

2020-07-22

The occupation of Niels Bohr's Institute

6 December 1943 – 3 February 1944

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...
Truths would be tales
Where now half-tales be truths
Antony and Cleopatra II:2.141

Preamble

The occupation of Niels Bohr's Institute in Copenhagen in December 1943 was a small incident in the perspective of the occupants. But it is a characteristic example of how any individual or group is, in a totalitarian system, at the mercy of the authorities, *in casu* represented by major war criminals.



Niels Bohr's Inst.

German Wehrmacht occupied Niels Bohr's Institute and the adjacent Mathematics Institute¹ on 6th December 1943 and ended the occupation on 3 February 1944, surprisingly without any conditions. The accelerator laboratory was left intact and, unlike the case of Joliot's institute in Paris, there was not even a request that German physicists should have a right to use the Institute's facilities. No formal explanation was given for the occupation, but it was suggested that ongoing research at the Institute might be of interest to the allies and that such results might have been transmitted by Niels Bohr. There are also several independent indications that, both in scientific and political German circles, the Institute's advanced equipment was seen as an important asset for the German nuclear weapons effort. However, the high-level decision making process behind the occupation has never been clarified. The apparent lack of a detailed plan and the unsystematic interrogations

¹ The Institute of Theoretical Physics (Institut for Teoretisk Fysik of Copenhagen University, was founded by Niels Bohr in 1921 (Pais 1991 p. 166ff.) It was often referred to as Niels Bohr's Institute. This denomination was also applied in many of the German documents relevant to the incident of the occupation. For practical reasons, the acronym NBI will be used in the present paper. In spite of the original name, NBI built up laboratory facilities for experimental research. At the time of the occupation, the equipment included advanced apparatus for experimental basic and applied atomic and nuclear research. Funds for a small cyclotron and a high-tension accelerator of the Cockroft-Walton type had been allocated already in 1935. They became operational in 1938 and 1939 respectively. A van de Graaf-accelerator, begun in 1939 and an isotope separator were under construction at the time of the occupation (Lassen 1963; Bjerger 1940, Levi 1963; Pais 1991, ch. 17). For biophysical applications see Levi 1963). The University's Institute for Mathematics had been built with funds provided by the Carlsberg Foundation in direct connection to NBI and was inaugurated in 1934. Auditoria and lecture rooms were used jointly by the two institutes, and the basement was used for laboratories (Ramskov 1995, p. 279, 285, 351). The occupation therefore also included the Mathematics Institute, a fact often left out in contemporary documents, although the relevant subfile of the *Copenhagen University: Konsistorium* records in the National Archives has the title "The Requisition of the Institute for Theoretical Physics and the blocking of the Mathematics Institute by the German Armed Forces" (*Den tyske Værnemagts Beslaglæggelse af Institutet for Teoretisk Fysik og Afspærring af Matematisk Institut*).

and evaluations rather suggest an erratic process with many different objectives and interests.

No hypotheses have been compatible with all relevant known facts. Further, claims for credit concerning involvement leading to the release either lack credibility (being self-promoting in post-war accounts), or at best account for part of the supporting rationale of highly placed political decisionmakers. This article reviews the historical facts and available documents against the background of the political situation at that time. The article suggests that NBI became a pawn in a complicated dispute of powers (*Kompetenzstreit*) among the German authorities in Denmark, reflecting (or deriving from) tensions between the Foreign Office (*Auswärtiges Amt, AA*), the Reich Central Security Office (the *Reichssicherheitshauptamt, RSHA*) and the High Command of the Armed Forces (the *Oberkommando der Wehrmacht, OKW*) in Berlin. An expert commission, led by Werner Heisenberg, presented without any serious investigation an amazingly poor basis for decision, which, however offered the General Governor (*Reichsbevollmächtigte*) Werner Best, arguments for unconditional release of the Institute. The outcome is surprising in view of the pressure from authorities and research organizations to use research facilities from within the power sphere of the Reich. It is argued that Walther Gerlach, just installed as Reichsbevollmächtigt for Nuclear Physics and “Gesamtleiter aller physikalischen Forschungsfragen” ex officio was involved midway in the NBI-matter, and that Commission was briefed that its deliberations should justify unconditional release of NBI as a politically preferred solution

1. The course of the occupation.

1.1: Protests and interrogations



In the morning of 6th December 1943, at 7h30, the Institute for Theoretical Physics of the University was invaded by German police soldiers, at the same time as the Rector [Vice Chancellor] of the University was handed a declaration of expropriation. Dr Bøggild and Mr Olsen, the head of the laboratory workshop, were transferred to Vestre Fængsel. Members of the guard asserted that the Institute would continue its research under leadership of Professor Weizsäcker² from Strasbourg. On the same day, in the afternoon at 15h30, the Rector gave an account of the events and about the protest the University had lodged.

This is the dramatic opening of the report on the occupation of Niels Bohr's Institute from 6th 1943 until 3 February 1944 (Jacobsen & Møller 1944). The quasi casual tone hides the understanding that the situation was by no means innoxious. They would have to deal with members of Gestapo and SD (the *Sicherheitsdienst*), including manifest criminals of war³, who were currently under pressure from

² Carl Friedrich v. Weizsäcker (1912-2007) was a German physicist and philosopher. He had met Heisenberg when still at school in Copenhagen and later became his friend and protégé. After studies in Leipzig he worked in Berlin with L. Meitner and P. Debye. He joined the German nuclear energy and weapons program from its inception in September 1943. In 1942 he became professor of Physics at the new Reichsuniversität in Strasbourg, a characteristically NS-oriented institution. Recently there have been speculations on a quasi-definite breach in the friendship with Heisenberg (Schäfer 2013), which has been contested (Schwarz 2015). In the letter cited in section 1.2 written three months after the incident, there is not the slightest indication of discord.

³ Among Germans placed in Denmark, notably: Werner Best (Reichsbevollmächtigt from 5 Nov. 1942, SS-General); Günter Pancke (SS-General, Höherer SS-und- Polizeiführer from 2 Nov. 1943; Rudolf Mildner (SS-Standartenführer, Head, SIPO/SD, 19 Sept 1943- 4th January 1944); Otto Bovensiepen (SS-Standartenführer, Head of Security Police from 14th January 1944); Hans Wäsche (Studienrat, Section leader in SD). In Danish post-war courts, Best and Bovensiepen

their superiors in Berlin to harden the occupation policies. Vestre Fængsel (the “Western Prison”) was the dreaded detention locus for Gestapo victims.



Werner Best

The University’s Vice Chancellor (Rector Magnificus) J. Nørregaard received a formal document (Requisition 1943), which did not state any reason for the action. The rectorate assumed (Nørregaard 1947, p.53) that the encroachment was related to Niels Bohr’s flight to Sweden in the end of September. There were indications that the occupation authorities suspected that research with military applications was being carried out at NBI, and that results had been transmitted to the Allies. Such speculation was consistent with subsequent interrogation of NBI staff (Bøggild 1944; Olsen 1944).

NBI Physicist Dr. J.K. Bøggild, who apparently was regarded by the officer in command to be acting director of the Institute (after Niels Bohr’s transfer to Sweden on 29 September), and H.W. Olsen, the head of the mechanical workshop, were transferred to Vestre Fængsel. NBI staff were offered working space in the premises of Polyteknisk Lærestanstalt (College of Advanced Technology). Four families – including Bøggild and Olsen – who were resident in the NBI building were supposed to leave the building (Jacobsen & Møller 1944). Olsen was released on 15th December, but Bøggild only on 26th January 1944. As documentation for expected questioning on current research programs at NBI, a list of papers published by NBI staff was compiled (Jacobsen & Møller 1943).

The University reacted immediately to the occupation by sending a protest, which was followed up by a note sent through the Danish Ministry of Foreign Affairs. The natural addressee for the protest was the Reichsbevollmächtigte Werner Best,⁴ who was placed under the German Ministry of Foreign Affairs. The intervention was described as “standing in flagrant disregard of international law” (Nørregaard 1947, p.53).⁵ As a preparation for this note, professor Alf Ross of the Faculty of law in great haste elaborated a legal analysis (Ross 1943, dated 7th December 1943). He referred to the Declaration (*Verordnung*) of 4 September 1943 by the

received death sentences (converted to prison), Pancke and Wäsche 20 years prison, but all were released after few years, on request from BRD. None was ever sentenced for their role in mass deportation and mass murder. Mildner appeared as witness in the Nuremberg tribunal and managed to escape to South America. (Bovensiepen 1945, Herbert 1996; Kirchhoff 2005; Lundtofte 2003, p.248, note 7 &9, Højsteretstidende 94(1950)1-64).

⁴ Werner Best (1903-1989) had been Reinhart Heydrich’s deputy and head of Amt 1 (Organisation, Verwaltung, Recht) in the security police and RSHA (Herbert 1996, diagram p. 580, note 171), where he lead Amt-1 (*Organisation, Verwaltung, Recht*). He advanced to SS-General. He had developed the idea of the *Grossraumordnung* to be implemented in occupied territories by the *Führungsvolk*, including *Flurbereinigung*: “It was Best’s basic conviction that it be necessary and right to expel or destroy all Jews from the German domain of power, a faith that he had not only advocated eloquently and defended theoretically, but had also, since 1935, implemented in practice with formidable energy at any opportunity” (Herbert 1996, p, 271; 371)”. Best maintained that this policy expressed a historical necessity and that it should be implemented without sentimentality. For this purpose, the Einsatzgruppen were created to follow behind the advancing Wehrmacht in the east, murdering civilians in the 100000s. Placed in France (1940-1942) Best was responsible for the mass deportation of citizens classified as Jews. From 5th November 1942, he was *Reichsbevollmächtig* (Plenipotentiary) in Denmark.

