

Werner Osenberg's Visions of the "Totaleinsatz" of the entire German Research Potential in Total War

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The article deals with an example of a scientist who developed a number of visions how one could exploit science for the Nazi war aims. Werner Osenberg was professor at technical university of Hannover since 1938. Since 1933 he was a member of the NSDAP, the SS, and worked for the SD (the Nazi spy apparatus). He had access to the highest party and government bodies. From the beginning of the Second World War he was involved in war research, from 1943 acting as head of the planning board in the *Reichsforschungsrat*. Osenberg's special attention was directed at scientific research designed to achieve the Nazi war aims. The development of weaponry especially for the Navy was one of his particular interests. In 1943 Osenberg addressed several memoranda to Hitler and other leaders of the Nazi state, in which he assessed the devastating German war situation. He deplored the insufficient utilization of available capacities of the German research potential. Following Hitler's maxim that "this war ... [is] not only a war of soldiers, but especially also of the technician," Osenberg developed a vision for the intensification of the German research program, in order to change the course of the war.

"A requirement of total war is the total deployment ["Totaleinsatz"] of our entire research potential," Werner Osenberg headlined an extensive memorandum at the end of July 1944.¹ In this text, he summarized on the one hand his ideas for the successful organization of technical and

¹ In German, "Ein Erfordernis des totalen Krieges ist der Totaleinsatz unseres gesamten Forschungspotentials," *Bundesarchiv*, Germany (hereafter: BArch) Berlin R 26 III, Nr. 49, sheet 127.

scientific war research, a topic that he had already addressed in previous memoranda to leading figures in the Nazi government and military apparatus. On the other hand, he refined his ideas regarding the changed war situation and wanted to make his contribution to the *Endsieg* (final victory) which he still believed was possible. Initially, brief glances at the research situation in Germany, his personality, and his background are necessary to understand Osenberg's intentions.²

Research

This section briefly surveys the social atmosphere in which scientific research had to be carried out in Nazi Germany. Science was not exactly one of the passions of the Nazis. This does not mean that the National Socialists did not make use of scientific research and development. The opposite was the case: considerable resources were spent on research and development, but the Nazi effort was not primarily about promoting science, but about promoting Nazi aims. It was an instrumentalisation of science by the NSDAP.³

The legends of the *Wunderwaffen* (wonder weapons) such as the "V-rockets" or the turbojet bomber Me 262, enjoyed a high priority in popular memory. But they cloud the view of the true situation of the research. The social environment of the Nazi period can be described as hostile towards science. Characteristically, for this is a statement from the leader of the *Deutsche Arbeitsfront* (German Labour Front, a Nazi trade union organization), Robert Ley, who said: "A professor may be sitting for many years in a laboratory to detect bacteria. However, I would prefer

² The following section summarizes the chapter about research in Nazi-Germany in Michael Jung, "Voll Begeisterung schlagen unsere Herzen zum Führer," – *Die Technische Hochschule Hannover und ihre Professoren im Nationalsozialismus* (Norderstedt: BOD, 2013), esp. 271–281.

³ For contrasting views of "hostility to science" and the "competitive situation" of science organization, see a recent publication: Sören Flachowsky, Rüdiger Hachtmann, Florian Schmaltz, "Wissenschaftspolitik, Forschungspraxis und Ressourcenmobilisierung im NS-Herrschaftssystem," – *Ressourcenmobilisierung. Wissenschaftspolitik und Forschungspraxis im NS-Herrschaftssystem*, ed. Sören Flachowsky, Rüdiger Hachtmann, Florian Schmaltz (Göttingen: Wallsteini, 2016), pp. 7–32.

every street sweeper. He takes his broom and sweeps with a single gesture thousands of bacteria into the gutter.”⁴

Though there were certainly a range of attitudes towards the universities and the sciences, the technical universities enjoyed a greater appreciation of the Nazi leadership due to their range of subjects and as application-oriented institutions. Research and development were therefore instrumentalized in the preparation and execution of the war, and the general anti-scientific environment did not prevent the Nazis from putting large sums of money into projects which were useful to their aims. The Reich Ministry for Science, Education and Popular Culture (*Reichsministerium für Wissenschaft, Erziehung und Volksbildung* – REM) was in charge of research organization.

