

**Research Ethics and Professionalism
on the Line: A Critical Analysis of
Rockefeller Foundation Support of
Neurosciences in Nazi Europe,
1933-1945**

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Abstract

The Nazi movement, heavily rooted in eugenics, caused the persecution and exile of hundreds of neuroscientists. Additionally, eugenic research took place in Nazi Germany with the motivation of improving the so-called “German race” through elimination of hereditary neurological diseases. With the advent of illegal killing of neuropsychiatric patients after World War II started, those patients could be used unethically as research subjects. Thus, neuroscience was at the heart of immoral and unethical activities in Nazi Germany from 1933 to 1945. The Rockefeller Foundation (RF) supported at least twenty exiled academic neuroscientists who either had prior RF support, or who showed “merit” to justify their being awarded limited funds to restart their careers abroad. The RF also supported eugenic neuroscientific research in Nazi Germany (and Denmark) despite escalating racial persecution in pre-war Germany. Some RF funds went to an institute which was also funded by the elite Nazi paramilitary group, the SS. And, an initially RF-funded project, a monkey farm in Würzburg, was used in unethical experiments to prove the cause of multiple sclerosis (MS) with subjects targeted for killing. Overall, the RF walked a fine line between supporting some victims of Nazi persecution, while ironically continuing to fund some neuroscientific research that could be linked to their persecution in the first place, or to destruction of neuropsychiatric patients. While supporting academic refugees was laudable, there was an undercurrent of supporting “best science” without regard for the ethical implications, from which current neuroscientists and others can learn valuable lessons.

Rockefeller Foundation Support of Neuroscientists in National Socialist Europe - Introduction

Neuroscience was a new and burgeoning medical and scientific specialty in the late 19th and early 20th century, often merged with psychiatry. Initially, it was not an independent entity. At the same time that it was emerging and becoming distinct from psychiatry with funded research programs and new institutes in Europe and North America - often supported by independent donors, societies, or agencies such as the Rockefeller Foundation (RF) - neuroscience became intertwined with the ethically unsound eugenics movement. As Germany entered the 1930s, several research programs were RF-funded in Germany, but the National Socialist (Nazi) movement that consumed Germany in 1933 with the election of Adolf Hitler resulted in the global dispersal and destruction of many neuroscience networks. The ethical mantra of the RF would be put to the test during the Nazi era, 1933-1945. It is known that over 150 neuroscientists fled the German Reich, over 60 collaborated in unethical eugenic programs (including sterilization, euthanasia, and research/experimentation on victims), and 24 resisted the Nazi tactics to eliminate neurological and psychiatric patients. The specialty is still coming to grips with its tainted past in the Nazi era. New information seems to emerge regularly about collaborators, victims, and resisters, though it is not always easy to neatly categorize such individuals and significant overlap between categories exists.¹²³ The RF was involved in aiding all three categories of individuals, such as helping refugee neuroscientists resettle in a foreign haven or funding a eugenics research program. The goal of this paper will be to elucidate such involvement in the Nazi era and critically analyze the RF's participation. Though a similar unreferenced analysis on "brain research" in Germany from 1930-50⁴ had been published fourteen years prior to the beginning of my research at the Rockefeller Archive Center (RAC), the goal of this research and report was to more comprehensively define the RF's involvement and analyze it through an ethical lens in the context

of the larger project and book, *Brain Science under the Swastika*. Indeed, the prior paper only discussed research projects in an overview-format, never discussed RF-support of resistors or opponents of Nazism, and only briefly mentioned the RF support to neuroscientist refugees.

Methods

In addition to the article above, the RAC website previously had a description and listing of 18 neuroscientists aided in the RF's "Refugee Scholar Program."⁵ These neuroscientists had been cross-referenced with other papers on this topic⁶⁷ and were part of the research for *Brain Science under the Swastika*. After an RAC grant-in-aid was awarded, research was conducted at the RAC in November 2015. Numerous files were accessed and researched to find more information for this report, but more so for the larger project, the book *Brain Science under the Swastika*. Further information was obtained to increase the number to twenty neuroscientist refugees (see also Table 2 below), and on collaborator neuroscientists aided by the RF (see Table 1 below).

The files were analyzed and copied during the RAC visit, and later were stored in the author's personal archive. When needed, Christina Schultz, PhD, a German Studies affiliate at the University of Illinois-Chicago, helped with translations from German to English.

Results

The RF had financial ties to a number of neuroscientist collaborators with the Nazi regime before World War II, some of which has been elucidated previously.⁸ Some examples in the so-called German Reich (Table 1) are the cases of Johannes Lange in Breslau, Georg Schaltenbrand in Würzburg, and Ernst Rüdin in Munich. But RF eugenic support took place in Denmark, as well, suggesting an interest in eugenic research on a broader scope.

Table 1. RF support to neuroscientist collaborators with eugenic research agendas

Collaborator	Country	RF grant	Eugenic research	Ties to Nazi regime of PI	Impact of research	When grant discontinued
Johannes Lange and Werner Wagner	Germany	\$13,800 over 5 yrs	Heredity of mental disease	Wagner = NSDAP member, Lange = EGOG member	Cataloguing hereditary neurologic disease cases in Silesia – used for sterilization or euthanasia purposes?	1940
Georg Schaltenbrand	Germany	\$3500 at least	“Monkey farm” for experimental multiple sclerosis research as well as “a complete library on M.S.”	SA, NSDAP, NSDÄB	Unethical deadly research on MS viral cause using 53 patients from Werneck asylum and the RF-funded monkey farm	1938
August Wimmer, Erik Strömgren, Hjelmar Helweg	Denmark	42,780 Danish Kroner over 4 years	Heredity of mental disease in Demark, “prognosis” and “prophylaxis”	N/A	Cataloguing of neuropsychiatric disease on the Island of Bornholm for possible eugenic measures	1940

Abbreviations: NSDAP, National Socialist German Worker’s Party (Nazi party); EGOG, *Erbgesundheitsobergericht* (Sterilization Appeals Court); SA,