⁵ Neither this protest note nor a reply have been found. To all appearance, the action against NBI was instigated by the German Security Police, using the military branch only for the practical management, The third arm of the occupation power, the administration of the Reichsbevollmächtigte, was passive right up to the events 25th -26th January, leading to unconditional release of the Institute.

military commander for Denmark, defining the rights of the occupation forces after the Danish government crisis of 29 August. Remarkably, the declaration in a way accepts the principles of the Hague Convention. Ross states: *The Declaration, in its para. 1 grants the right of requisitions only 'to ensure the execution of assignments for the Wehrmacht in this country. It must be assumed that the purpose of the requisition is to further studies in Atomic Physics aiming at general support of Germany's warfare against the enemy, and therefore the fundamental condition cannot be judged to be fulfilled.* It is surprising that it was considered meaningful to keep up the illusion of legality and decency, well knowing that conventions and agreements were not respected and could be overruled at any time without any justification. Or was it a masque or diplomatic algorithm that had to be maintained for face saving in both camps, with tongue in cheek?⁶

On the way to the prison, Bøggild was asked if he knew Prof. Heisenberg and Dr. Weizsäcker. It was of course known that both scientists had been frequent visitors to NBI and that they even were comfortable with Danish language. Both had, in 1941, lectured at NBI and at the German culture center (Deutsches Wissenschaftliches Institut, DWI), also arguing for the benefit of research cooperation with German institutions, which had been clearly rejected (Frayn 1998; Dörries 2005, Pais 1991 Walker 2019).



H.W. Olsen

H.W. Olsen was interrogated briefly on 11th December in Vestre Fængsel. Questions concerned Niels Bohrs departure and activities in England, research at the accelerators, and publications. He was urged to cooperate with the foreseen German management but refused, which was politely regretted by the interrogator (Olsen 1944).



J.K. Bøggild

J.K. Bøggild was interrogated on 20th December in Dagmarhus, the centre of the German administration, shared with SD and Gestapo (Bøggild 1944). The interrogators were Dr. Wäsche⁷(from SD, the notorious Sicherheitsdienst), a Dr Baer⁸, and an engineer. Wäsche declared the the reason for the action against the Institute was that Prof. Bohr had escaped and had joined the enemy. If Prof. Bohr had stayed in Denmark, or if he had transferred only to Sweden, it would never have happened. Wäsche had noted that Bohr and Hevesy had left Denmark just before the “Judenaktion”- being “only a quarter-Jew” had no reason to feel insecure. Then followed questions on NBI staff and their research, in particular on the use of the accelerators and on the Van de Graaf-machine and the isotope separator in construction, preparation of radioactive samples for biophysical

⁶ It was natural to address the protest to the Reichsbevollmächtigte Werner Best, who was placed under the German Ministry of Foreign Affairs,

⁷Hans O.R. Wäsche (1903-1979) was *Studienrat* and section leader in the Security Police (Copenhagen). His assignment included espionage, infiltration and actions against resistance groups, including “Gegenterror”, i.e., retaliation, torture, deportation and “clearing murder” (where he selected victims suitable for a deterrent effect. His superior in the SS hierarchy was Rudolf Mildner (see note 25, who strangely does not appear in the records of the NBI case, but might have instigated the action on direct order from Gestapo headquarters in Berlin (see section 3.2.4).

⁸ Baer appeared in the interrogation with Bøggild. where he was presented as “physicist”. He later surfaced in the Expert Commission and in the disappearance and return of the Cyclotron logbook. His affiliation was the Reichsforschungsrat (see note 17).



Hans Wäsche

research, and studies of fission fragment from uranium were mentioned. On the question, whether there also [sic!] was research on “Uran-Zertrümmerung” and use of atomic energy, the answer was that such research was impossible with the resources available.

The crucial question was: Had Bohr theoretically found solutions to problems in the use of atomic energy and had Harald Bohr⁹ helped with the mathematics required? The answer given was that basic nuclear data were not known and could only be found by experiment, and that any speculations about contributions by Harald Bohr were unfounded. Finally: Has Prof. Bohr expressed any opinion about the War?



J.C. Jacobsen

On his own initiative, Prof. Jacobsen (NBI) was invited for a meeting at Dagmarhus on 11 Jan. 1944. Dr. Wäsche said that nothing could be removed from the Institute at present. He was expecting an expert commission. As soon as they arrive, there would be a meeting at the institute and then objects requested could be removed. This also concerned some instruments belonging to the radium unit and books and lecture notes. Dr. Bøggild was still held in custody due to “certain informations from abroad”, which Wäsche declined to comment on. Jacobsen asserted that concerning the use of the cyclotron, the emphasis was mainly on radioactive tracers used in biophysical research. Bohr did not participate in experiments at the cyclotron. Referring to a note in Swedish press that Bohr had brought an important invention relating to warfare, Jacobsen claimed it was nonsense.¹⁰ Wäsche believed that Bohr had become a member of the staff of Lindemann [Lord Cherwell], Churchill’s science adviser. Jacobsen thought that Bohr had left because he felt threatened in Denmark. According to Wäsche this was not justified since “neither half-Jews nor mixed marriages are affected”. Finally, Wäsche declared that the confiscation of NBI was unavoidable - since Bohr had indulged in strong anti-German propaganda, and when he escaped to England, the action became inevitable.



Bohr at Cyclotron

The question of access to research material left in the NBI had been raised already on the day of the NBI-occupaton. August Krogh¹¹ sent a letter to the Rector (Krogh 1943) requests material relating to radiation studies led by G. de Hevesy until his recent departure, and a near-complete dissertation by K. Zerahn. There followed requests by Bøggild (who thought he could work during his detention), by mathematics professor B. Jessen (Jessen 1943), and zoophysiologicalist K. Zerahn (Zerahn 1943), who asked permission to get, “books, manuscripts and table silver belonging to professor de Hevesy”. In a letter, dated 8th January 1944, Hans v. Euler¹² in Stockholm (Euler 1944) asked Heisenberg, asked for help to recuperate research material left by Hevesy, who was now working in Eulers Institute. For

⁹ Niels Bohr’s brother, prominent member of the Mathematics Institute.

¹⁰ On 9th October, tree days after Bohr’s arrival in London, The New York Times had published an article with the headline “DR N.H.D Bohr, Dane, has a new atomic blast invention “ (Pais 1991, p. 491). This must surely have been picked up by German intelligence.

¹¹ August Krogh, Nobel Laureate 1920, was a pupil of N. Bohr’s father.

¹² Hans v. Euler-Chelpin (Professor at Stockholms Högskola (later called Stockholm University) was an ardent supporter of NS-Germany (Widmalm 2011 and Maier 2005). Hevesy worked in Euler’s institution after his escape from Copenhagen in late September 1943.

reasons not spelled out, he believed that Heisenberg would have influence on the predicament of NBI.

According to a rumour circulating in Denmark at the time, a resistance group had advanced plans to destroy the NBI to prevent the Germans from seizing the NBI's accelerators for military research. This story appears in most accounts of the NBI occupation (Cassidy 1991, p. 468; Pais 1991, p. 490; Rozental 1964, p. 167) and later reminiscences (Højrup 2000). The two last references claim that explosives had been installed with detonators in the building. Rozental (who was in Sweden at the time), remembers (having been told?) that a member of the Danish resistance visiting Stockholm had disclosed the exact location of the installation in case the agents responsible were to be incapacitated. Christian Møller and/or Ole Chievitz (Professor at Copenhagen University and active in the resistance movement), had the action suspended after tele-consultation with Bohr. Strangely, there is no first-hand evidence of this dramatic story, so it is not possible to decide what its factual background could be. If the rumour circulated before the occupation of NBI, it might have been picked up by an informer, precipitating the German intervention. Heisenberg, in his preparatory notes for the NBI investigation, has two references to the risk of "sabotage" (see Appendix I), a point that probably had to be considered in any strategy.



Chr. Møller



Hans Suess

1.2 The Expert Commission

One week after the occupation, Professor Chr. Møller (NBI) met Hans Suess (Jacobsen & Møller 1944), a physicist working in Hamburg with Paul Harteck, a prominent member of the German Nuclear Energy and weapons program. He was on his way to Rjukan in Norway, where Norsk Hydro had a plant extracting heavy water of great importance for the German nuclear reactor program.¹³ Møller urged Suess to contact Heisenberg, asking him to intervene in favour of the Institute. The message from Suess reached Heisenberg - who claimed not having been informed in other ways - only after his return from holidays on 5th January 1944. According to Heisenberg's account (Jacobsen & Møller 1944) he contacted "the authorities responsible for such matters"¹⁴. He was told that a commission of experts was going to be sent to Copenhagen to establish whether there had been work of military importance carried out in secret at NBI. The group would consist of Heisenberg, Kurt Diebner¹⁵ and Dr. Baer (see note 8). Heisenberg did not comment on how this group had been selected, nor did he comment on its mandate.

¹³ See Wikipedia and Børresen 2012, p.490. At Farm Hall (Bernstein 2001, p. 249) where 10 German physicists were detained after the war, Harteck tells Otto Hahn about a miracle invention for producing unlimited amounts of heavy water. This is one evident example of pseudo-conversations choreographed only to be picked up by the surveillance system, showing that the detainees not only knew that conversations were recorded, but used this knowledge for their own benefit.

¹⁴ Unfortunately, Heisenberg did not mention which "responsible authorities" he contacted. This question, of importance for understanding the decision-making process, will be addressed in the sequel.

¹⁵ Kurt Diebner (1905-1964). German physicist. Member of NSDAP. From 1934 he was employed by the PTR (Physikalisch-Technische Reichsanstalt), which was led by Physics Nobelist Johannes Stark (co-founder of the anti-Semitic *Deutsche Physik* movement) who directed PTR's activities towards military applications. Diebner participated in

Just before his departure for Copenhagen, Heisenberg received a letter (dated 18th January 1944, Weizsäcker 1944) from his friend C.F.v. Weizsäcker:



W. Heisenberg

Prof. W. Heisenberg
Berlin-Dahlem
Kaiser Wilhelm Institute for Physics
20 Boltzmann Street

Dear Werner,

Many thanks for your letter of 9th and for the book on the atomic nucleus, which just arrived. [*Physik der Atomkerne, Eight lectures (1943) – reconstructed from stenographed lecture notes by Prof. Wilhelm Westphal*]. Even if the book on High Altitude Radiation would have been more important, nevertheless I find it gratifying that at least the nuclear book has now appeared. I hope you have by now received the report which I sent you at Hechingen. If you are going to Copenhagen, then I would like to say this: Wirtz wrote me quite confidentially that he had heard from Diebner that the German representation in Copenhagen is thinking of giving me the job of directing the Bohr Institute. He has undoubtedly told you about it already. However, if I am the first to tell you about it, please don't mention it to Diebner. Although it practically goes without saying, I wish to give you definite assurance that I would be decidedly unhappy to take that kind of a post. If this plan is still intended, I would be very grateful to you if you could use your influence to change it. I am intending to be in Berlin from 15th or 16th of February until 18th, and on the 18th to lecture in Laue's colloquium on planets – on verbal communications from my friend Hoffman.