However, it was in a weak position in the Nazi leadership hierarchy, and in fact could not assume any leading function. In addition to the REM, the high commands of the branches of military service were heavily involved in the field, in which the *Reichsluftfahrtministerium* (Ministry of Aviation – RLM) under Göring had been particularly active, and the Ministries of Armaments and War Production (Speer), Economic Affairs, and Posts, the latter in particular in the field of war-important telecommunications. In addition, other influential actors such as the SS-institution *Ahnenerbe* (Ancestral Heritage) and the *Notgemeinschaft der deutschen Wissenschaft* (Emergency Association of German Science, NDW; later *Deutsche Forschungsgemeinschaft*, DFG) were at work.

A very special role was played by the Four-Year-Plan authority, which was established in 1936 by Hitler personally in a secret memorandum, which decreed:

- 1) “the German army ... [should] be ready in 4 years”,
- 2) “the German economy ... [should] be ready for war in 4 years”⁵

This authority was headed by Göring as “plenipotentiary” and equipped with sufficient resources to stimulate the production of armaments for war preparation and management. In this context, the *Reichs-*

⁴ Quoted after Helmut Joachim Fischer, *Erinnerungen*. Teil I: Von der Wissenschaft zum Sicherheitsdienst (Ingolstadt: Zeitgeschichtliche Forschungsstelle, 1984), 178. Undated.

⁵ *Ibid.*, 273.

forschungsrat (Reich Research Council, RFR) was formed, which had to coordinate the scientific and technical research important for war. However, the RFR was unable to connect the above mentioned competing research institutions into a unified research network due to its organizational connection and infrastructure. A second RFR was set up in 1942, this time under the leadership of Göring, and, although there were gradual changes, the basic problem of the competitive situation was not resolved.

Werner Osenberg

Born in 1900 in Zeitz in the middle of Germany, Werner Osenberg participated in the last two months of the First World War as a navy cadet, after passing his *baccalaureate* (high school exams).⁶ From 1919 he studied medicine for two semesters. After that, he graduated in mechanical engineering at the technical universities of Munich and Dresden. After a short period in an engineering office, he worked from 1927 to 1938 as research assistant at the department of technical science of management at the Technical University Dresden, an extraordinarily long time in this function. In 1929 he was awarded Dr.-Ing. (PhD), appointed in 1938 the Chair of Machine Tools at the Technical University Hannover (*Technische Hochschule Hannover*) and became the director of the institute with the same name.

This appointment was unusual. Osenberg was not on the actual appointments list, which carried three other peoples' names and which had been sent by the university to the responsible ministry. It is true he was mentioned there, but only as someone who might be a later option for such a position, after further probation in practice. An engineering professor from the Technical University Danzig was first appointed, who was considered an expert in his field. However, before he could start his new position, he died on the way to his new place of activity from, as

⁶ "CV Osenberg," BArch Berlin R26 III, Nr. 43, sheet 33–35; about the appointment of Osenberg see Jung, "Voll Begeisterung schlagen," 188–194.

reported, a heart attack. That death, however, did not lead to the second or third-placed candidates to take over the chair. The appointment of Osenberg was decided in a very rapid arrangement between then rector of the *Technische Hochschule Hannover*, a well-known Nazi activist, and the leadership of the NSDAP in Munich.

Considerable doubts existed about his professional qualifications – as briefly mentioned – already at that time. Thus, his predecessor, the well-respected professor Friedrich Schwerd, resisted the appointment of Osenberg for this reason vigorously. Later, this view has been confirmed by a more or less “neutral” side: “His technical and scientific knowledge were well below par,” as Samuel Goudsmit formulated shortly after the end of the Second World War.⁷ Goudsmit had the opportunity as a member of the “Combined Intelligence Objectives Sub-Committee” (CIOS) of the Allied occupation powers to examine Osenberg in detail during his internment after the war and could therefore consider his person. The CIOS collected from 1945 onwards information on the scientific, technical and industrial capacity of Germany.