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Sturmabteilung (Storm troopers, Nazi “brown shirts”); NSDÄB, *NS-Ärztebund* (National Socialist German Doctors’ League)

Lange in Breslau

In Breslau, Silesia (then part of Nazi Germany, but now Wroclaw, Poland) racially or politically-based dismissals from the university medical faculty (in combination with Berlin and Frankfurt) contributed to 40% of all medical civil service dismissals in 1933, including several in Johannes Lange’s (1891–1938) university neuropsychiatric clinic (*Nervenlinik*). *Oberarzt* (senior doctor) Erich Guttmann (1896–1948) and his purer neurology counterpart *Oberarzt* Curt Rosenthal (1892–1937) were dismissed. Also, *Oberarzt* Siegfried Fischer (1891–1966) was dismissed in 1934, who escaped to Panama and then to San Francisco, and *Oberarzt* neuroserologist Felix Georgi (1893–1965), who by 1934 already had 55 publications, escaped to Switzerland and became the Neurologic-University Clinic Director in Basel.⁹ It is unclear which of these four *Oberärzte* was replaced by Lange’s new NSDAP (Nazi Party) member *Oberarzt* Werner Wagner (1904–1956) in 1935.¹⁰

At the time of Hitler’s power seizure (*Machtergreifung*), Lange was professor and director of the *Nervenlinik*. Lange had already conducted research on the potentially hereditary nature of criminality, and during the Nazi era, was a member of the hereditary sterilization appeals court (EGOG).¹¹ But according to an RF officer, Lange was “slightly endangered by the circumstance that his wife is non-Aryan.”¹²(p.3) The RF thought a foreign grant would strengthen Lange’s position in Breslau; thus, he was granted \$1,930 in December 1933 for “research on heredity in mental disease”; Lange used this for studies on heredity of muscular dystrophy and myotonia congenita.¹³ Lange was granted another \$2,000 from the RF in December 1934, and the RF praised Lange for his work on heredity of mental disease, especially twin studies, stating that the “previous grant has considerably strengthened Prof. Lange’s position...”¹⁴(p.5) Thus, with Lange, a not uncommon (for the Nazi era) gray area is evident. He was a victim of racism, and he was aided by American money from the RF to further racial

hygiene research and policies. Overall, the RF funded \$13,800 from 1934 to 1940 for close work with Foerster's Neurological Institute (to which the RF had already contributed \$50,000 previously). Some of this work pertained to spinal muscular atrophy, muscular dystrophy, myotonia congenita, Huntington's disease, and other familial neurologic conditions.¹⁵¹⁶ Wagner took over the Breslau clinic after Lange's death, and even resumed the RF-funded hereditary neurologic work that Lange initiated.¹⁷ Wagner's requested continuance of the RF grant was approved as late as February 1939 and extended even into 1940 after the war's start.¹⁸ The RF official called the Breslau grants "a first-rate investment."^{19(p.25)} It is troubling from an ethical standpoint that the RF still funded this research even after *Kristallnacht* and at the same time they supported Jewish neuroscientist refugees from Europe. It is also interesting to consider the potential fate during the Nazi euthanasia program of the Silesian families researched and catalogued by Lange and colleagues.

Schaltenbrand

The story of Georg Schaltenbrand (1897–1979) reveals much regarding the gray areas of Nazi neuroscience and the RF's involvement in furthering his tainted research and even in postwar whitewashing. Schaltenbrand was famed neurologist Max Nonne's *Oberarzt* in Hamburg and former member of the nationalistic *Freikorps*. He later became a *Stahlhelm* (Steel Helmet) member in October 1933 and an SA (*Sturmabteilung*, Nazi "brown shirts") stormtrooper in March 1934. Schaltenbrand also signed the November 1933 commitment of German university professors to Hitler.²⁰ Schaltenbrand resigned from the SA in 1936, citing time constraints,²¹ but joined the NSDAP in 1937 and the NSDÄB (Nazi Doctor's Association) in 1940.²² Schaltenbrand's NSDAP membership was in good standing, although he might have made anti-fascist statements.²³

Schaltenbrand's political affiliations during the Nazi movement and takeover suggest a nationalistic attitude, and that he had no compunctions officially collaborating with the Nazis. As an SA man, Schaltenbrand remained interim director of the Hamburg neurologic clinic after Nonne retired,²⁴ but he moved

from Hamburg to Würzburg in 1935 after reportedly quarrelling with Nazi officials.²⁵ In his research and publications, Schaltenbrand was primarily focused on neurologic pathophysiology and treatment,²⁶ and not on racial hygiene issues.

Schaltenbrand had longstanding ties to the RF dating to the 1920s, studying with its support in Holland in 1924 and 1925–26, in Boston (1926–27) at Harvey Cushing’s department, and later at the RF-funded Peking Union Medical College (PUMC) in China (1928–30).^{27,28} Thus, he had international professional neuroscientific and personal connections and was not provincial. Schaltenbrand even went on an RF-funded tour of German, Swiss, and Dutch neurology clinics in 1932 and delivered his report just prior to the Nazi *Machtergreifung*, proclaiming the need for multiple clinical neurology centers throughout Germany. When Schaltenbrand lost the Hamburg neurology chair and directorship of dismissed Jew Paul Schuster’s Hufeland Hospital in Berlin, Schaltenbrand stated to the RF that he was “too liberal minded, too international,” and that a high-ranking Nazi neurologist opponent prevented his advancement. The RF was therefore under the impression that Schaltenbrand did not stand any chance professionally in Germany and that he was being censored by the Nazi secret police (Gestapo). But he was apparently too nationalistic to leave Germany and with luck, Medicine Professor Erich Grafe (1881–1958) in Würzburg granted Schaltenbrand a 50–60-bed neurologic unit, plus an assistant and laboratory space.²⁹

Schaltenbrand became head of the Neurological Division of the Würzburg University Medicine Department in 1935, and opened a histological laboratory in 1936 to examine brain tumors.^{30,31} He still had RF funding through 1937, but refused further funding, stating it could hurt him politically if he were the only one receiving it in Germany³² (He didn’t know about Breslau apparently.) Schaltenbrand became a full professor and chair of neurology in 1938;³³ this would not likely have occurred if he were at odds politically with the Nazis. His Nazi alliance afforded him access to an unethical patient pool for his experiments to find the cause of MS.