Best wishes,
Your C.F.



C.F. v. Weizsäcker

C.F. v. Weizsäcker, who had been active in the German “Uranium Program” since its inception in Autumn 1939 was, since a year, professor of Physics in the decidedly NS-oriented new *Reichsuniversität* (aka *Kampfuniversität*) in Strasbourg. His dislike of the idea of a transfer to Copenhagen is understandable. NBI would become part of the German “Uranium Program” and obliged to feed neutron data into the calculations, knowing that the effort would not change the dismal outlook for a project, severely underbudgeted in favour of the missiles program. Further, the task would be entirely technical with no basic physics in view, while at Strasbourg he could pursue his scientific interest, including astrophysics.

There is not the slightest indication of any disaccord (see note 2). This letter is obviously confidential, suggesting a favourable intervention, possibly at odds with political interests at play. It is conceivable that the letter was delivered by a

the German “Uranium project” from its inception on 16 Sept. 1939. When KWI-P was taken over by HWA (*Heereswaffenamt*) he was placed as director of the Institute and with a key role in the Uranium program. After reorganization, KWI-P having been returned to KWG, now directed by Heisenberg, Diebner continued to direct the remaining fission studies funded by HWA but controlled by RFR (*Reichsforschungsrat*). Diebner was among the 10 scientists detained at the English mansion Farm Hall the second half of 1945 (Bernstein 2001).



K. Diebner

colleague travelling to Berlin. If sent by mail it could have been intercepted, and interpreted as a lack of personal zeal for the needs of the Reich. There is no reason to doubt the authenticity of this letter. Diebner, as head of the Uranium Project of the Heereswaffenamt (Army Ordnance), would be among the first to be informed about the NBI occupation – he might even have been among the instigators of the operation, and could have multiple reasons to welcome the idea of Weizsäcker as leader of NBI (see section 3.2.5).

On 23th January 1944, Heisenberg wrote to his mother:

Early tomorrow I have to go to Copenhagen for a few days. I am not happy about that trip, since Bohr has fled to Sweden and the Institute has been taken over by our military forces. But exactly for that reason it seems necessary that I clarify what is right, and if possible contribute to a settlement. I believe that I owe this act of friendship to Bohr [*dem Bohr*]; Let us hope that my visit will not be in vain. (Hirsch-Heisenberg 2003, p.331, 23 Jan. 1944).

About the same day, Heisenberg's wife writes from Urfeld:

That you have to go to Copenhagen is not nice. It will not be easy for you, this journey. But your visit to Leipzig will certainly be worse... (Hirsch-Heisenberg 2011, p. 230). [The Heisenberg domicile in Leipzig had been destroyed in a bomb attack.]

Indeed, Heisenberg had reason to be prudent. He was now well established as leader of the Kaiser Wilhelm Institute for Physics, Professor in Berlin, Member of the Prussian Academy of Sciences, recipient of the Kopernicus Prize, and of the German War Cross 1st class – on the recommendation to Hitler from armament minister Speer (Cassidy 1991, p.464 and Walker 2020 p.151). He was evidently regarded to be “politically reliable”. But in the aftermath of the “Deutsche-Physik”-affair¹⁶, as late as May 1939 the RSHA opined to REM (Ministry of Education) - Heisenberg must have been able to give “politically correct” replies to leading questions:

Heisenberg comes from an environment characterized by Jewish approach and method... But in later years the perspective based on race is more apparent in His work. [...] Today H rejects in principle the Jewish foreign influence in the German Lebensraum (Hentschel 1996, Doc. 73).

Any suggestion of friendship corruption or other infringements on the NS-Regime's primary interests, would be difficult to handle and consequences unforeseeable.

Arriving in Copenhagen on 24th January 1944, Heisenberg had sketched four possible strategies on the reverse of the letter from Euler received a week earlier (Appendix 1). They could satisfy all tastes, ranging from complete butchering of the Institute [*vollständiges ausschlachten*], which he regarded as unpracticable, to

¹⁶ *Deutsche Physik* was an anti-Semitic movement launched by Nobel Laureates Philipp Lenard and Johannes Stark (Cassidy 1991, p.351ff). Its epistemologic foundation was the antithesis of pragmatic (experimental, creative, Aryan) and Dogmatic (speculative, destructive, Jewish) Physics. Heisenberg had been attacked in 1937 in the SS-journal *Das Schwarze Korps* for being a “White Jew”, but was cleared by none less than Himmler, albeit with the ominous argument “we cannot afford to lose or kill (*verlieren oder totmachen*) this man who is relatively young and can contribute new blood (Himmler to Heydrich, 21th July 1938).

release practically without conditions, which he judged having too poor profitability [*zu geringer Nutzeffekt*]. Perhaps these four points summarized discussions with “the authorities” and Diebner. Interestingly, although the Commission was to investigate possible illegal war-related research at NBI, all points relate to the potential use of the accelerators and the Institute’s future.

In the afternoon Heisenberg had a meeting at Dagmarhus with Wäsche, presumably to be informed about the situation as viewed by the security police (SD). In the evening he met Jacobsen and Møller in the latter’s home. He presented three of his four options – the “butchering” was not mentioned. After discussion, for presentation to Nørregaard the following morning, three slightly modified formulations were produced, plus a fourth, which suggests that the Institute be released without other conditions than that German colleagues may pick up some surplus goods of no use to the Institute - this may be an instance of black humour of the times (Appendix II).

At 10h the following morning (25 Jan.) Jacobsen and Møller discussed the situation with Nørregaard, agreeing that no condition on direct cooperation with German research institutions would be acceptable. At 11h followed an inspection of NBI premises. Present were the members of the Commission (Heisenberg, Diebner and Baer), Wäsche (representing SD), Schacht (representing the Reichsbevollmächtigte), Jacobsen, Møller, and Bøggild (on leave from Vestre Fængsel). Of main interest were the accelerators. The question of possible research with military applications was apparently not raised. In a private conversation with Jacobsen and Møller after the inspection, Heisenberg mentioned that he now thought that release of NBI without conditions might be possible. At 14h Jacobsen again reported to the Rector.

As Heisenberg was to meet Best in the evening (Bøggild 1944), this afternoon was the only opportunity for the Commission for internal deliberations on its mandate, using the information gathered during the morning’s inspection.

Participants in the evening meeting were, according to Best’s diary:

Abend: SS Standartenführer Bovensiepen, Gesandtschaftsrat Schacht, Prof. Dr. Heisenberg, Kriegsverwaltungsrat Dr. Diebner [sic!] (Oberkommando der Wehrmacht), Dr. Baer (Reichsforschungsrat und Planungsamt). (Bei uns.)¹⁷

The meeting was held in Best’s residence. Present were the three members of the Commission. Assuming that the Commission had met in the afternoon to elaborate

¹⁷ Note that Wäsche was not present. Nor was there a representative of the Wehrmacht. SD was represented by Otto Bovensiepen (see note 19), the new head of the security police, replacing Mildner (see note 25) since 4th January. Diebner was not in OKW (Oberkommando der Wehrmacht), but in HWA (Army Ordnance). This is the only instance where Baer’s affiliation is mentioned, viz. the Planungsamt of RFR (Reichsforschungsrat), the national research funding organization recently placed under Reichsmarschall Goering. The RFR “Planungsamt” was created in June 1943 to keep records of scientific and technical staff and to further R&D in armament-related areas. Baer thus was working under Werner Osenberg (see note 31 and Wikipedia). RFR apparently had an interest in the NBI-case, since Baer was sent to participate in the December interrogations in Copenhagen, before the idea of an expert Commission had been launched. He also was responsible for the disappearance and later reappearance of NBI’s cyclotron logbook, which apparently was thought to hide information on secret experiments (see section 1.3)

on a strategy, this evening meeting provided an opportunity to eliminate any political discord in a matter, that surprisingly at this point turned out to be regarded as of little importance from the German point of view. The evening discussions must have been summarized after the meeting. No formal report of the Commission has been found, but it is likely that what was handed out in the two meetings the following morning (26th January) might have been *in lieu* of a formal report, and that it was identical to the “Report” handed over to Jacobsen and Møller by Heisenberg later the same day (Heisenberg 1944a, translation in Section 1.4).

1.3 Endgame



G. Pancke

Interesting information comes from Best’s diary for 26th January:

Morning meeting in Dagmarhus with Duckwitz, Oberregierungsrat Dr. Heisenberg, Hauptbanf. Teichmann, Hptm. Daub, Presseref. Schröder.

This was apparently an information meeting explaining the NBI case, where certainly the Commission’s arguments were presented

9h.-10h Inspection of the Niels Bohr Institute (Blegdamsvej 15) with Dr Heisenberg, SS Gruf. Pancke¹⁸ and SS-Staf. Bovensiepen.¹⁹

To this last meeting, Best had invited, apart from Heisenberg, only the two highest functionaries of the Security Police, and not the other two members of the Commission. Perhaps the idea was to ensure that the security police, which had been the active agent throughout the occupation, would be committed to Best’s policy. The Wehrmacht’s absence seems to confirm that its role had been exclusively to carry out the practical management of the occupation, on the request of the security police.