However, Osenberg was a member of the NSDAP and the SS since 1933. As of 1936 he was part of the SD (Security Service of the Reichsführer SS) and had access to influential party and government bodies. This seems to have been the true ticket to his professorial career.

“He was inspired by a mania for organization and a passion for card indexes,” noticed Goudsmit in 1945.⁸ He benefited from this mania in the organization of war research after the beginning of the war. After being active in research, particularly for the navy, since 1940, he acted as head of the *Planungsamt des Reichsforschungsrates*, the Planning Department of the Reich Research Council from 1943 onwards, and had a relatively large influence on the German research organizations.⁹ The question,

⁷ Samuel A. Goudsmit, *Alsos. Vol. 1 The History of Modern Physics 1800–1950* (Los Angeles: Tomash Publishers, 1983), 187. First published in New York in 1947.

⁸ *Ibid.*

⁹ The *Planungsamt* was established at Osenberg's suggestion the same year. About Osenberg's activities in the *Planungsamt*: Ruth Federspiel, “Mobilisierung der Rüstungsforschung? Werner Osenberg und das Planungsamt im Reichsforschungsrat 1943–1945,” – *Rüstungsforschung im Nationalsozialismus. Organisation, Mobilisierung und Entgrenzung der Technikwissenschaften*, ed. Helmut Maier (Göttingen: Wallstein, 2002), 72–105.

why at a first glance an ordinary professor from a rather smallish technical university could ascend to such a leadership position, Goudsmit disclosed shortly after the war: “The Security Service of the Elite Guard (SD der SS) [...] also boasted of a ‘cultural’ department, Section IIIc, headed by a Wilhelm Spengler. Osenberg was Spengler’s right-hand man for the sciences. The function of this section was to enforce the Nazi doctrine at educational and cultural institutions. This was done by means of squealers and investigators who reported directly to Osenberg. [...] In addition, Osenberg collected data on their [the scientists’] attitude towards the Nazi doctrine.”¹⁰

Memoranda

Shortly after the beginning of the Second World War Osenberg’s institute was declared as “Wehrbetrieb,” which meant that its work was completely converted to the needs of the war. A short time later, the installation of a “marine development department” and the conversion of the remaining part of the institute into a “Four-Year-Plan Institute for Manufacturing Process” followed.¹¹ Thus, the official acceptance of Osenberg’s projects was given by the head of the Four-Year-Plan Authority *Reichsmarschall* and Reich Aviation Minister Göring. Osenberg stated, however, that the absolute mobilization of scientific capacity for the Nazi war aims in many university research institutions was not the rule and the existing possibilities were only fractionally used. This statement led him to the formulation of several memoranda addressed to the highest party and government bodies, in which he developed his ideas for the utilization of the entire technical and scientific research potential in Germany for achieving the aim of the *Endsieg*. Thus he remained in the tradition of the leaders of the technically educated elite, who were strongly influenced by the experience of the First World War. They repeatedly emphasized “the high importance of technology” for warfare, as they had concluded that

¹⁰ Goudsmit, *Alsos*, 189.

¹¹ “CV Osenberg,” l.c., sheet 34.

the defeat of 1918 had a lot to do with the insufficient use of the possibilities of technical sciences.¹²

Osenberg assessed the devastating German "war situation as a result of insufficient utilization of available capacities of the German research" in his third memorandum, written on December 28, 1943.¹³ He considered in greater detail the – in his view – deficient situation of war research and those measures which in his opinion could solve the problems. This memorandum was submitted to the head of the Party Chancellery Martin Bormann, the Commander of the Air Force and the Ministry of Aviation Göring, and the Reichsführer-SS Heinrich Himmler in early January 1944, and later in the year to the Reich Minister for Armaments and War Production Albert Speer, and the head of the SS Leadership Main Office Hans Jüttner. Bormann was asked to submit the memorandum to Hitler.