Working in Boston in 1927, Schaltenbrand criticized unsuccessful animal experiments to transmit MS to pigs, cats, and guinea pigs.³⁴ But it was not until Schaltenbrand established himself fully in Würzburg that his plan to transmit MS to monkeys (more biologically similar to humans) came to fruition.³⁵ In November 1935, he requested up to 1200 RM from the RF for test animals.³⁶ But he received even more than that: a 7750 RM (\$2500) RF grant in 1936 to supplement a German agency grant to fund cerebrospinal fluid (CSF) research. On October 3, 1936, Schaltenbrand wrote to the RF, “Especially I plan to concentrate all efforts on the investigation of multiple sclerosis and I hope that it will be possible for the Rockefeller Foundation to give us further support in this direction.”³⁷

On January 23, 1937, Schaltenbrand again wrote to the RF asking for funding for animal work on MS. He wanted to hire a zoologist to “...start a monkey-farm here for neurological research, especially in the field of experimental multiple sclerosis. This project is considered favorable by the Deutsche Forschungsgemeinschaft and the University.”³⁸ He hoped RF grant support would be more likely since matching funds were promised from Nazi German agencies. He specifically asked if RF funding could be available to pay for “Construction of the monkey-farm.”³⁹ In fact, the RF granted \$1000 toward this and other work in Schaltenbrand’s clinic in 1937. In June 1937, Schaltenbrand dared to ask for a larger sum of 11,000 RM from the RF to help pay for the “monkey farm for experimental work on Multiple Sclerosis and allied problems...,” as well as “a complete library on M.S.”⁴⁰ This sum was more than half of the overall projected expense of this monkey farm (20,000 RM), the other portion to be matched by German funds; Schaltenbrand called this monkey farm the “main expenditure” of research funds for his clinic.

Schaltenbrand included in his research budget the salary of his *Oberarzt*, neurologist Hans Wolff (1908–?), an *SS-Hauptsturmführer* by 1944,⁴¹ whom he hoped would be salaried by university funds, but if not, then RF funds. Schaltenbrand eventually received 7000 RM from the German Research Agency (DFG) in 1937 and hoped to obtain at least another 6000 RM from there to fund the building of the monkey farm for staff salaries. RF help to construct the

monkey building would be crucial, since the DFG would not fund this; the DFG would only fund the equipment and the staff salaries. Schaltenbrand's requests were in vain as of May 1938, thus the monkeys remained in Jena until the monkey farm could be constructed.⁴² Of note, SS-man Wolff was part of the 1939 DFG-granted project titled "Is there a specific serum response in multiple sclerosis."⁴³ DFG money would be used to fund the following experiments not only on animals, but on humans. Instead of thanking the RF (which would have been problematic with Gestapo censors), Schaltenbrand wrote in 1943 the following heartfelt thanks to the DFG in the foreword to his book: "I would also like to thank the German Research Foundation, which, in the years of the most strenuous efforts of our fatherland, gave me the means to continue this work."⁴⁴

Using the partially RF-funded monkey farm, Schaltenbrand's team ran 63 tests on 17 monkeys from 1938 to 1941,⁴⁵ but he may have started injecting cerebrospinal fluid (CSF) from human patients with MS into monkeys' spinal canals as early as 1936. But Schaltenbrand's monkey experiments did not prove that monkeys developed MS from injection with human MS CSF. The monkeys had a non-specific CSF inflammatory picture and non-specific neurologic signs; even control monkeys injected with control human CSF developed a similar non-specific CSF change. Despite lack of evidence in the animal model, Schaltenbrand's next step with this project was an ethical calamity that has now become infamous in the history of neuroscience and resulted in Schaltenbrand's censorship even in Würzburg, where his bust was removed from the neurology clinic in the 1990s.⁴⁶ Already in 1940, Schaltenbrand had begun human clinical trials with tainted CSF; he wrote the following: "Vaccinations performed on idiots and the incurable mentally ill (decade-long catatonia) have resulted in the following: 1. Upon inoculation of CSF from monkeys that had been inoculated with human [MS] CSF in the 1st or 2nd phase and suffered from chronic pleocytosis, many of the vaccinated mentally ill persons had chronic pleocytosis. ⁴⁷ (pp.840-1) Despite failing to explain the relevance of this "pleocytosis" and whether the subjects had neurological symptoms resembling MS, Schaltenbrand stated the following in 1943 with his next unethical publication:

The fear that MS would actually be triggered by such an experiment does not appear any greater to me than ... around 1:1000. Naturally one could not think of such a test on a healthy person or even a sick person. I believed, however, that I could bear the responsibility of conducting such tests on humans who suffer from an incurable complete dementia.^{48(p.180)}

Did Schaltenbrand accept responsibility for experimenting unethically on 53 institutionalized patients from the Werneck asylum, causing deaths in two of them? He eagerly disseminated his research report by smuggling it through Switzerland in 1943, despite nonspecific pathologic and CSF findings, never correlating with an MS-like clinical syndrome. To a 1948 investigational board, he stated he was trying to counter the negative influence of the pro-euthanasia Nazi propaganda film *Ich Klage an [I Accuse]* that supported euthanasia of an MS patient, and claimed he was trying to devise a treatment method for MS also. He also claimed that the two dead experimental subjects were not killed by the experiments themselves, but the time-course of their deaths suggests otherwise; their deaths seem to have been a calculated risk anyway because these had an “incurable dementia.” Schaltenbrand completely disrespected patient autonomy and principles such as not causing undue harm to subjects and only experimenting on them if they would clearly benefit, violating even a 1931 German ethical guideline, let alone the Hippocratic oath.⁴⁹