O. Bovensiepen

This second “inspection” must have been extremely brief. Already at 11h30, Nørregaard received a message from the Danish Ministry of Foreign Affairs, that NBI would shortly be released without conditions. At 15h30 Heisenberg met Jacobsen and Møller at the Polyteknisk Lærestanstalt He presented a unsigned and undated “Report” which could be a summary of the Commission’s deliberations. Actually, no formal report of the Commission’s work has been found. But the text seems to have been used in justifying the release of NBI without conditions, as it recurs in the press release of 1st February (Release 1944; see Appendix III) published widely in the press the following day. It opens with the statement:

¹⁸ Günther Pancke (1899-1973). NSDAP 1930; SS 1931. SS-Sturnhauptführer 30 Jan. 1933; SS Obergruppenführer (Geneal). Head of SS Rasse-und-Siedlungsamt (RuSHA) 1938-40, planning “radical measures” for extending the German *Lebensraum*. Höherer SS-und Polizeiführer (HSSPF) in Danmark 6 Oct.1943, placed directly under Himmler, to fight resistance with counter-terror and “clearing murders”. “Pancke’s name keeps resurging among individuals deeply involved with the *Endlösung* and extermination” (Lundtofte 2003 p. 56). RuSHA was the object of the 8th subsidiary Nuremberg tribunal. Pancke escaped indictment in Nuremberg.

¹⁹ Otto Bovensiepen (1905-1979, NSDAP 1925, Gestapo 1933. Head of Gestapo Berlin 1941-43 with assignment to deport the city’s Jewish population (ca 50.000). In Denmark, as head of Security Police (replacing Diebner from 4th January 1944) he organized the sharpening of measures against the resistance movement by counter-terror (*Gegenterror*) ordered by the Führer headquarter, including torture, deportation and murder. B was never held accountable for his part in the Holocaust. (Bovensiepen 1945; Kirchhoff *et al* 2005; Lundtofte 2003, p.248 notes 7&9)

Professor Niels Bohr's Institute released – Niels Bohr's escape was uncalled for. Scientific investigation at the Institute has led to termination of the requisition.²⁰

The formal release document (Reinstatement 1944) is also dated 1st February) and addressed “To the Danish State, represented by the Rector of Copenhagen University”, with copy to the *Reichsvollmächttige in Dänemark*, but not to the Security Police. It states laconically that the Institute “stands immediately and to its full extent at the disposal to the University”. It is signed by the *Wehrmachtintendant Dänemark* (illegible signature). The formal end of the occupation followed on 3rd February at 15h30. On the German side a captain and a lieutenant, on the Danish side Jacobsen and Møller, with an authorization from the Rector. Considering the involvement of two SS-Generals in the matter, this was a demonstratively minimal attentiveness, demonstrating that the matter was now filed as insignificant.

Soon after the end of the NBI-occupation, Heisenberg was again invited to Copenhagen. On 19th April 1944 he lectured at the DWI and then at NBI on “*The smallest constituents of matter*” [Die kleinsten Bausteine der Materie]. He had lectured on the same topic in December 1943, when visiting the infamous General Governor Hans Frank in his residence in the castle of Cracow (Walker 2020).

Heisenberg's perspective is summarized by Elisabeth H. (Heisenberg 1984, p. 82):

In September 1943, Bohr had fled from Denmark, taking a small boat over the sound by night, apparently fearing a threatened pogrom against the Jews. Subsequently, the SS seized his institute, and his colleague, Dr. Böggild, was arrested on suspicion of “conspiracy with the enemy.” Heisenberg had been informed of these events through circuitous routes, and he travelled to Copenhagen immediately and exerted all his influence to secure the freedom of Dr. Böggild as well as that of the Institute. After a few days of intense efforts, he managed to change the mind of the commanding officer, Dr. Best. Both Dr. Böggild and the Institute were released from custody, and the Copenhageners could once again resume their work without interference. However, Heisenberg had to pay a price here, too: he had to talk to all of the important people of the occupation forces and the Gestapo, he had to eat and drink with them, and had to move about as though he were one of them; there was no cheaper way.

A final incident ends the story. The logbook of the cyclotron, with records of all runs, had been confiscated by Dr Baer, RFR's member of the Commission, who had also participated in some interrogations. He might have been looking for evidence of “secret” fission research, and perhaps he had lost interest after the precipitated decision of the release of NBI. The book had surfaced on his desk. Instead of sending it to the Institute, for unknown reasons he forwarded it to Heisenberg, who decided to take a formal route, sending it by diplomatic mail to Gesantschaftsrat Schacht (in Best's administration) for transfer to NBI along with an attached letter to Jacobsen (Heisenberg 1944d):

²⁰ The press release is published in Alkil 1945-46, vol. 2, p.867. It is reproduced here as Appendix III (in English translation).

Dear Mr Jacobsen,

18.5.1944

After lengthy investigations, Dr. Baer successfully retrieved, among other documents, the cyclotron book which you requested. I will now send the book in the courier's bag to Gesandtschaftsrat Schacht who, I trust, will kindly make it reach you in one way or another. Let us hope that many successful experiments at the cyclotron will be recorded in the book.

I still have the best memories of the nice days in Copenhagen [the visit in mid-April] and I always hope that it will not take too long until we can again discuss Physics in Copenhagen under peaceful conditions.

1.4 The Report

As mentioned before, an unsigned and undated "Report" handed to Jacobsen and Möller on 26th January probably is to be regarded as the outcome of the Expert Commission's summary of its own considerations and discussions with German occupation authorities, *in casu* the Reichsbevollmächtigte and the Security Police. The arguments seem to have been used to justify the decision to release NBI without conditions, and to formulate the press release concerning the decision. The text is given in Danish translation in Jacobsen&Møller 1944. The original has not been found.

12

Report

The Institute was commandeered since there had been suspicion whether there had been carried out investigations of importance for warfare, and that results from such research had been transferred abroad in the context of Professor Bohr's departure.

The investigations pursued at the Institute have shown that there is no justification for such suspicions; All work carried out at the Institute has consisted of general scientific research.

Considering the Institute's future, its use for studies with direct application in warfare is excluded, in part due to local prerequisites, partly since such activities would require large amounts of material which the Institute is not presently in a position to acquire.

There have been discussions on the possibility of running the Institute under German management. The only possible candidate as Director is Professor Bothe,²¹ but he himself as well as his 4-5 assistants are so



W. Bothe

²¹ Walther Bothe (1891-1957) German Physicist. Employed by PTR (Physikalisch-Technische Reichsanstalt) 1913-30. Head 1934 of Physics department of KWI for Medical Research. Conflict with Deutsche Physik-movement. Participation in the German Nuclear Energy and Weapons Program (Uranverein). Nobel Laureate 1954.

strongly involved in research related to military applications that a transfer to Copenhagen is out of the question.

However, it is important that scientific work continues, since the results will also benefit Germany. It is therefore reasonable that the Institute is returned to the Danish scientists. The possibility that research results might reach enemy countries on clandestine routes must be regarded as non-existent, *considering the persons responsible* [emphasis added].

Comments on the Report:

It is easy to argue against the validity of these statements:

- 1) Various studies, both theoretical and experimental, of neutron-induced fission had been made and published, also by members of NBI. Obviously, theoretical problems could be addressed, and the equipment could be used for fast neutron physics. The inspection had not provided any basis for concluding that no such research had been done, albeit on a small scale.
- 2) Evidently, the institute could not develop nuclear weapons, but a conclusion that it could not, in principle, contribute ideas or empiric results of any importance is not convincing.
- 3) The assertion that Bothe (or Weizsäcker, as had been mentioned on several occasions) would be the only conceivable German research managers able to direct the Institute towards primary German interests is plainly not correct.
- 4) Without any control, it would be impossible to make sure that no “secret” theoretical and empirical research programs would be pursued in the Institute, the results being transferred to the allies.
- 5) It is worth noting the strange expression “*considering the persons responsible*”, as an argument that German interests will not be transgressed. It has a characteristic flavour of an anti-Semitic insinuation, designed to please and to convince the German authorities about the politically correct judgements of the Expert Commission. The meaning is clear: Bohr had, characteristically, joined the enemy, but such treason would be unthinkable with respect to his remaining “Aryan” colleagues who were now in charge.

When reviewing the sequence of incidents, one is left with the impression of lack of focus on purpose and planning, and of unclear authority and command lines, resulting in *Resortstreite* [disagreement on delegated authority] and erratic decision making. The superficial interrogations, investigations and evaluations did not provide any new insights or conclusive evidence useful for rational decisions, and the statements of the Report are not really tenable.

From the very beginning, NBI staff must have perceived themselves being at the mercy of arbitrariness in charges and judgments. Fortunately they did not know the full antecedents of their adversaries.

After a rather alarming prelude, the NBI case evolved into just a small incident in the perception of the German occupation administration. There were several interests at play: a charge of research related to nuclear weapons, German interest in access to advanced research equipment, harsher retributive policies against resistance, and the obsessively pervasive quest of anti-Semitic manifestations. To explain the erratic decision making in the NBI case, it must be seen in its larger context of changes in the power structure following the political crisis of late August 1943.

2. Political turbulence in Autumn 1943

It is surprising that there was a delay from April 1940 (the German occupation of Denmark) until end of 1943 before the value of NBI for German nuclear weapons research became a practical issue. The need for experimental data for knowledge about chain reactions was evident when the “Uranium Club” was organized in September 1939. HWA had appropriated KWI for Physics, and its leader Peter Debye was compelled to leave, Diebner (see note 15) being installed as project coordinator (Walker 1989, p. 19ff); Bernstein 2001, p. xxii). In Summer 1942 the program was reorganized, KWI-P was returned to KWG (with Heisenberg as director) and the nine participating sub-projects were loosely coordinated under RFR (Walker 1989, p 52 ff.). In a period of four years, systematic rejection by NBI of research cooperation with German research institutions had been accepted. It is the timing that suggests looking at political turbulence in Autumn 1943 to explain the strangely erratic decisionmaking in the NBI case. Two factors are relevant: The Kompetenzstreit (dispute of power and assignment between the *Reichsbevollmächtigte*, the Security Police, and the *Wehrmacht*, and the directives from Berlin demanding state terror in response to resistance activities. The events on the Danish scene are described in greater detail in Rosengren (1982) and Herbert (1996).