The first, very detailed section deals with measures Osenberg had introduced previously in his functions in research management, in order to intensify the war research. Starting from the statement that "no influence on the research and its utilization for military equipment was exerted by the responsible authorities in the first two years of the war,"¹⁴ he pointed out the necessity of activating the "even in the fifth year of the war still available capacities" as "inevitable for the war." The previous measures were inter alia: 1) an "organization chart to activate the entire research" prepared for the Navy, which was implemented; 2) the collection of "600 research centres of German universities" with their human and material resources in a central file; 3) the establishment of the Planning Department of the Reich Research Council for the "identification and summary of war important tasks of defence technology" and launching "the creation of a unit of 3,000–5,000 first-class research-

¹² For example the then rector of the TH Hannover in 1917, see: Königlich Technische Hochschule zu Hannover, *Die Übergabe des Rektorats am 30. Juni 1917* (Hannover: n.p. 1917), 3, located in Archiv der TIB/UniA Hannover, Hann. 146 A Acc. 62/81, Nr. 4. See also Stefan Willeke, "Die Technokratiebewegung zwischen den Weltkriegen und der 'Kulturfaktor Technik' – Technische Intelligenz und 'Kulturfaktor Technik'", ed. Burkhard Dietz, Michael Fessner, Helmut Maier (Münster, New York: Waxmann, 1996), 203–220.

¹³ BArch Berlin R 26 III, Nr. 49, sheet 142.

¹⁴ *Ibid.*, sheet 143.

ers and professionals” as “scientific stormtroopers” (*wissenschaftlicher Stoßtrupp*).¹⁵

Obviously, however, these initiated measures were not as successful as Osenberg had imagined. That brings him to the statement in the second section of the memorandum that still around 41 percent of potentially useful research institutes of the universities were “not used for the war effort.” Besides, he remarks that “according to the state of 7 December 1943 [...] 3721 of the 5000 considered scientists were still found in the army in functions not corresponding to their qualifications.” Almost 80 percent of fully trained engineers were deployed in the army in lower ranks, for example – as Osenberg smugly mentions – a professor of thermodynamics as warden in a military prison, an engineer of high-pressure steam and gas turbines for high-speed boats as a cleaner, and a chemist (a specialist in the field of carbon compounds) as a worker doing simple office work.¹⁶ He also mentions many examples, which in his view proved the “insufficient war effort [...] of the German research:” defects in radar engineering and torpedo development,¹⁷ and uneconomic methods in production engineering. Defining science as a type of weapon, he emphasized: “What unspeakable misery could have been avoided if one had given the researcher and the engineer his basic tools in time, his gun [emphasis Osenberg], with which he had been used to deal for years.”¹⁸

After a critical look at “the progress-inhibiting effects of misunderstood secrecy orders”¹⁹ in the exchange of research results as well as other sections on “the research organizations of enemy states”²⁰ and regarding the “outlined problems in the research sector of the German arms build-up,”²¹ Osenberg developed his ideas as “proposals to performance enhancement of our military research.”²² In order to use “science as a weapon,” Osenberg regarded the following measures as essential:

¹⁵ *Ibid.*, sheet 154.

¹⁶ *Ibid.*, sheet 152.

¹⁷ Goudsmit, *Alsos*, 187.

¹⁸ BArch Berlin R 26 III, Nr. 49, sheet 151.