Schaltenbrand had a successful postwar career and never repented for any Nazi era events. He was dismissed from his university post as of September 1947 because he “joined some party organizations in ’37.”⁵⁰ Despite briefly being in a prisoner-of-war camp, he still authored a book and saw patients from his home, at the same time pleading for a “rehabilitation” letter from the RF to facilitate his denazification. Schaltenbrand’s American neurologist friend Percival Bailey later claimed to the RF in 1947 that when Schaltenbrand had only joined the NSDAP because his wife wouldn’t agree to him immigrating to America to take a post at the University of Pennsylvania and the only way he could remain in Germany was to join the party.⁵¹ But given the earlier nationalist affiliations and SA stormtrooper status, and the fact that Schaltenbrand did not want to leave Germany in 1934, Bailey’s reasoning is difficult to believe. Schaltenbrand, in

letters to the RF, did not appear to feel culpability for his actions in joining the “party organizations.” He wrote that “Only people who really lived in Germany and had an intricate knowledge of the rules of the game that was played here will be able to judge my behavior during the last years.”⁵² Because he had refused RF funding after *Kristallnacht* in 1938 when he was “ashamed” of Germany and because he was not “militaristic” and purportedly “never appeared as a... ‘Nazi’ individual,” Schaltenbrand felt he was cleared for any prior unethical acts or in the destructive tendencies of neuroscience under National Socialism. The RF obliged him with letters by November 1947, stating exactly what he needed, which aided his denazification process.⁵³ As one can surmise from a comprehensive look at neuroscience under Nazism,⁵⁴ or of German medicine and science under Hitler, many heinous ethical violations were carried out by individuals who did not “appear as a Nazi.” Overall, Schaltenbrand seems to have been mainly an opportunist with nationalist tendencies, who thought the end justified the means, and the RF abetted the man and those means to some extent.

Rüdin vs. Spielmeyer and the DFA

Events at the Deutsche Forschungsanstalt for Psychiatry (DFA) in Munich embody many of the principles highlighted in this report. There were unethical dismissals, some resistance against Nazism, and collaboration with the Nazis. The Kaiser Wilhelm Society (KWS) supported the DFA conceptually and financially, subsuming the institute in 1924, and in 1928, the DFA moved to a new facility in Munich after the RF also funded it in 1926 (\$325,000). Famed neuroscientist Emil Kraepelin and Jewish rising star neuroscientist Felix Plaut (1877-1940) had traveled to America in 1925 to further acquaint the RF with the DFA and its mission.^{55,56} In 1927, the DFA was jointly directed by Walther Spielmeyer (1879-1935) and Plaut. However, the institution had a toxic atmosphere due to anti-Semitism in regard to Plaut and wealthy benefactor James (1867–1933) Loeb’s influence⁵⁷ on the DFA, tensions with the university clinic, and personal tensions between Plaut and spirochete laboratory⁵⁸ head Franz Jahnelt (1885–1971). But some of the tensions died down from 1928 to

1933. Spielmeyer's laboratory, already renowned, became an "international mecca of neuropathology," conducting research on numerous acquired brain and spinal disorders.⁵⁹ RF-funded research was also documented on circulatory disturbances and idiocy research in Spielmeyer's department, and neurosyphilis research in Plaut's department.⁶⁰ Actually, Plaut conducted groundbreaking research to propel the field of neuro-immunology forward, discovering antibodies in nervous tissue (contradicting prior beliefs of relative "immunological weakness" of the nervous system) and antigenic properties of spirochetes. Plaut's Jewish colleague Karl Neubürger (1890–1972) researched Pick's disease and other cerebral injury pathophysiology, and Jahnel investigated metal colloid treatment for nervous system spirochetal infections.

By the start of the Nazi era, the DFA's departments and directors were the Institute for Genealogy and Demography (Rüdin), the Clinical Institute (Kurt Schneider (1887–1967)), the Neuropathological Institute (Spielmeyer) and Anatomy Clinic (Neubürger), and the Institute for Serology, Experimental Therapy, and Spirochete Research (Plaut and Jahnel).^{61,62,63} Rüdin was actually DFA executive director as of 1931 and throughout the entire Nazi era, his racial hygiene initiatives becoming the mantra at the DFA. However, Rüdin's racial hygiene introduction did not arise from a vacuum. From the DFA's beginning, a genealogical–demographics department was a central part of the institute's plan. Naturally, that DFA department was allocated to longstanding racial hygienist Rüdin.^{64,65} But the situation in regard to the overwhelming resource drain Rüdin created at the DFA for racial hygiene research was perhaps best summed up by Spielmeyer to the RF in January 1935:

In your letter you write that I am director of the [DFA]...not correct. According to the [DFA] rules the management must be taken over by one of the other department heads...one of them must from time to time take over the...management. I had the position until 1931 and from that time Professor Rüdin. Now since the national-socialist régime has started so-called equalization everywhere, the leader principle holds for our Institute also and Rüdin is the leader of the so-called "gang." [This latter expression is taken from the mining industry, where the men who go in to mine the coal and the office workers are called "gang."] As hereditary biologist Dr. Rüdin is in the confidence of the Minister of the Interior, Dr. Frick, and through him

Rüdin is race hygiene commissioner. Therefore race hygiene is being stressed above all other problems in the Institute and Rüdin has a very large staff of doctors: besides the usual workers sent here from other institutes and clinics, he has more than twelve salaried doctors as scientific staff and also forty-seven typists.^{66(pp.2-3)}

Spielmeyer wrote this to withstand Nazi censors and revealed his disdain of not only Rüdin but of Nazism generally, as well as to elucidate to the RF the coordinated Nazi strategy toward staffing and resource allocation to suit racial hygiene research and practice. Spielmeyer actually instructed his letter's recipient, neuropsychiatrist Andrew Woods of Iowa, to pass the letter on to the RF, wanting the latter to be informed of what their funds could possibly be used to support. Highlighting the persecution Spielmeyer was facing in the Nazified milieu at the DFA in early 1935, Woods wrote to the RF when he enclosed Spielmeyer's letter:

The inclosed [sic] letter from Dr. Spielmeyer is pathetic. I think he is a little afraid of the censor being more likely to inspect a letter to you if he had sent it directly. Perhaps you know that Mrs. Spielmeyer is of Jewish origin and probably this is the basis of his present unfortunate situation. You will note from this letter that he is in a state of emotional tension which I fear is making his work almost impossible for him. It all seems a vast pity. There are, perhaps, not more than two or three other neuropathologists in the world whose investigations...are of equal value with Spielmeyer's.^{67(p.1)}

Rüdin was reportedly not an anti-Semite,⁶⁸ and he did not join the NSDAP until 1937, despite numerous other Nazi activities (including chief authorship of the official sterilization law commentary).⁶⁹ But Rüdin was not overtly concerned about the dismissals of Plaut or Neubürger,⁷⁰ except in the sense that valuable RF funding to the DFA would likely be cancelled.⁷¹ Rüdin personally suspended Plaut in October 1935,⁷² and then wondered, after Plaut was gone, whether to even keep the Serology Department, since so many serologists were non-Aryan and it would be hard to find a "suitable" replacement.⁷³ Rüdin was so eager to comply with Nazi decrees to dismiss employees descended from three or four full-Jewish grandparents that he let Plaut go as a "precautionary dismissal," before the Bavarian education minister had even authorized this measure.

Rüdin wrote that “This dismissal must occur immediately, to be on the safe side.”^{74(p.9)} To Rüdin, it was fine for his salary to come from the Jew Loeb, and for the institute to have survived its founding and continued existence throughout the unstable inflationary Weimar period in large part with Loeb’s money, but Jews could not work at the DFA. Thus, regardless of personal feelings toward Jews, Rüdin was a Nazi collaborator with racial policies in the Machiavellian sense. His daughter stated: “He would have sold himself to the devil, in order to obtain money for his institute and his research.”^{75(p.131)} Did the RF aid and abet this Nazi collaborator, or rebuke his claims?

Spielmeier died in February 1935, apparently from pneumosepsis, secondary to influenza, but an RF official wondered the following:

What role the wear-and-tear of the worry Spielmeier had recently had played in his death will be a difficult one to evaluate...the loss to psychiatry is an extraordinary one and I do not see anybody on the horizon who will quite fill the bill and the role that Spielmeier played in his field...^{76(p.5)}

The same official wondered about whether Lange, “one of the most talented of Kraepelin’s pupils,” could return to take Spielmeier’s place, but then doubtfully stated “the situation in regard to Lange’s wife is similar to Spielmeier’s.”^{77(p.5)} Plaut stated that he not only lost his “best friend,” but that his loss was “irreparable.”^{79 (p.4)} There was shock and disorientation at the DFA after Spielmeier’s death. He had actively campaigned to keep Jewish colleagues, he took on a vocal and courageous anti-Nazi stance,⁸⁰ and after his death and Loeb’s death earlier, Rüdin was unopposed in his power at the DFA.⁸¹

Rüdin also downplayed the costs and work involved in reporting cases, collecting data, and eugenic research associated with the Nazi sterilization law, and assured anxious neuropsychiatrists that he would “put in a word for them with the authorities, to get further financial support.”^{82(p.188)} This is ironic and doubtful given that Rüdin commented in reports regarding diminishing financial support from the state, and the fact that the DFA had been dependent on American financing from the Loeb family and from the RF. Rüdin had

begged the RF for continued funding, a request that was denied, even after Spielmeyer died and Plaut and Neubürger were dismissed, and when he knew that RF-funding was dependent on these individuals running the programs supported by the RF.

Neuroscientist refugees from Munich and the DFA were aided by the RF, and ties to the collaborators were largely severed. RF officials had only agreed to fund research directed by Spielmeyer. They told Rüdin when he requested funds to continue despite Spielmeyer's death that the funding would only continue for a year after Spielmeyer's death date, and only funds to Plaut would continue after that.⁸³ RF grant support to the DFA during the Nazi era had come under fire. The RF was blasted by the American Committee against Fascist Oppression in Germany in February 1934 for providing money to the initially Jewish-financed DFA, even though Rüdin was accused of conducting SS-financed research "scientifically proving" the hereditary superiority of the "Nordic race" and "inferiority of the Semitic and other races," and that Rüdin's associate Theo Lang, "founder" of the German Medical Association, which was persecuting Jewish physicians, was at the DFA. The RF was pressed about the accuracy of this article, prompting the RF in New York to clarify with their International Health Division in Europe about the Medical Sciences grants to the DFA. The RF defended its grants to the "various liberal groups" by stating their funding of 1931 was only for neurosciences and granted to Spielmeyer and Plaut, not to Rüdin, who was partly funded by an SS grant to the Notgemeinschaft der Deutschen Wissenschaft of \$125,000. Sensitized to public opinion then, a funding request by Rüdin to retain a Jewish assistant at the DFA was even rejected by the RF in December 1933.⁸⁴ And eight months later Plaut would write again to the RF, stating the following:

I have been informed today that my connection with the Research Institute as with the University is to be discontinued immediately. It is not a personal action against me but a general regulation concerning persons of Jewish descent who still hold government or similarly official positions. Dr. Neubürger of our Research Institute has received the same communication...I shall not be able to bring to conclusion the studies upon which I embarked with the aid of the [RF]. My former collaborators have been instructed to finish them

somehow. I have been informed that the authorities have been requested to make an exception in the case of Dr. Neubürger and myself, but the chance of success for such a proposal seems very slender to me...Under the crushing weight of this very recent blow of fate I can, of course, see almost no way of arranging my future life; I only know that the forced unemployment, to which I and my colleagues remaining in Germany would be subjected, would hardly be endurable.^{85(p.14)}

Plaut was correct – his and Neubürger’s positions could not be saved.⁸⁶ Even though he had left the Jewish religious community in 1932, Plaut was a full Jew according to the Nuremberg Laws, thus fully at the the mercy of the Nazis.⁸⁷ Notably, there is no record of the RF even responding to a 1938 assistance request⁸⁸ from Plaut’s Aryan successor Jahnel, who joined the NSDAP in January 1940.⁸⁹ Euphemistically, Plaut and Neubürger were noted to be on a “leave of absence” according to a published 1936 DFA report.⁹⁰

