be able to name anybody, “even a refugee” (which speaks to her level of respect towards refugees and displaced persons). “I refused to intervene”, Warburg wrote, “Why should I try and send somebody else instead, in order to protect her husband?” (*ibid.*, p. 109).

A new turn of events came on 20 March, when Warburg heard of a governmental order that determined how to proceed with businesses that were no longer operating because the enemy was approaching. Allegedly, this order allowed for a partial relocation of materials, so that important apparatus and documents could be saved. According to Warburg’s diary, Theodor Bücher was able to secure permission from Albert Speer to proceed according to this order on 28 March and to move some of the institute’s equipment to a hunting lodge of his father’s near Magdeburg – which also implied that Theodor Bücher himself would be saved from taking part in the *Volkssturm*. However, when Bücher eventually left Liebenberg on 18 April, Warburg was infuriated. Instead of showing concern for Bücher’s fears or his uncertain fate, Warburg bitterly complained that Bücher had acted against every order, apparently panicking, as word spread that the Russian front was expected to reach Liebenberg that very evening. As Warburg wrote, in anger and contempt, Bücher did not compose a list of apparatus, he did not leave behind a copy of the permission in the office and, without consulting with Warburg, Bücher had packed 10 litres of alcohol. This was the last entry before Warburg discontinued his diary notes.

However, Lüttgens also kept a diary, which describes in detail the months April to September 1945 in Liebenberg.³⁰ According to these notes, the situation grew increasingly precarious: “Every day and every night, air

²⁷ All three of them were later accused by Warburg of denunciation (on 5 August 1946); see Henning (1985, p. 17).

²⁸ These diary notes were first published in Nickelsen (2008).

²⁹ Persons who were enlisted in “*Volkssturm II*” (mostly those in “strategically important professions”) were only drafted for short periods of time, for operations close to their home. In contrast, persons who were enlisted in “*Volkssturm I*” could be deployed for up to six weeks and in more distant places.

³⁰ A full transcript of these notes is provided in Werner (1991, pp. 326–334; doc. 124).

raid warnings, often three times”, Lüttgens noted on 15 April (Werner 1991, p. 326). On 27 April, Lüttgens had a last phone call with Warburg; the next day, the Russians arrived and the fighting started in Liebenberg. It did not take long. On 30 April, 1945, the Red Army had seized full control of the area. Warburg’s institute was almost completely dismantled by the Russian military, with all remaining apparatus removed; and although the Russian commander in charge, Marshall Zhukov, later apologised and ordered to return the equipment to Warburg, none of the valuable apparatus was ever to be seen again. The

After 1945

Warburg himself stayed in Rügen until September 1945, as he wrote to his sister Lotte in January 1946. As we can take from this and other letters, he was treated with respect:

“Until the end of September, I stayed with Jacob on Rügen, whom I saved quite skillfully from military service and *Volkssturm*, and who is well. We were then driven to Dahlem in Russian cars, with all our belongings. Four weeks ago, Marshall Zhukov even had our two horses fetched from Rügen. When I had a meal with him in Babelsberg, he asked me whether there was anything he could do for me – now the horses are in Düppel again, so that in my private life, everything is like in former times. In terms of my scientific work, however, the situation is less favourable at the moment.”³²

It took several more years for Warburg’s professional situation to stabilise again. In 1953, the institute was re-founded as “Max Planck Institute for Cell Physiology” and Warburg was re-installed as its director. Warburg even negotiated a special contract based on which he was exempted from the usual terms of retirement. An attempt to hand over the institute to Birgit Vennesland as Warburg’s successor in the late 1960s ended disastrously, so that Warburg remained in his position until his death on 1 August, 1970, upon which the institute was closed.

Warburg never forgave the persons whom he suspected to have been responsible for the denunciation, that is, Negelein, Kubowitz, and Christian. In 1946, Christian turned to Warburg and asked him for a certificate of employment; after all, he had spent more than fifteen years in Warburg’s service. This letter remained unanswered (BBAW-Archive; NL Warburg 190).³³ Nevertheless, Christian, as an able and qualified scientist, found a new position with the biochemist Karl Lohmann in Berlin – the same place where Negelein found employment. Warburg was well aware of this fact and was not inclined to let this pass. When the Allied Control Council issued a series of directives regarding Germany’s denazification process, in the same year of 1946, Warburg sent a registered letter to

KWS consequently agreed that Schloss Seehaus could be used by the local hospital for the time being.