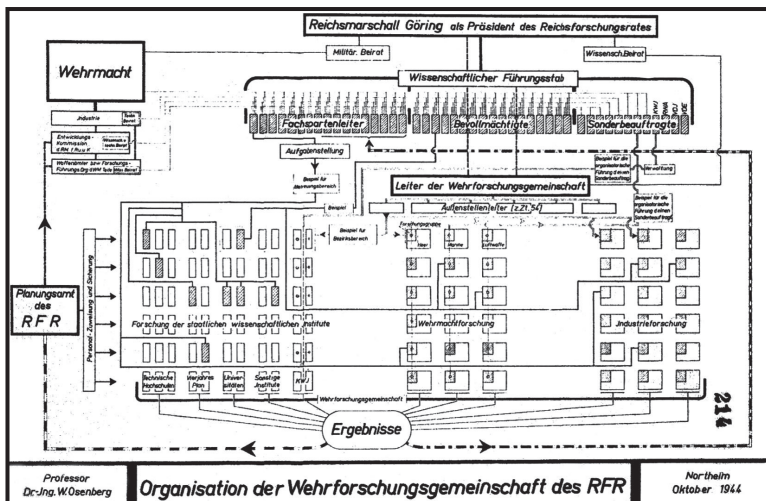
¹⁹ *Ibid.*, sheet 150.

²⁰ *Ibid.*, sheet 155 et seq.

²¹ *Ibid.*, sheet 157 et seq.

²² *Ibid.*, sheet 159 et seq.

- 1) Centralization of research organization in the Reich Research Council (RFR);
- 2) transfer of the personnel and financial responsibility of the main research institutes towards the RFR;
- 3) establishment of a "problem collection point" for military engineering, situated at Osenberg's Planning Department of the RFR, which executed the transmission of tasks to relevant research institutions for solving the problems;
- 4) communication of research results to competent bodies of the Reich Minister for Armaments and War Production and the affected parts of the army;
- 5) establishment of a "research survey" to control the utilization of research facilities and the exclusion of projects not important for the war;
- 6) establishment of a department for the identification of "modern" production processes and implementation and steering of the operation of "scientific stormtroopers," e.g. for production of new weapons.



Organizational chart of the "Wehrforschungsgemeinschaft".
 BArch Berlin R 26 III, Nr. 112, sheet 214

This third memorandum seems to have been hardly noticed, like the first two. Although the Planning Department of the RFR that he had proposed was established in 1943, the “repatriation” of under-qualified scientists employed by the army was initiated and although certain requirements of confidentiality were relaxed, the number of scientists which could restart their research activities were far from the requested 5000.²³ All other ideas remained unrealized until mid-1944.

This brought Osenberg to launch another attempt to intensify the war research. On 31 July 1944, at a time when Germany’s military situation in view of the Allied invasion and the offensive of the Red Army in the east appeared hopeless to every rational thinking person, he wrote the initially mentioned headline with the significant title: “A requirement of total war is the total deployment of our entire research potential.” Following the “decree of the Führer about the total war deployment” and Hitler’s statement that “this war ... (is) not only a war of soldiers, but especially also the technician,”²⁴ Osenberg summarized his visions in the main points, stated more precisely and completed it “to change course of the war definitively.”²⁵

Like a guiding thread the emphasis is throughout the seven page document on the importance of science for the outcome of the war. In the present phase of the war, it was “undoubtedly a question of the survival of the German people, to concede to the engineer, but especially to the researcher the place he deserves next to the fighting soldiers.” In summer 1944, Osenberg had the firm conviction that the war would have developed differently and more successfully for Nazi Germany, if a “total mobilization of under-used energies of German science at the beginning of the war” for the war research had taken place. He assumed that “a total activation of the German war research [...] is still possible” and that “it would have a decisive influence on the course of the war (air war, submarine war and the like).”

Substantially new were his proposals to establish a “scientific advisory board” consisting of three professors with the possibility of reporting to

²³ According to Goudsmit there were 2500, according to Ruth Federspiel less than 4000, Federspiel, “Mobilisierung der Rüstungsforschung” 89.

²⁴ Hitler in a statement on 6 July 1944, cited by BArch Berlin R 26 III, no. 43, sheet 127.