Scandinavian Eugenics and RF Funding

Euthanasia never took place in Scandinavia, but eugenic sterilization did,⁹¹⁹² and eugenic research took place even with RF funding. For example, the University Psychiatric Clinic’s (Rigshospitalet) “Heredo-Biological Laboratory” in Denmark received RF funding for eugenic studies with implications for sterilization, including a comprehensive cataloguing of the hereditary histories of the population of the Island of Bornholm. August Wimmer (1872–1937), professor and head of the clinic, wrote to the RF the following:

As will be easily understood, researeches [sic] ... will offer a very great interest with regard to a number of problems of eugenic, mental hygiene, etc. For instance, we are as yet rather uncertain as to the ‘heredo-prognosis,’ i.e. the extend [sic], to which mental diseases, psychopathies, oligophrenia, epilepsy is to be expected in the offspring of insane or psychopathic people. For the prophylaxis of mental anomalies, say for instance through sterilization, such knowledge is badly wanted.”⁹³

Oligophrenia is an old term for intellectual disability. Wimmer and his successor Hjelmar Helweg, along with researcher Erik Strömngren and others were granted 42,780 Danish kroner from 1936 to 1940 for this “heredobiological” work. Though not affiliated with Nazi collaborators, this RF funding measure seems in line with funding to eugenic work in Germany, for instance by Lange in Breslau, and suggests their global support of eugenic research.

Refugee Aid by the RF

RF funding support to Nazi collaborators and eugenicists in the 1930s stands in stark ethical contrast to the aid to neuroscientist refugees from the Nazi onslaught (Table 2).

Table 2. Neuroscientist refugees aided by the RF

Name	National origin	Specialty	Institute from which dismissed or fled because of persecution	Institute to which RF made a grant-in-aid to support refugee scholar
Bielschowsky, Max	German	Neuro-Pathology	Kaiser-Wilhelm Institute	University of Utrecht
Buchtal, Fritz	Danish	Physics	University of Copenhagen	Vanderbilt University
de Jong, Herman	Dutch	Neurology	University of Amsterdam	New York State Psychiatric Institute & Hospital
Goldstein, Kurt	German	Neurology	University of Berlin and Moabit Hospital	Columbia University
Grünthal, Ernst	German	Psychiatry	University of Wurzburg	University of Bern
Guttman, Erich	German	Psychiatry	Psychiatric Clinic, Breslau	University of Oxford
Hofer, Paul	German	Physiology	University of Heidelberg	Tufts Medical School
Jossmann, Paul	German	Neurology	University of Berlin	Boston School of Medicine
Levin, Ernst	German	Neuro-Pathology	University of Munich	University of Edinburgh
Lewy, F. H.	Austrian	Neurology	University of Berlin	New York University

List, Carl Felix	German	Neurology	University of Berlin	University of Michigan
Loewi, Otto	Austrian	Pharmacology	University of Graz	New York University
Lowenstein, Otto	German	Neurology	University of Bonn	New York University
Marburg, Otto	Austrian	Neuro- pathology	University of Vienna	Columbia University
Mayer-Gross, Willy	German	Psychiatry	University of Heidelberg	Maudsley Hospital, London
Meyer, Alfred	German	Psychiatry	University of Bonn	Maudsley Hospital, London
Plaut, Felix	German	Neurology, Psychiatry	Kaiser-Wilhelm Institute (Deutsche Forschungsanstalt)	Horton Hospital, London
Riese, Walter	German	Neurology	Faculty of Medicine, Frankfurt	Medical College of Virginia
Scharrer, Ernst (and wife Berta)	German	Neuro- endocrinology	University of Frankfurt	University of Chicago
Thannhauser, S. J.	German	Brain Chemistry	University of Freiburg	Tufts Medical School

Already the plights of Plaut and Neubürger have been discussed in conjunction with a larger overall scheme of funding support to Munich's DFA, and Georgi has been mentioned in Breslau. But RF aid to Max Bielschowsky, Alfred Meyer, Kurt Goldstein in Holland, Ernst and Berta Scharrer in the US, and Paul Hofer in Boston is illustrative regarding some of the common themes facing this group overall.

Max Bielschowsky

One of the most notable Jewish neuroscientist refugees aided by the RF was Max Bielschowsky (1869–1940).⁹⁴ Bielschowsky turned down offers to work in Warsaw given insufficient facilities for his work and the rising anti-Semitism, and he could not get Rockefeller Foundation support for a position at the University of California-San Francisco because the position was not permanent or supported salary-wise and was rejected by RF leadership. Bielschowsky fled

to the Netherlands, where he first was active in the neuropathology laboratory of the university neurologic clinic in Amsterdam, and later in the laboratory of the psychiatric clinic of the University of Utrecht with temporary RF support. But none of the Dutch positions was permanent. RF leader Robert Lambert speculated about why Bielschowsky was not being offered a permanent position in Holland: “I suspect the explanation is that while everybody respects B for his fine work, no one wants him around. He is not a lovable person.”^{95 p.11} Furthermore, it was said about Bielschowsky that “...he has a different attitude than that of the Dutch. He is less tactful, especially with the technicians, and it is doubtful if he will get along. Prof. [Snapper] thinks it a German training rather than an individual trait.”^{96 (p.4)} Thus, Bielschowsky perhaps faced a “double persecution” that was pervasive amongst exiled neuroscientists: racist persecution in his home country, and ironic persecution for a Germanic attitude while in Holland. In 1935, Bielschowsky spent some time in Madrid at the Cajal Institute, and after he suffered a stroke in 1936, he temporarily returned to Berlin under threat of losing his old-age pension by living outside Germany. He fled with one of his sons to England in 1939 just before the outbreak of war. He was able to work in a laboratory in Sheffield until his death in the summer of 1940 of another stroke. He was buried next to his friend, the neurologist Paul Schuster, broke, exiled, and abandoned.⁹⁷