After the occupation (9th April 1940) Denmark retained a relatively wide measure of sovereignty within the German administration. When Werner Best took over the role of *Reichsbevollmächtigt* (Governor) on 5th November 1942, the situation was compatible with his principle of *Bündnisverwaltung*, one of several possible forms of administration of occupied countries in his vision of *Völkische Grossraumordnung* foreseen for Europe. But the arrangement broke down in August 1943, when public disturbance led to a crisis, the government resigned and a state of military emergency was proclaimed (29 August, ending on 5th October). Best tried, without success to strengthen his position through his contacts in Berlin, and by initiating an action to eliminate the entire population of individuals regarded as Jewish according to NS taxonomy. The *Judenaktion* was ordered formally from Berlin, taking place 1-2 October, and was a failure, as over 90 per cent of persons targeted escaped to Sweden (Ak1979a, no 287, 8th Sept 1943). On



F.A. Six

25th October, Best had a telephone conversation with his friend F.A. Six,²² whom he knew from their parallel activities in SD and RSHA. By claiming that the single purpose of the action had been to make Denmark *judenfrei*, it should be presented in Berlin as a success (Herbert 1996, p. 370). Actually, Best had reported already on 2nd October “Vom heutigen Tag kann Dänemark als entjudet bezeichnet werden” followed by a vitriolic anti-Semitic statement. (Akten 1979b no 7, 2 Oct. 1943).

This interpretation was not accepted in the Führer headquarters. In order to radicalize and control the repression against resistance, Himmler appointed as HSSPF (Höherer SS und Polizei Führer), G. Pancke²³ (from 6th November 1943), a position on the same level as Best. i.e. SS-General, but placed directly under Himmler. Thereby a triumvirate was created: Military, Police, and Civil Administration, with different ambitions and powers, corresponding to relations and tensions between the corresponding organizations in Berlin (OKW, AA, and RSHA), (Rosengreen 1982, p.59). This organization, characterized as *bewusst unklar* (deliberately vague) was introduced as a means to maintain multiple command lines and split or unclear loyalties. Having imposed this situation, Himmler sent paternal advice to Best (around 12th October: *Haben Sie die Grösse darüber nicht traurig zu sein. Die Form der Organisation ist so eine bessere* (Herbert 1996, p. 619, note 152). While formulated in courteous terms, it could not be understood otherwise than an order not to interfere with reprisal actions requested from RSHA.

On 28th November²⁴, Pancke was summoned to Himmler, who gave instructions about *Gegenterror* (counter-terror), comprising “clearing murder” directed at prominent Danish citizens of high visibility in public life, as retribution for resistance actions, according to principles coined by Hitler: “Terror can only be combatted by counter-terror. On the contrary, sentences of marshal courts only create martyrs and national heroes” (Rosengreen 1982, p.108; Herbert 1996, p.379). On 30th December, the triumvirate *in toto* were ordered to the *Wolfschanze* in East Prussia, where the three generals were castigated in humiliating terms by Hitler, Himmler and the leaders of OKW (Keitel) and RSHA (Kaltenbrunner). The agenda was *Gegenterror*.

²²Franz Alfred Six (1909-1975). NSDAP 1930, SA 1932; SS/SD 1937; SS Brigadenführer (General) Jan. 1945. Dr.Phil 1934. Prof (Berlin) 1940 in Auslandspolitik u. Auslandskunde. In 1939 Head of SD Div. *Gegnerforschung & Weltanschauungsforschung* upgraded to Amt VII in 1939, when SD was absorbed in RSHA. Organizer (with W.Best) of *Einsatzgruppen* for eliminating elites and undesired population groups in occupied areas. Leading *Vorkommando Moskau* (part of Einsatzgruppe B) in Summer 1941. From 1943 leader of section *Kulturpolitik* in AA (incl. research cooperation within the German power sphere). Actively participating in implementing the *Endlösung* by promoting the interests of RSHA in AA, remaining closely attached to his old Amt VII. “Six made a major contribution relative to Jewish and racial policy as well as anti-Semitic persecution by the SD. His role in this was largely suppressed after the war, with his subordinate A. Eichmann much more visible” (Bartrop 2019, p. 257).

²³ See note 18

²⁴ Herbert by mistake gives the date 5th December (Herbert 1996, p.620, note 157). See also Rosengreen 1982, p. 77 and Himmler’s agenda notes). The date is important for the account of the action against NBI on 6th October. (Private message from J.T. Lauridsen)

The new orders from RSHA had immediate effect, despite the Reichsbevollmächtigte's hesitations. On 4th December, a German soldier was shot in central Copenhagen. Pancke, on his return, immediately ordered his deputy Rudolf Mildner²⁵ to have three detained Danes shot "under attempt to escape" (Lundtofte 2003, p.161, Rosengreen 1982). On 4th January 1944 followed the most well-known example of a "clearing murder", of the writer-clergyman Kai Munk, and on 6 January a Copenhagen surgeon was shot in his practice (Kristensen 2005). In the following year, squadrons controlled by the security police through Mildner's successor Otto Bovensiepen (see note 19), committed more than 100 "clearing murders"²⁶

It is to this background of the power structure and policies in the wake of the August-1943 crisis that the NBI case has to be understood. A number of further circumstances have to be considered.

3. Further elements of background

3.1 Around Bomb Physics

The historian of science Cameron Reed notes:

In summary, by the time of the Battle of Britain [June-October 1940], understanding of the roles of different isotopes in the fission process, measurements of secondary neutron numbers, appreciation of the prospect of breeding plutonium, and preliminary analyses of criticality conditions had laid the groundwork for realistic appraisals of the possibility of developing nuclear weapons. Two routes to such weapons looked feasible: isolating Uranium-235, and synthesizing Plutonium-239. In Berlin, London, and Washington, high-level officials had been alerted to these possibilities (Reed 2018).

By mid-1941 it was possible, by correct use of mathematics for description of neutron diffusion and available scattering, absorption and fission data, to get fair estimates for bomb construction, even if numerous technical problems had to be solved. It is therefore unlikely that such calculations had not been correctly performed in the German camp. In commenting on the reaction among the

²⁵ Rudolf Mildner (1902 - ?). NSDAP 1931; SS-Standartenführer (Colonel)1943. Head of Gestapo in Katowice with jurisdiction over Auschwitz, where M was head of the police tribunal (Martial Court) where he operated "both as a brutal interrogator and judge in the infamous "Block 11" (Rees 2005, p.59). Head of the security Police in Denmark (19 September 1943 – 4 Jan. 1944) with assignment to deport the entire Jewish population in Denmark (in NS-taxonomy) and to ruthlessly fight Danish resistance. Regarded by Himmler, after the failed *Judenaktion* in late September 1943, as "a man with bourgeois inhibitions" (Rosengren 1982, p.78), he was replaced by Otto Bovensiepen. The judgment is contradicted by Best's report to Ribbentrop (Akten 1979b, No. 130, 14 Dec. 1943) on the past three months: 424 detentions for illegal activities (mainly communists), of which 184 deported to German concentration camps; 11 death sentences, 8 prisoners killed at attempted escape; Large stockpiles of weapons seized." M ended his NS career as Head of security police in Vienna. It is strange that Mildner is not visible in the events of the NBI occupation, other than through his statements in the Nuremberg Interviews (Goldensohn 2004), although Wäsche's interrogations must have been carried out on orders from Mildner.

²⁶ For a complete list see Wikipedia with search string *clearingmord*

detainees at Farm hall after the news about Hiroshima, that Heisenberg had not had such calculations performed

WH: ... Quite honestly, I have never worked it out as I never believed one could get pure “235”. I always knew that it could be done with “235” with fast neutrons ...

Bernstein even suggests that “he had not really understood bomb physics” (Bernstein 2001, p.128; 130-31 &195). This judgment is contradicted by the lecture Heisenberg held only a week after the event (Bernstein 2001, p.130 &191ff.), but it also seems inconceivable that he would have, in a matter of such importance, stopped short of the theoretically evident route. Much more likely is his statement in Summer 1942 to Speer that the physics was known but the technical problems the real obstacle (Rhodes 1986, p. 404). Given this situation, it seems obvious that data obtainable by NBI accelerators would not make a difference for the German nuclear weapons program, the main challenge being production of sufficient quantities of fissile material. However, this does exclude that there would be research units where the equipment would be welcome.

Niels Bohr had from the moment of the report on discovery of nuclear fission made important theoretical research, culminating in a pathbreaking paper (Bohr & Wheeler 1939). Considering his reputation it is understandable that it was widely believed that he had theoretical results, supported by data from accelerator experiments, of importance to nuclear weapons developments. Bohr was therefore regarded in public understanding, as a unique asset in the nuclear race. This was the background for Weizsäcker’s visit to NBI in March and again in September 1941 with Heisenberg, both at the time involved with the German nuclear weapons project – the latter event including the famous meeting with Bohr (Frayn 1998; Dörries 2005; Pais 1991, p. 481ff.). The visitors had been annoyed noting the adverse attitude of their colleagues at NBI to research cooperation with German institutions, which in their view would be in the interest of the Institute.

17

In his report on the March-1941 trip Weizsäcker states: *I was able to study the experimental and theoretical work at Bohr’s Institute, investigations of uranium and thorium fission by fast neutrons and deuterons. I have brought back copies and manuscripts of the work that is of great interest for our current investigations. The technical production of energy from uranium fission is not being worked on in Copenhagen...*”, (Archive of MPG, Berlin, here quoted from Walker 2019). It is interesting that the material was not classified, although fission research had in general been classified since Spring 1940. Exactly which documents were handed over is not clear. There were recent publications on fission fragments, on deuteron-induced fission in Uranium and Thorium, and on neutron-proton scattering cross sections (Pais 1991, p.458 and printed list of NBI publications).

It is notable that the interrogations of NBI staff in December 1943 did not produce any information beyond Weizsäcker’s report from March.1941. The German occupation authorities simply hung on to the idea that Bohr’s escape to the enemy was a peril, so much more threatening in Autumn 1943, as the German program had lost momentum over a year earlier. Weizsäcker must have been an obvious candidate to manage the work of NBI, as he was known as a protagonist of the German Uranium Program, familiar with the Institute, unquestionably politically

reliable – and he even was fluent in Danish language. He was, since over a year, professor of physics at the *Reichsuniversität* (aka *Kampfuniversität*) in Strasbourg, which had explicit NS orientation.