²⁵ *Ibid.*

Hitler directly and participating "at important meetings at Hitler's headquarters and at the Ministry of Speer" as well as the establishment of the so-called *Wehrforschungsgemeinschaft* (Defence research community). While the first wish – to directly report to Hitler – remained unrealized, Osenberg's dream of the *Wehrforschungsgemeinschaft* became reality, at least on paper. On 24 August 1944, about three weeks after Osenberg published his last paper, Göring signed a decree ordering the establishment of the new organization headed by Osenberg.²⁶ Its stated aim was that all "in research engaged state and industrial institutes and laboratories [should be integrated] [...] for the purpose of a uniform personal responsibility" and only those research projects be given the top priority, which were regarded as "decisive for the outcome of the war" by the RFR.²⁷ Osenberg created a beautiful and very detailed organizational chart, he printed well-formulated explanations, and up to the 15th of October, 1944, more than a thousand scientific institutions from universities, industry and the armed forces reportedly wished to participate in "Osenberg's bold plan of organization."²⁸ However, there is no proof of any effect the *Wehrforschungsgemeinschaft* might have had. Instead, it seems to be the last convulsion of a desperately struggling scientific community against the "bitter end."

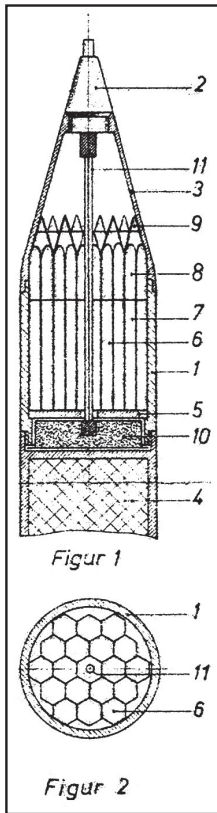
At that time, Osenberg certainly saw the situation differently. Thus, he was still full of energy at the beginning of 1945. On the 21st of January 1945 he sent a proposal for the effective combating against enemy air formations to Hitler directly. For his project of an anti-aircraft missile named "Planet", he had three weeks earlier applied for a patent. Now, at the end of January 1945, and about three months before the final end of Nazi Germany, he had the opinion "that it is still possible to change the air war situation almost instantly by implementing appropriate measures."²⁹ For this purpose he had already received the approval of the "Reichsführer SS" Himmler, who gave him "all the support, especially from the manufacturing sector (concentration camps)" and to have "promised

²⁶ BArch Berlin R 26 III, Nr. 108, sheet 7.

²⁷ BArch Berlin R 26 III, Nr. 112, sheet 216.

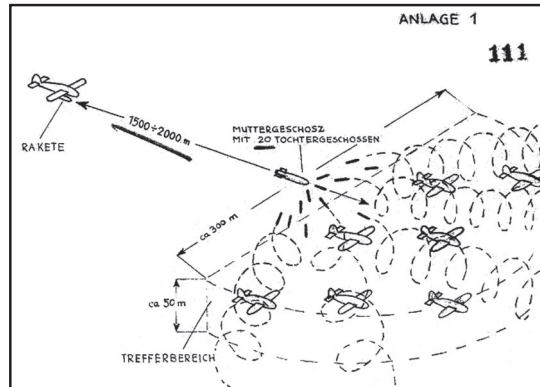
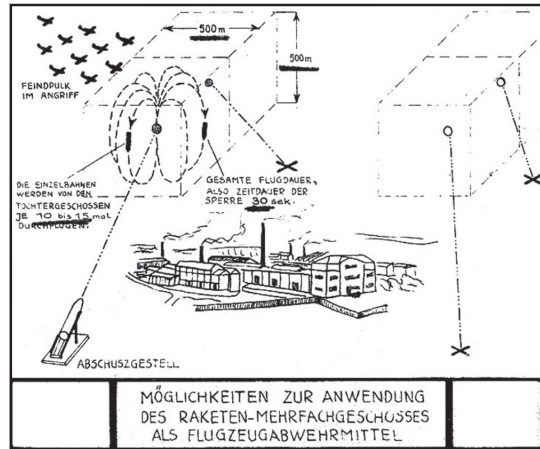
²⁸ Karl-Heinz Ludwig, *Technik und Ingenieure im Dritten Reich* (Düsseldorf: Droste, 1979), 265.