Kurt Goldstein – Holland, then New York City

The eminent Kurt Goldstein (1878–1965), successor in Frankfurt to Ariëns Kappers’s former teacher Ludwig Edinger, was able to secure RF funding while in exile in Holland and awaiting his immigration to America. Four eminent Dutch neuroscientist professors drafted a letter to the RF stating their clinics or institutes were available “to help and to promote the investigations” of “recognized authority” Goldstein, so that his work could remain uninterrupted. Because of the support of the Amsterdam professors, not only did Goldstein obtain an appointment in Dutch academia, but he also received a 2000 Dutch guilder stipend from the Dutch *Akademisch Steunfonds* (“academic assistance fund”) along with a matching RF fund from 1933 to 1934.⁹⁸

Paul Hoefler, Refugee to Boston

Paul F.A. Hoefler (1903–), an MD, PhD, was dismissed by May 1933 as a non-Aryan, even though a practicing Lutheran and one-quarter Jewish.⁹⁹ Hoefler was replaced by later NSDAP and SS member Alfred von Auersperg, who completed Hoefler's neurophysiology research on reflex action potentials in normal subjects, compared to those with pyramidal and extrapyramidal diseases.¹⁰⁰ Despite Hoefler's mandatory dismissal under the racist Nazi civil service laws, Hoefler's chief, Viktor von Weizsäcker, wrote that Hoefler "... is one of the most talented and reliable young physiologists in Germany."^{101p.71}

Hoefler briefly worked as an assistant at the Kennenburg private psychiatric clinic near Esslingen until 1934 and then was able to immigrate to Boston and work at Tufts College Medical School, with help from the RF, after being invited by neurologist Joseph Pratt. The RF contributed half of Hoefler's \$2400 salary at Tufts for 1934-35, and they contributed equal amounts in 1935 and 1936, since Tufts gave the RF "Satisfactory assurance of absorption..." The RF also wrote that "...Doctor Hoefler's research falls in one of the Foundation's fields of special interest and that his training in physics and medicine gives him exceptional qualifications for such research." The other half of Hoefler's salary was contributed by the Emergency Committee for the Aid of Displaced Foreign Physicians (ECADFP).¹⁰² Thus, Hoefler was fortuitous to be recommended highly in Germany to the point Pratt backed his appointment, and that his work was "of special interest" to the RF, and to the ECADFP. It should be noted that Boston academic neurologists Stanley Cobb, Tracy Putnam, and Pratt were all on the Executive Committee of the "Boston Committee on Medical Émigrés" (later coordinated with the ECADFP),¹⁰³ and, therefore, were all invested in aiding foreign refugees like Hoefler. Putnam, in particular, wrote, "...I should, of course, be very glad to do what I can for any of the groups interested in the refugee problem. If we can find a decent solution to that, I shall feel optimistic to finding solutions to other problems which face this country."¹⁰⁴

Hoefler's pre-eminence and scholarly potential did appear to be crucial in his being awarded an RF grant. But during a year-long drama between Pratt, Hoefler, the RF, and other eminent neurologists at the Boston City Hospital (Putnam and Cobb), in which Hoefler felt abused and incensed that he "...actually meant for [Pratt] nothing but short-wave-therapy" (the research Pratt wanted Hoefler to complete), the RF's position on "deposed scholars" became clearer. Hoefler's case appears to be illustrative. He seems to have expressed his concerns about doing more neurophysiology work to Pratt, and had already told Robert Lambert of the RF that "his routine work at the Boston Dispensary gives him little time for anything." But Pratt then tried to transfer Hoefler's grant to another German (Heinrich Brugsch) to carry out the short-wave research. but Alan Gregg of the RF had the following to say about their grant: "It was not made to be dependent upon any special type of work (e.g. short wave therapy), but was for a deposed German scholar of such merit that he was likely to be given a permanent appointment."¹⁰⁵

The fact that the RF not only had concern about the individual refugee scientist's fate but for their scientific merit and potential to make a grant to the person a worthy investment, is evident in Lambert's further statement to Pratt: "...our funds have been set aside for the placement only of men of exceptional merit and distinction. The question of the man's need is definitely subsidiary, otherwise the funds would be quickly used up on the least valuable of the scholars."¹⁰⁶ Eventually this matter was settled "locally" and Hoefler went to work with Putnam, for whom Hoefler could "be of real use to me in a multiple sclerosis investigation or to Bill Lennox in the epilepsy program." And Hoefler was less a "bother" to the RF (as stated by Lambert in a diary entry following a call with Pratt), and per a 1939 update in his RF file "His colleagues report that he is an exceedingly able investigator and scholar." Hoefler went with Putnam to New York where Putnam became Chair of the New York Neurological Institute.¹⁰⁷ Hoefler's story highlights that not all scholars were able to be helped by the RF or other agencies, but that self-interest on the part of some American university investigators in using the desperate refugees, and those refugees with a higher likely return on investment for the RF, led to a triaged approach in choosing some refugees to literally "publish or perish."

Ernst and Berta Scharrer, Rejectors of Nazism, Supported by the RF

The “Aryan” Nazi resistor husband–wife pair of Ernst (1905–1965) and Berta (1906–1995) Scharrer, founders of “neuro-endocrinology,” would often arrive at the Frankfurt Neurological Institute with briefcases in both hands following the *Machtergreifung*, preventing them from having to “Heil Hitler” to their colleagues, and they decided to leave Germany in protest of Nazi politics.¹⁰⁸ Ernst was director at Frankfurt from 1933 to 1937.¹⁰⁹ The couple immigrated to the US in March 1937 on student visas and Ernst obtained an RF fellowship at the University of Chicago Medical School in the Department of Anatomy from April to June 1937, and again from September 1937 to June 1938.¹¹⁰

Ernst could not take a position in Germany offered by Hugo Spatz at the KWIHF (Kaiser Wilhelm Institute for Brain Research), since he had candidly made anti-Nazi remarks while abroad and it would be dangerous to return to Germany. Besides the personal danger, an academic job offering could be conditional and professionally risky: Scharrer relayed to the RF that a friend had been similarly promised a position in Germany but was ultimately rejected because he was not a zealous Nazi and had to go into industry. Scharrer told the RF he felt the Nazi “limitation in the recruiting of younger men [was] the most serious drawback to the continued development of German Science.”¹¹¹