3.2 Rumours, queries and professional interests

3.2.1. The Kiel Gestapo files (Kiel 1943)

The news in Swedish news media of Bohr's arrival in Stockholm and subsequent transfer to London, alluded to in the interrogations of NBI staff, was picked up by the Gestapo, as is evident from two cards from the Kiel Gestapo files (private message from J.T.Lauridsen):

5.10. FS von KO Schweden. Lt Schwed. Presse vom 3.10.1943 ist der Däne Niel Bohr, Schwed. Nobelpreisträger, als Flüchtling nach Stockholm gekommen. B. wird als Atomphysiker bezeichnet. 237/43/III F gKdos

15.11.: FS von KO Schweden: Lt schwed. Pressemeldung vom 12.11.43. ist der Nobelpreisträger Professor Niels Bohr kürzlich mit einem seiner Söhne, der sich ebenfalls mit theoretischer Physik beschäftigt, in England. Einer der ersten, mit denen Prof. Bohr in Verbindung trat, war Lord Cherwell, der Onkel des dän. Verfassers Kelvin Lindemann und Churchills erster Ratgeber. 261/43/III F gHdos aus Krak's Blaa Bog 1942.

.....[the reverse of this card is missing].

Churchills Persönlichem Mithelfer lord Cherwell, die in direktem Zusammenhang mit seiner Reise standen. Man glaubt zu wissen, dass der Anlass zu seiner Reise Sprengstoffforschungen sind, 57/44/III F g U. am 12.1.44 an III Wi abgegeben.

Comment: 1) The title *Nobelpreisträger* was pejorative after the débâcle around Carl v. Ossietzkys peace prize in 1935. 2) Lord Cherwell (Frederick Lindemann) was Churchill's science adviser and Physics professor at Oxford. 3) The intelligence claims that Cherwell is the uncle of a Danish writer, whose full name is Kelvin Thyrbø-Lindemann (1911-2004). The coincidence of names is purely spurious²⁷. 3) it is possible that the Kiel information came from Copenhagen. The Gestapo officer, H. Wäsche, who was the principal interrogator, had personal contacts with his colleagues in Kiel (Kirchhoff 2005).

Actually (Pais 1991, p.489), Bohr arrived in London on 6th October 1943. In the same evening he met James Chadwick (discoverer of the neutron) and John Anderson (member of Churchill's cabinet and responsible for the British nuclear weapons project, code-named Tube Alloys). Bohr might well have met Lord Cherwell, whom he knew from the Solvay conferences, but Pais does not mention this.

²⁷ Kevin L. had joined the Danish resistance. On 30 September 1943, the day after the Danish government crisis, the whole edition of his recently published novel *To those who will defend freedom* was confiscated. In February 1944 he fled to Sweden after having escaped an attempt of murder (Wikipedia).

3.2.2. Eberhard v. Thadden, AA Judenreferent

In Best's correspondence there is a letter from Eberhard v. Thadden²⁸ dated 12th October 1943: "*Wegen zahlreichen Anfragen nach Niels und Harald Bohr erbitte Drahtbericht ob genannte als Juden erfasst oder noch in Kopenhagen sind.*" (Lauridsen 2012, Vol. 4, Nr 274). [Due to numerous inquiries I request report by telegram whether those mentioned have been arrested or are still in Copenhagen.]

The reply is dated 13th October: "*Niels und Harald Bohr waren laut Auskunft des Befehlhabers der Sicherheitspolizei nicht in der Festnahmeliste vermerkt. Sie sind jedoch aus Kopenhagen verschwunden, ohne das bis jetzt etwas über ihren Verleib bekannt worden ist*" (Lauridsen 2012, Vol. 4, Nr 281)

[According to message from the Head of Security Police, Niels and Harald Bohr were not included on the list for arrests. However, they have disappeared from Copenhagen, without anything concerning their whereabouts is known.]

Comment: Thadden's interest was certainly not benevolent. The Security police officer mentioned must have been Mildner, who certainly knew (as did Best) about the information on Bohr's arrival in Stockholm, published in Swedish press on 3rd October (see Section 3.2.1). It should be recalled that questions about Bohr were recurrent in the interrogations following the occupation of NBI, and that, as I argue, Bohr's absence is significant in the subsequent release of NBI

19

3.2.3 Requesting an expert commission

An internal memorandum from AA (Reichelt 1944) has bearing on the NBI incident. It is dated 12th January 1944 and concerns "*Scientific material in the building of Sysisk Kemisk Institut [sic!] in Copenhagen. Section Inland 1(I) has received a message dated 6th January from Ausland (2/III) and forwards it for consideration. However, since the issue is an evaluation of the material, which presumably cannot be carried out by Inland 2, nor is within its assignment, it seems necessary to involve another organization – the Heereswaffenamt is suggested – for the task. It is requested that Ausland (2/III) will receive a provisional notification about the actions taken.*

Comments: 1) Fysisk-Kemisk Institut, which was directed by J.N. Brønsted was a neighbour of NBI. It must be assumed that the case concerns NBI, and that we have a case of *lapsus linguae*. The timing coincides with the creation of the expert commission of Heisenberg *et al.* The HWA indeed played an important part in the German nuclear fission program, although the major part was now dependent on funding from RFR. 3) This memorandum was sent to Section Inland 2, which was the "Judenreferat", led by E. v. Thadden. Considering the character of the issue,

²⁸ Eberhard von Thadden (1909-1964), Dr. Jur 1933. NSDAP 1933, SS 1936. Sturmbannführer (Major)1945. Head of Amt Inland-II in AA (Auswärtiges Amt) 1943-1945, working as "*Judenreferent*" (succeeding Franz Rademacher) with the assignment to implement and encourage actions (Judenmassnahmen) against the Jewish population in the entire German power sphere, implying massive deportation to death camps. Thadden was for example directly involved with the deportation to death camps of several hundred thousand Hungarian Jews in 1944. He escaped prosecution for crimes against humanity.

this seems strange, but perhaps indicates the way the NBI case was regarded by the German authorities, namely as a kind of *Sippenhaft*.²⁹



R. Mildner

3.2.4. Mildner in Nuremberg (Goldensohn 2004)

Mildner (see note 25) acted as witness at the main Nuremberg tribunal. This is how Goldensohn was able to carry out interviews with him. As expected, his account is largely self-serving, denying any involvement in criminal acts. However, he made statements related to the NBI-incident which are regarded as credible by many historians.

- 1) "On September 17, 1943 I got to Denmark. I carried an order with me from Müller [head of Gestapo in RSHA], to arrest Niels Bohr, a famous atomic physicist. He was a Jew or half Jew. That was the reason for the order."
- 2) "In addition, I didn't arrest Niels Bohr, because I didn't want to arrest Danish scientists [sic!]. Bohr fled to Sweden. That was long after the Jewish deportation [Mildner's error]. From Sweden Bohr went to England, was received, and Radio London announced that Bohr had decided to give his work to the Allies. Then came a cable from Himmler, after Bohr's visit to Churchill, that the official responsible for Bohr's escape was to be made accountable at once. Müller in Berlin gave the order to confiscate the Institute of Physics in Copenhagen. I wrote back that they should send experts from Berlin. This they later did."



H. Müller

Comments: The order to arrest Bohr is at least compatible with warnings Bohr had received, precipitating his departure. Orders from Müller (the director of Gestapo in RSHA) should normally have gone via Pancke, but bypassing the formal routes, even without documentation, was common (see for example Section 3.2.7). However, the order to occupy NBI was much more likely given by Pancke on his return from Berlin around 1st December. Mildner does not mention the reason for calling experts, but it must have come up once NBI had been seized. Here Mildner overstates his influence – the idea was surely discussed with Pancke and Best, both of whom later participated in the final discussions leading to unconditional release.

3.2.5. The "Responsible Authorities"

It is not known how the idea of an expert commission came up, nor how it was selected. But in an interview in 1965, Walther Gerlach³⁰ claimed that, with Franz Alfred Six (see note 22), head of the division for cultural politics in the AA, he got involved in constituting the group as it appeared in Copenhagen on 24th January 1944 (Cassidy 1991, p. 468 and Note 24:90, interview by David Irving). This statement has been accepted as credible by many historians, and it makes sense considering the position of Gerlach in RFR, and Six in AA.



W. Gerlach

²⁹ In NS Germany, the mediaeval term was revived to justify the punishment of kin (relatives, spouse) for offence of a family member. (Wikipedia)

³⁰ Walther Gerlach (1889-1979). Prof. of Physics (Munich). From 1st January 1944 head of Physics section in RFR, Generalbevollmächtigter for Nuclear Physics and "Gesamtleiter aller physikalischen Forschungsfragen". Powerful coordinating role for funding the German nuclear fission program. Taking numerous initiatives, G. tried to coordinate all physics research in Germany, in particular research with military applications. by a) determining directions for research programs, b) creating cohesion between research and the needs of the Wehrmacht, and c) following up many war-related development tasks (Flachowsky 2008, p. 308). G. was involved with weapons research until the end of WW2 (Karlsch 2005).

The relationship between Heisenberg and Diebner (a physicist from HWA (Army Ordnance) was not cordial, dating back to the formation of the “Uranium Club” in September 1939 when Diebner was placed in charge of the “Uranium Program” (Bernstein 2001, p. xxv). The situation is highlighted by a conversation at Farm Hall on 22nd December 1945 between Heisenberg, C.F.v. Weizsäcker and Karl Wirtz, colleague from KWI-P (Bernstein 2001, p.316):

Wirtz: ... The problem is what is going to happen to people like Diebner. We know what sort of a man he is, but I don't think we should just drop him.

Heisenberg: I agree. He has behaved himself very well recently.

Weizsäcker: It ought to be possible to do something for him. He is not a physicist in the real sense of the word, but as it seems that we shall be able to work again, we shall need somebody to get hold of apparatus, to look after it, and so forth.. We could very well use him for something like that.