²⁹ BArch Berlin R 26 III, Nr. 49, sheet 108.



Warhead "Planet".

BArch Berlin R 26 III,
Nr. 49, sheet 60



Examples of the use of "Planet".

BArch Berlin R 26 III, Nr. 49, sheet 111.

later use of the projectiles by the Waffen-SS." This new "wonder weapon" should form a "greater area denial and attack system" that could finally stand up to the overwhelming air supremacy of the Allies. The "Planet" rocket consisted of a carrier rocket, transporting up to 24 individual missile units, to attack enemy bombers in screw-shaped formations, able to be launched from land, air and sea.³⁰

³⁰ About Osenberg's further developments of weapons see also: Jung, "Voll Begeisterung," 296-304; Birgit Schlegel, "Waffenentwicklungen unter Professor Werner Osenberg in Hannover (1941-1943) und in Lindau a. H. (1943-1945)," *Northeimer Jahrbuch* (2007): 75-107.

Unlike many of his other proposals, this idea of Osenberg was met with great enthusiasm in the Nazi leadership – certainly in view of the miserable military situation. Thus it was insisted by the highest authority to develop this project as quickly as possible and the necessary investigations were started at *Technische Hochschule Hannover* and at the Aerodynamic Research Institute of the University of Göttingen in the shortest possible time. First results were available on 29 March. Apart from the rather dubious technical feasibility of the project, it was already too late to finalize the project. Several days later, Allied troops reached the location of Osenberg's institute and the Planning Department of the RFR near Hannover and arrested him. In this situation he handed his entire archive over, including the records and card indexes covering the entire German research sector.³¹ This he had done due to his new vision: he thought he could use his knowledge to play a significant role in a new Germany.

Epilogue: after the war

This did not come true, but apart from a longer internment, Osenberg was hardly harmed by his commitment to the Nazi regime. Despite joining the SS and the SD, he was classified in the denazification proceedings as "disburdened" because he "did not belong to an organization declared as being criminal in the Nuremberg trials," as he himself remarked.³² This demonstrably false classification was probably due to his cooperation with the allied departments in investigating the German research capacities.³³ He was, after a certain waiting period, again a professor at

³¹ According to Lind Hunt the United States and Great Britain used Osenberg's list of 15,000 scientists of the Third Reich with a lot of fanatical Nazis "as a recruitment tool for decades," Linda Hunt, *Secret Agenda: the United States government, Nazi scientists, and project paperclip, 1945 to 1990* (New York: St. Martins Press, 1991), 32 et seq. See also: "Examination of Dr. Ing. W. Osenberg," NARA RG 331 UD 13D.

³² Letter of Osenberg to the rector of TH Hannover (27 November 1947), Archiv des Hamburger Instituts für Sozialforschung, PA Osenberg, sheet 92.

³³ SS and SD were classified as criminal organizations at the Nuremberg Trial of the Major War Criminals. Inter alia, only members were excluded who were conscripted or exercised just simple activities like office work. This was not true for Osenberg.

the Technical University Hannover and taught there until his retirement in 1970. He died in 1974.

What people would prefer to remember in later years was not Osenberg's almost fanatical support for the Nazis, but what has been known as "Osenberg action", i.e. the retrieval of scientists from the armed forces to more secure places in institutes. His ideas of "science as a weapon" and the role of scientists as "scientific stormtroopers" were not spoken of after the war, and his actions have been reinterpreted as non-political efforts to secure the continuity of the German research establishment. In 1956 the publication for the 125th anniversary of the university stated that: "These [Osenberg's] measures have succeeded in that not only the human substance, but mostly also the values of the German scientific institutes for post-war tasks were preserved for the benefit of the German economy."³⁴ Nine years later the rector of the university formulated in a congratulatory letter on Osenberg's 65th birthday: "With this activity, you have done a beneficial work in saving the intellectual substance of Germany in the collapse."³⁵ And Osenberg is similarly honoured in the *Catalogus Professorum* of *Leibniz Universität Hannover*, without any indication of his political activities before 1945.³⁶

Bibliography

Archives

BArch Berlin R 26 III (Reichsforschungsrat), Nr. 43.