Bücher’s attempt to save at least some of the equipment also failed, as can be taken from a letter that Bücher wrote to Warburg in December.³¹ In June 1945, the Berlin High Command of the American forces confiscated Warburg’s institute in Berlin-Dahlem and used it as temporary headquarters; thereupon, Warburg dismissed all employees. This was the end of the Kaiser Wilhelm Institute for Cell Physiology (*ibid.*, p. 338).

Lohmann and stated in unequivocal terms that both Walter and Marianne Christian were guilty of Nazi crimes and racial discrimination according to these directives and, hence, must be dismissed from their positions. Warburg accused them of having denounced not only himself to the Nazis, but also two Dutch employees of the lab in Liebenberg (BBAW-Archive; NL Warburg 1113.). Warburg assured Lohmann that the pertinent documents were available in photocopy and also offered to provide the testimony of no fewer than three eyewitnesses who were willing to provide a sworn statement of confirmation. Warburg finally added that the Christians ought to be grateful to him for not being removed to one of the Russian or American detention camps; he also hinted that there was a Dutch unit in Berlin that likely would be highly interested in this case. (Interestingly, Warburg had Christian work in his own institute again for some years after 1948 – obviously he still found Christian’s skills and knowledge useful. The collaboration ended in disagreement and Christian sought employment in Freiburg/Breisgau instead; *see* Werner 1991.)

Kubowitz also survived and, like Christian, asked Warburg for a confirmation of his employment at the KWI for Cell Physiology (which encompassed more than 25 years of work in Kubowitz’s case), however, Warburg never provided that document. Kubowitz also found employment, in his case with Theodor Brugsch at the Berlin Charité. In 1955, the year of his retirement, Kubowitz repeated his request for a job certificate, adding that Warburg was legally obliged to issue a document, which declared the length and nature of his employment. If Warburg were to refuse, Kubowitz warned, he would file a suit with the labour court (BBAW-Archiv; NL Warburg 550). Unfortunately, we do not know Warburg’s reply, but it is unlikely that he was impressed by Kubowitz’s threatening announcement.

Warburg did, however, stay in touch with Theodor and Hermann Bücher, and when he travelled to the United

³¹ Bücher to Warburg on 26 December 1945; a transcript is provided in Werner (1991), pp. 335-337; doc. 126.

³² Warburg to his sister, Lotte, on 13 January 1946; *see* also Werner (1991, pp. 355-356; Dok. 128).

³³ When Marianne Christian repeated this request for herself, after her husband had died in 1955, Warburg only sent the most formal confirmation of her employment that barely fulfilled legal requirements.

States in 1948/49, he did his best to find a position for Theodor with his American colleagues (albeit in vain).³⁴ Warburg also testified in favour of Hermann Bücher, to exonerate him in the denazification process. Among other things, Warburg emphasised the support Bücher had provided him in 1941, when Warburg had been dismissed from his position at the KWI.³⁵ Along the same lines, Warburg in 1945 also gave testimony in favour of a clearance certificate for Victor Brack, in grateful memory of Brack's support of Warburg four years earlier (see above) – notwithstanding the fact that Brack was evidently involved in terrible crimes and multiple murders. Among other things, Brack was one of the organisers of the Nazi's so-called "euthanasia" programme T4.³⁶ Warburg, no doubt, was not only incredibly stubborn but also incredibly self-centred in his judgment and moral outlook.

Theodor Bücher was, presumably, the only person who was fully informed about the denunciation incident, potentially from both sides, and yet he never spoke about it in public. In 1947, Bücher corresponded with (Sir) Hans Krebs, who also was one of Warburg's former laboratory co-workers. (Because of his Jewish family, Krebs had been dismissed by the Nazis from his academic position in Germany in 1933, had emigrated to the United Kingdom and was eventually awarded the Nobel Prize for Medicine or Physiology; his name is remembered in the "Krebs cycle" of cell respiration.³⁷) Krebs and Bücher exchanged their views of the polemic tone of Warburg's monograph of 1946, dealing with heavy metals as prosthetic groups — the very book that Warburg wrote on Rügen, while the institute was being moved and the denunciation letters were being issued. Bücher explained Warburg's tone by pointing to the personal difficulties that he had had to endure in this period:

Conclusion

Given that Warburg was such an extraordinarily renowned scientist (and such an extraordinarily self-centred and eccentric personality), one ought to be careful in deriving more general claims from these episodes. Yet in the early years, Warburg's dealing with the Nazi regime exemplifies the situation of many other scientists at the time that were considered Jews. He met with typical obstacles, such as discriminatory laws and regulations and the incursions of

"Warburg's book was written in days of extraordinary agitation in great as well as in small events: at the beginning of the final phase of the war, of the emptying and evacuation of the institute from Dahlem to Liebenberg (summer 1943 – spring 1944), a time, which was filled with dreadful, inevitably escalating disputes internally between Warburg and his coworkers, quarrels which came to a horrifying end when Kubowitz and Negelein were called up to join an active Volkssturm squadron and moved to the collapsing front at the Oder."

Thus, while Bücher wrote of "dreadful, inevitably escalating disputes" he made no mention of the letters of denunciation. Bücher furthermore added in his letter to Krebs that he had been in close contact with Warburg during these months and had tried, with little or no success, to cheer him up. He finished this part of the letter with a rather ambiguous remark, stating: "this year's visit [*i.e.*, 1947] was under the same fatal star of condemnation of his oldest collaborators" (*all quotes*: Bücher 1983, p. 27).³⁸

Krebs, therefore, was unaware of the content and quality of the "disputes" that Bücher mentioned. This is confirmed by a letter Krebs wrote to Warburg, in the same year, 1947, in which he asked about Warburg's long-standing co-workers:

"I was very glad to hear from Bücher that you are in good health and living in relative comfort. He mentioned that he had seen you recently and that you are engaged in writing two monographs. These will be eagerly awaited by many people over here. Bücher never mentioned what has become of Negelein, Kubowitz, and Christian. I hope they are well" (BBAW-Archiv, NL Warburg 542).

Warburg's answer is unknown, but it is unlikely that he responded to this inquiry in detail.

rank-and-file public servants, who enjoyed their new positions of power. However, the fact that neither this situation nor others ended badly for Warburg was certainly non-typical. In the case of the custom office, the Kaiser Wilhelm Society intervened, whereas Warburg's dismissal as a director as well as the denunciations of later years – extremely dangerous situations for him – were handled and resolved by even more influential figures from other

³⁴ See, e.g., the letter written by Hermann Bücher to Warburg on 18 December 1948. (AMPS; III, 1, 157), or the letter by Theodor Bücher to Warburg, 6 August 1948 (AMPS; III, 1, 158).

³⁵ See Warburg's testimony in favour of Hermann Bücher, dated 20 April 1946. BBAW-Archiv, NL Warburg 1076. Sections of this document are quoted in Werner (1991, p. 303). See also Warburg's letter to Hermann Bücher of 1946 (no further date given), BBAW-Archiv, NL Warburg 1054.

³⁶ See, e.g., Werner (1991, p. 312); Macrakis (1993, p. 64). See on the T4 programme, e.g., Aly (2013). Notwithstanding Warburg's testimony, Brack was sentenced to death in 1947 and executed in 1948.

³⁷ On Hans Krebs, see the seminal, two-volume intellectual biography by Holmes (1991, 1993). On Krebs's discovery of the urea cycle, for which he put to use the techniques he had learned in Warburg's laboratory, see also Nickelsen and Graßhoff (2009).

³⁸ Continuing: „I know him [Warburg] from many evening talks in Liebenberg in which I, living under the same roof with Warburg, tried with completely insufficient means to calm him down and to fight his bad spirits."

spheres of public life. This amount of support, which most probably saved Warburg's life, was exceptional, but it is yet another piece of evidence that, despite the Nazi State's systematic, cruel and merciless efficiency in implementing its antisemitic laws, exemptions were possible through personal networks and relationships. There was, in fact, a high degree of "*Willkür in der Willkür*", as it has been referred to in German historiography ("arbitrariness in despotism").

His experiences in the early 1940s shaped Warburg's

loyalties after the war: he never forgot that members of his staff had tried to send him to the Nazis' concentration camps (and never forgave them), while he unhesitatingly testified in favour of his supporters after the war, notwithstanding the fact that some of them had evidently committed terrible crimes. Good and evil, justified and inexcusable: microstudies like the one presented here demonstrate the insufficiency of simple categories and the difficulty of moral judgment in dealing with the history of the Nazi period and, presumably, other terror regimes.

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