Heisenberg: That is roughly my idea

It is hard to believe that Diebner would be Heisenberg's preferred choice for the commission. Rather it corroborates the belief that it was not Heisenberg who approached Gerlach with suggestions for a committee, but on the contrary, Heisenberg was invited to discuss the matter by “the relevant authorities”, who argued for representation of KWG (Heisenberg), HWA (Diebner), and RFR.

3.2.6 Beutelager etc.

Gerlach was of course well aware of the predicament of R&D in critical areas in Germany. In particular Physics-related R&D was known to lag behind USA. The industrial physicist and chairman of the German Physical Society, Carl Ramsauer, had already on 20th January 1942 sent an alarming memorandum (*Eingabe*, Hoffmann & Walker 2007, p. 594-617) to the Ministry of Education and several important decision makers. It included the article “The outclassing of German through American Physics” (*Die Überflügelung der deutschen durch die amerikanische Physik* (idem p.600; Hentschel 1996, Doc. 91; Walker 1989, p. 75). In the covering letter he writes: “Physics in Germany has lost its former premy to American Physics, and is in danger of continued decline ” [*Die deutsche Physik hat ihre frühere Vormachtstellung an die amerikanische Physik verloren und ist in Gefahr Immer weiter ins Hintertreffen zu geraten*] (Hoffmann & Walker 2007, p. 595).



C. Ramsauer

The National Research Council (RFR) had, already three weeks after the occupation of NBI, discussed the idea of confiscating equipment from NBI. Gerlach ought to have been present at this meeting, and it is reasonable to assume that he would be asked to handle the issue, since from 1st January he would be Generalbevollmächtigter for Nuclear Physics (see note 30). At the same meeting, the head of the RFR planning department, Werner Osenberg³¹ presented a document “*Die Kriegslage als Folge unzureichender Auslastung verfügbarer*

³¹Werner Osenberg (1900-1974). NSDAP 1933, SS 1936. Prof. of Materials Science at Hannover Tech. Univ.1938. Head of RFR Planning department, June 1943 for coordinating resources and personnel for armament-related R&D. A staff member was Dr. Baer, one of the members of the “Expert Commission”.. After the war, Osenberg was engaged by the OSS (Office of Strategic Services) for the *Project Paperclip*, whereby some 1500 scientists and engineers, partly deeply tainted by war crimes, were offered positions in USA (Wikipedia)

Kapazitäten der deutschen Forschung” (The war situation as a result of insufficient use of available capacity, Cassidy 1991, p. 468 & note 24:89, document dated 28th December 1943).

Actually the looting of research institutions in occupied zones was widely regarded as compatible with “anständig bleiben”. Walker has found evidence of the use of *Beutelager* (looting stores) by Diebner and Gerlach, and not least by Erich Schumann, head of HWA’s weapons research section (and a distant relative of the composer Robert S.) for use in projects of the “Uranium Club” (Walker 1989, p. 147, 149, & notes). In this light, the *a priori* prospects of a “weak solution” of the NBI case must have looked rather bleak when the commission was formed.

3.2.7. Bovensiepen’s interrogation about disorder in orders

Otto Bovensiepen (see note 19) was interrogated *in Kastell Copenhagen on 20 August 1945*. The interrogation was carried out by the *Civilian Interrogation Center (CIC)*, British Military Mission, with co-operation of the Danish police authority. (“He was told that it was up to him to testify, since no torture would be applied to him”).

O.B. confirmed the organizational principle that Best and Pancke “were equals” and thus could not give orders to each other, Pancke reporting to RSHA and Best to AA. O.B. got his orders from Pancke, but he also got orders directly from the RSHA in Berlin in special cases, and Pancke was not always informed. As to relations to Best, the police should try to align to Best’s political course. Therefore O.B. would discuss the various actions with Best as well, but Best could not interfere in the execution of orders received from Pancke or from RSHA, even in case of disagreement. However, there was practically no disagreement [in O.B.’s perception]. Asked about his opinion on counter-terror, torture and murder ordered from Berlin, he thought that any “rules of war” could be disregarded in the conflict, as it had developed.

22

4. A scenario for the apparently erratic dispositions

The apparent lack of purpose and planning of the NBI case is no doubt related to a decision making situation that is characteristically *bewusst unklar* (intentionally diffuse), where rational argument is less important than personalities, personal relationships, and power structure, leading to difficulty of judging which actions would be met with approval from Berlin. I will here suggest a possible scenario (compatible with known facts) for the events leading up to the unconditional release of NBI, keeping in mind that things might just as well have ended differently if one of the key agents had seen any advantage in a different stance.

About 1st December 1943, G. Pancke (HSSPF) returned to Copenhagen after having been ordered to the Führer headquarters. Under humiliating conditions he was reproached for not having implemented harsher methods to stifle actions of

the Danish resistance. Among other concerns was the failure of the “judenaktion” requested by Best on 8th September and carried out 1-2 October.

The action against NBI took place on 6th December. The reasons given were disparate and vague: Had there been clandestine work on nuclear weapons? Why had Niels Bohr escaped to Sweden and England bringing secret research result to the enemy, as suggested by news media? There were implicit but recurrent anti-Semitic remarks. The immediate impression that the action was poorly planned, was confirmed by several pointless and unfocussed interrogations, which were not followed up in any depth even by the Expert Commission; and thus the results were inconclusive. In retrospect, one is left with the impression that the NBI action served the purpose of getting things done quickly - and the insistence on Bohr suggests that in this case it was a kind of *Sippenhaft*, a revenge for his disappearance. The haste of the intervention makes it likely that it was ordered by the HSSPF on his own authority, informing the Generalbevollmächtigte but not asking for his acquiescence.

Considering the international reputation of NBI, it is not surprising that news about the occupation spread immediately in the science community, certainly reaching the RFR, an institution that might have an interest in sending an observer. This would explain the presence of a taciturn Dr. Baer at the interrogation of Dr. Bøggild on 20th December.

After that, there was no development to report at the almost daily information meetings at Dagmarhus. As the case obviously was related to the AA section of cultural and scientific cooperation, it would be natural for Best to intervene, offering to contact his friend from the years in Himmler’s RSHA and now head of the relevant AA-section, F.A. Six, suggesting the idea of calling an expert committee to review the interest of the German research community, with a mandate restricted by political expediency. For Six, the evident expert to consult was W. Gerlach the new Generalbevollmächtigt for Nuclear Physics R&D (from 1st January 1944). This would explain the delay of the case until late January 1944. It is also consistent with the later statement in the interview with Irving (see section 3.2.5.). Perhaps v. Thadden had asked about the NBI case and had been informed about the planned commission, which would explain the correspondence referred to (in section 3.2.3.).

The composition of the commission would be evident for Gerlach. The German “Uranium Program” was financed by HWA and RFR, the latter run by several institutions with KWI-P being central. The logical representation of interests would therefore be Heisenberg (for KWI-P), Diebner (for HWA) and a representative for RFR’s planning division. We do not know if a formal mandate was ever decided for the commission’s mission. As will be suggested, it is rather likely that the commission’s task was more cosmetic than scientific, created to enable a politically convenient solution of the matter.

We know the end result: NBI was unconditionally released 48 hours after Heisenberg’s arrival in Copenhagen, with the other members of the Committee. There had been two brief inspections at the premises, and a couple of brief meetings. We do not know how the decision was arrived at. We can assume that

Best would not decide against a unanimous recommendation of the Committee for a hard line of confiscation or takeover of the Institute under German leadership. So presumably, the “report” expresses the statement of the Committee, possibly with minor changes of the phrasing. It is in this form that it serves as argument for release. But the arguments, as was pointed out, would not stand up to critical evaluation. Could it be that Best and Six had agreed on the politically commendable solution of the problem? Normally, Gerlach, Diebner, and Osenberg (or his representative) would be expected to maximize German benefits, while Heisenberg, and to some extent Gerlach, would be embarrassed by the consequences. The lenient result therefore seems counterintuitive. But, considering that both Six and Best were SS-generals, a discrete message about a politically preferred conclusion would overcome any professional doubts. In Best’s perspective the solution was rational: Just as he successfully had made Denmark “Judenfrei”, NBI was now fully aryanized. “The possibility that research results might reach enemy countries on clandestine routes must be regarded as non-existent, *considering the persons responsible.*”



Niels Bohr

On 30th January 1946, Niels Bohr wrote to Heisenberg: “...*I do long very much to be able to talk with you again about these questions [Relativistic Quantum Mechanics] and also about those events during the war when, after I had been compelled to leave Denmark, you rendered the Institute so much help...*” (Bohr 1946). Certes, but in a way perhaps more intricate than it appeared.

Appendix I: Werner Heisenberg’s annotations

on reverse of letter (dated 8th January 1944) from H. v. Euler
(abbreviations and punctuation as in the original manuscript)

1) Übernahme des Instituts durch Deutsche Physiker	Einsatz für Kriegswichtige Forschung	Schwierigkeit der praktischen Verwirklichung; Sabotageakte Ständige Bewachung nötig
2) Völlige Freigabe unter Voraussetzung: Veröffentlichung der Resultate, Gelegentliche Kontrolle etc.	Die Ergebnisse der wissenschaftlichen Arbeit können unmittelbar übernommen werden u. indirekt nutzbar werden.	Zu geringer Nutzeffekt; Sabotage nicht ausgeschlossen Verrat ins Ausland nicht ausgeschlossen. Prestigefrage
3) Vollständiges ausschachten des Instituts in bezug auf Apparate.	Gewinn an Wertvollen Apparate für Deutschland	Die wissenschaftlichen Arbeiten des Instituts nicht nutzbar, die grossen Apparate nicht zu transportieren.
Kompromissvorschlag zwischen 2) u. 3): Freigabe des Instituts Ablieferung von Apparaten, die hier nicht unbedingt nötig sind u. die in Deutschland dringend gebraucht werden	Wissenschaftliche Arbeit, u. Apparate	Störung der wissenschaftlichen Arbeit, nur teilweise Ausnützung der Apparate

Appendix II: Muligheder, der kunde tænkes efter første samtale med Professor Heisenberg

Memorandum (Jacobsen 1944) in Jacobsen's handwriting, apparently written after meeting with Heisenberg on 24th January 1943 in preparation of discussion with Nørregaard the following morning, before the official inspection of NBI. Words in italics are added later, perhaps after Jacobsen and Møller had compared notes and perceptions. WH's item 3 has been weakened, substituting "part of the equipment" for WHs "complete butchering". In this wording, there is no practical difference between items III and IV, unless item IV is meant to open for negotiations. Nørregaard (Nø47) has a much weaker point 3, similar to Heisenberg's point 2 (Appendix I) but eliminating the control - this would be the only option acceptable to the University. Actually, there never came any opportunity for negotiations.