BArch Berlin R 26 III (Reichsforschungsrat), Nr. 49.

BArch Berlin R 26 III (Reichsforschungsrat), Nr. 108.

³⁴ *125 Jahre Technische Hochschule Hannover* (S.L.: s.a., 1956), 185.

³⁵ PA Osenberg, sheet 267. Osenberg was very proud about this statement. In his answer to the rector he formulated not without adulating himself: "I appreciated very much the fact that you commemorated also the personal protective action on this occasion I executed during the war to preserve the substance of the staff of German scientific institutions. I dare say, the Technische Hochschule Hannover can be proud that this action precisely originated from the local university." PA Osenberg, sheet 268.

³⁶ Horst Gerken (ed.), *Catalogus Professorum 183–2006. Festschrift zum 175-jährigen Bestehen der Universität Hannover*, Band 2 (Hildesheim, Zürich, New York: Olms, 2006), 372.

BArch Berlin R 26 III (Reichsforschungsrat), Nr. 112.

Archiv Hamburger Institut für Sozialforschung, Personalakte (PA) der Technischen Hochschule Hannover über Werner Osenberg (1938–1984).

Archiv der TIB/UniA Hannover, Hann. 146 A (Technische Hochschule Hannover), Acc. 62/81, Nr. 4.

NARA (National Archives and Records Administration, United States) RG 331 UD 13D.

Published sources

125 Jahre Technische Hochschule Hannover. S.l.: s.a., 1956.

Federspiel, Ruth. "Mobilisierung der Rüstungsforschung? Werner Osenberg und das Planungsamt im Reichsforschungsrat 1943–1945," – *Rüstungsforschung im Nationalsozialismus. Organisation, Mobilisierung und Entgrenzung der Technikwissenschaften*, ed. Helmut Maier, 72–105. Göttingen: Wallstein, 2002.

Flachowsky, Sören; Rüdiger Hachtmann and Florian Schmaltz (eds.). *Ressourcenmobilisierung. Wissenschaftspolitik und Forschungspraxis im NS-Herrschaftssystem*. Göttingen: Wallstein, 2016.

Gerken, Horst (ed.). *Catalogus Professorum 1831–2006. Festschrift zum 175-jährigem Bestehen der Universität Hannover*. Band 2. Hildesheim, Zürich, New York: Olms, 2006.

Goudsmit, Samuel A. *Alsos. Vol. 1 The History of Modern Physics 1800–1950*. Los Angeles: Tomash Publishers, 1983 (first published in 1947).

Hunt, Linda. *Secret Agenda: The United States government, Nazi scientists, and project paperclip, 1945 to 1990*. New York: St. Martin's Press, 1991.

Jung, Michael. "Voll Begeisterung schlagen unsere Herzen zum Führer," – *Die Technische Hochschule Hannover und ihre Professoren im Nationalsozialismus*. Norderstedt: BOD, 2013.

Ludwig, Karl-Heinz. *Technik und Ingenieure im Dritten Reich*. Düsseldorf: Droste, 1979.

Schlegel, Birgit. "Waffenentwicklungen unter Professor Werner Osenberg in Hannover (1941–1943) und in Lindau a. H. (1943–1945)," *Northeimer Jahrbuch* (2007): 75–107.

Willeke, Stefan. "Die Technokratiebewegung zwischen den Weltkriegen und der 'Kulturfaktor Technik,'" – *Technische Intelligenz und "Kulturfaktor Technik"*, ed. Burkhard Dietz, Michael Fessner and Helmut Maier, 203–220. Münster, New York: Waxmann, 1996.