I

The Institute is not released. German scientists will use the Institute, possibly in cooperation with Danish scientists.

II

The Institute is released. The Danish scientists have to accept a level of cooperation on non-war-oriented research, for example providing radioactive samples etc. for German research.

Possible release assuming all research results are published.

III

The Institute is released. The Danish scientists return after part of the equipment, now not available in Germany, has been removed.

IV

The Institute is released. Equipment not needed for the Institute's work is removed.

Appendix III: Press release 1 February 1944

Professor Niels Bohr's Institute again released

Niels Bohr's flight was not justified. – Scientific investigations at the Institute have led to revocation of requisition.

Ritzau's bureau communicates:

Few months ago the well-known Physicist and Atomic Scientist, Professor Niels Bohr fled from Denmark. The reason for his flight was not known, and it could not be explained from the Professor's earlier conduct. However, when Niels Bohr had arrived in England, where his scientific research was officially characterized as important for warfare, there must, on the part of German authorities, arise suspicion that the Professor had planned and carried out, in Copenhagen, work of importance for warfare, intended for use against German interests. This issue could be settled only by an exhaustive scientific investigation of his past place of work, the Institute for theoretical Physics and the laboratory for Atomic Research, Blegdamsvej 15. Therefore the Institute was seized and placed under guard. Subsequently, German Atomic scientists arrived to ascertain, whether it was possible, with the equipment at the Institute, to carry out work of any kind whatsoever with application to warfare. The result was fairly evident that the Institute can function as a basis for purely scientific research only. Accordingly, once this had been determined, the confiscation is revoked and the Institute is returned to Copenhagen University.

7. References

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 - No. 130 (14th December 1943): Best to Ribbentrop: report on Mildner’s activities 15 September – 14th December 1943: apart from the death sentences (presumably from Wehrmacht court-martials outside Best’s jurisdiction), Mildner must have acted on a general mandate, reporting regularly (daily?) to Best: 169 *Festnahmen wegen Sabotage*, 424 *Festnahmen* concerning illegal activities, mainly Communists, of which 184 were sent to German concentration camps, 11 death sentences, 8 killed in action or trying to escape, massive weapons depots seized.
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[The notes were taken during interviews. As Goldensohn's proficiency in German was limited, the questions and answers are filtered through an interpreter. The respondents were uncertain about the prospective use of their responses. G's notes have not been available to academic research. Almost fifty years later, the texts were selected, arranged, modified and edited for publication. Mildner exonerates himself as a moderate agent with high integrity, speaking up against his superiors (including Himmler), while systematically blaming his superiors for atrocities ordered and committed, including his role in Auschwitz. In the process he distorts facts and ties himself up in inconsistencies and contradictions, partly noted by Goldensohn, prof. at State Univ. of Florida]

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B) Archival material

(Abbreviation: [RA/KU Kons.J.385/43] refers to documents in the Danish National Archives, Copenhagen University, Konsistorium Journal Nr. 385, 1943). Reference to the Niels Bohr Archive in Copenhagen are indicated by the acronym NBA.

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It contains a detailed reconstruction of interrogations. Copy available at NBA].

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Jacobsen, J.C. & Møller, Chr. (1944). *Rapport over Begivenhederne under Besættelsen af Universitetets Institut for teoretisk Fysik fra den 6th December 1943 til den 3 Februar 1944* [Typescript, 6p.] This document is undated and unsigned, but the copy in the National Archives has a handwritten comment: “Indkom 29/6 1944” (received 29th June 1944) [RA/KU Kons.J.385/43]. It was probably written by Jacobsen and Møller for the University Rector, who had been responsible, though mostly in the background, for the negotiations with the German authorities after the expropriation of the NBI. It contains WH’s revised strategies and his “report” (Heisenberg 1944a; probably the report of the commission). The document originally included, as appendices, an account of ongoing research at NBI, compiled to facilitate clearance from the occupation authorities (JM43), and Olsens report (**Olsen (1944).**)

Jessen, B. (1943). Letter to Nørregård concerning private property left behind in the Mathematics Institute, that had been occupied along with NBI [RA/KU Kons.J.385/43]

Krogh, A. (1943). *Brief note, dated 6th December 1943.* It describes current radiobiological research at NBI, a continuation of work started by Georg de Hevesy (Nobel laureate 1943). The author requests the release of working material, including data and manuscripts. He also requests the release of counters and radioactive sources (including Radium) needed for the work, which might be continued in the Zoophysiological Laboratory of the University. [RA/KU Kons.J.385/43]

Kristensen, S.R. (2005). *Clearingmord på danske læger 1944–45* (<http://www.historisktidsskrift.dk/16122005.html>)

Kiel (1943). *Niels Bohr.* Two catalogue cards from Gestapo in Kiel, Germany [From microfilm archive, Washington D.C.]. Photocopy provided by J.T.Lauridsen.

Olsen, H.W. (1944). *Report on interrogation.* Besøg den 11/12 1943 kl. 12.15 i Vestre Fængsel Celle Nr. 170 af 2 tyske Civilpersoner [typescript], [RA/KU Kons.J.385/43]. [Olsen’s report is quoted *in extenso* in Nø47]

Reichelt (1944). *Wissenschaftliches Material in dem Gebäude des Sysisk (sic) Kemisk Institut in Kopenhagen* [Internal memorandum from AA, dated 12th January 1944, found in the residual archives of the Wehrmacht (Denmark)] (photocopy provided by John T. Lauridsen).

Inland 1(I)

An Inland 2(II,3)

z.Hd.v.MVR Dr. Reichelt

Betr. 1 Wissenschaftliches Material in dem Gebäude des Sysisk [sic!] Kemisk Institut in Kopenhagen.

Betr. 2 Schr, Ausld (2/III) v: 6.1.1944.

Nach Vortrag bei Herrn Chef Inland wird das o.a. Vorgangsschreiben zur weiteren Veranlassung dorthin übersandt. Da vermutlich eine Sichtung des Materials weder von dort durchgeführt werden kann, noch zu den Aufgaben von Inland 2 gehören dürfte, erscheint es notwendig, eine andere Dienststelle - gedacht ist an das Heereswaffenamt – zur durchführung der Aufgabe einzuschalten.

Es wird gebeten, Ausld. (2/III) über die von dort veranlasten Massnahmen einen Zwischenbescheid zu erteilen,

(Illegible signature)

Reinstatement. (1944). *Übergabeverhandlung* [Wehrmachtintendant Dänemark to Nørregård 1st February 1944, acknowledging the reinstatement of NBI under the University, and signed by Chr.Møller and J.C. Jacobsen, and two illegible names for the German side. The document is reproduced in (Ro64)] [RA/KU Kons.J.385/43].

Release. (1944). *Professor Niels Bohrs Institut atter frigivet* [Official press release, dated 1 February 1944. It was published in several newspapers on the following day. It presents a brief justification for the occupation and the subsequent end thereof, and follows closely formulations in **Heisenberg (1944a)**].

Requisition. (1943). *Beschlagnahmeverfügung Nr. 150 auf Grund der Verordnung des Wehrmachtbefehlhabers Dänemark vom 4.12.1943 betreffend beschlagnahme von Gebäuden und Liegenschaften*. This is transcript of the document presented at the military intervention on 6th December 1943. The letter head says: "Intendant beim Wehrmachtbefehlshaber Dänemark." The transcript has no signature. It only states "I.A." [Im Auftrag]. [RA/KU Kons.J.385/43].

Ross, A. (1943). *Udtalelse om "Beschlagnahmeverfügung Nr. 150..."* [Legal analysis of the requisition document, dated 7th December 1943. The author claims that the requisition cannot be justified by reference to the "Verordnung" quoted, nor is it compatible with generally accepted international law (The Hague Convention). He supplies references to current German regulations supporting his conclusions. [RA/KU Kons.J.385/43]

Weizsäcker. (1944). *Letter from CFvW to WH, dated 18th January 1944* (Exhibit "H", ALSOS Strassburg Mission, 15 Dec.1944. ALSOS's translation, in the National Archives, Washington DC). [Reproduced in the present paper as Appendix IV]

Zerahn, K. (1943). Letter to Nørregård, requesting permission from the German Authorities to collect "books, manuscripts and table silver" belonging to Professor Hevesy. [RA/KU Kons.J.385/43]

31

Abbreviations

AA = Auswärtiges Amt	DWI = Deutsches Wissenschaftliches Institut
HSSPF = Höherer SS-u. Polizeiführer	HWA = Heereswaffenamt
KWG = Kaiser Wilhelm Gesellschaft	KWI-P = Kaiser Wilh. Inst. f. Physik
NBI = Niels Bohr Institute	NSDAP = Nationalsozialistische Deutsche Arbeiterpartei
OKW = Oberkommando der Wehrmacht	PTR = Physikalisch-Technische Reichsanstalt
REM = Reichserziehungsministerium	RFR = Reichsforschungsrat
R&D = Research and Development	SD = Sicherheitsdienst

Acknowledgements

The author wishes to thank Drs. J.T. Lauridsen, H. Lundtofte and M. Walker for important documents, comments and advice, and Mrs. Felicity Pors for guidance in the collections of the Niels Bohr Archive, Copenhagen. The author is responsible for statements, interpretations, and arguments, and for the selection of material used.

Copenhagen 14 July 2020
Stephan Schwarz (etienne649@gmail.com)