Robert Lambert of the RF was sympathetic to the Scharrers’ remaining in the US, stating the following:

Dangerous for S. to return to Germany any time after his 1st yr. in U.S. He never hesitated to say exactly what he thought of Nazi regime. While unwise, this was done naturally and sincerely. Having expressed feelings and being a person who would not bring himself to conform, after a yr [sic] of freedom in U.S., it was inevitable S. would stay here” and he could not urge him to go back to Germany since “it would be very dangerous.”¹¹²

Another RF officer, Daniel O'Brien, disagreed, stating that the Scharrers' staying in the US:

represents...a clear defeat of what he believes to be one of the best opportunities to build up in Germany the field of comparative anatomy of the nervous system...they should have returned to Germany and stuck it out...The S. case might well afford a talking point when eventually other applicants may come from Germany for fships...¹¹³

Scharrer and his wife worked at the Rockefeller Institute for Medical Research in New York (1938–40), followed by the Western Reserve University in Ohio (1940–46), the University of Colorado School of Medicine (1946–54), and, finally, Ernst became Anatomy chairman at Albert Einstein College of Medicine in New York in 1955.¹¹⁴

Discussion and Conclusions

The above examples point to a convoluted admixture of aid to neuroscientists who had been exiled from their academic positions in Nazi Germany and Austria for racial and political reasons, contrasted with controversial monetary aid for eugenic research in Germany and Scandinavia. Or they point to grant funding of an institute such as the DFA that was engaged in eugenic work and a receiver of Nazi SS funding, even if the RF funds were directed only to persecuted faculty such as Spielmeyer or Plaut. Of course, the RF support to the scholars helped them to become established and restart their careers abroad, but what of all the non-academic refugee neuroscientists or academic neuroscientists who were not “men of exceptional merit and distinction” (stated by a prominent RF official)? With limited funds, it would seem the RF operated within set parameters to do some good to save academic neuroscientists in peril.

To some extent, support of eugenics work may not have been ultra-surprising in an era where eugenics was espoused globally not as a pseudoscience, as we see it today, but as a legitimate method to improve the genetic makeup of a

population, albeit with clearly racist undertones. In neuroscience alone, multiple eminent neuroscientists including Oskar Vogt, William Lennox, and Robert Foster Kennedy all supported eugenics and even euthanasia, respectively.¹¹⁵ Ironically, the RF extensively funded work at Boston State Hospital Psychiatric Department under neuropsychiatrist Abraham Myerson which included, among other projects, a “reorientation” and critical appraisal of the foundation of eugenical sterilization. Myerson in his 1940 report for the RF stated that the book he and collaborators had published five years prior “...was influential in determining the attitude of the American Eugenics Society towards mental disease causing...an alteration from excessive dogmatism towards a more cautious and reasonable approach to the problem.”¹¹⁶ Helped chiefly by neurologist émigré Leo Alexander, an RF-funded clinician-researcher who left Frankfurt and came to Boston via Beijing and a stint at the RF-funded Peking Union Medical College (even beating out the ill-fated Felix Plaut), along with Tracy Putnam, Myerson and colleagues proved the following: “. . . only 3% of the insane in the next generation could be eliminated by sterilizing the insane of the present generation...”¹¹⁷ Interestingly, despite later criticism of Schaltenbrand’s unethical experiments,¹¹⁸ Alexander never raised concerns about RF-funding of the former’s monkey farm that facilitated the unethical experiments on humans. Perhaps this was out of ignorance, or perhaps he was still grateful for the help the RF had given him in the 1930s to escape tyranny. The RF itself uncritically helped absolve Schaltenbrand of his ethical violations and Nazi collaboration with post-war whitewashing letters; whether this means the RF condoned his unethical actions, or was ignorant of their implications at the time, is unclear.

In the “retrospectoscope,” did the RF act apolitically and in the interest of science and learning, or in the interest of individual neuroscientists, or both? The picture is indeed in varying shades of grey, and far from black and white. Clearly, RF officials had sympathy and wished to support individual neuroscientists, albeit neuroscientists who had met their bar for “exceptional merit,” and that even transcended opinions on “likability” in the case of a Bielschowsky, or in cases of excessive local drama and egos such as with Hoefer. Even in the case of the Scharrers, in which one RF official thought

shortsightedly that they were ruining an opportunity to build up comparative neuroanatomy in Germany, the Scharrers were still fully supported in their flight from Nazi Germany and re-establishment in the US. Otherwise, they likely would have been forced to return to Germany for possible arrest and brutal treatment by the Gestapo for sedition. And the RF did seem to act apolitically in regard to dropping funds to the DFA in Munich and certainly to Germany with the onset of hostilities in Europe with World War II.

And yet, the RF seemed to have disregarded its own funded work's result in Boston regarding the futility of eugenics work, and funding to Lange and Schaltenbrand should have been cut off sooner. Additionally, the RF-funding for Danish hereditary psychiatric work with eugenic implications also is troubling, especially after the 1935 report by Myerson et al. The RF did, on balance, help a significant portion of scholars, and neuroscience should be forever grateful to them for this. But the grant funding for eugenics work in Nazi Germany and elsewhere should also be forever a lesson to the neuroscience community and the RF about the dangers of supporting unsubstantiated scientific work not rooted in medical ethics and even contrary to contemporary evidence of its utility. Medical and research ethics should never take a backseat to scientific progress.

Abbreviations

Nazi Era Terms:

DFA - *Deutsche Forschungsanstalt für Psychiatrie* (German Research Institute for Psychiatry, Munich)

DFG - *Deutsche Forschungsgemeinschaft* (German Research Council)

EGOG - *Erbgesundheitsobergericht* (sterilization appeals court)

KWI - Kaiser Wilhelm Institute

KWIHF - *Kaiser Wilhelm Institut für Hirnforschung* (Kaiser Wilhelm Institute for Brain Research)

NSDÄB - NS-Ärztebund (National Socialist German Doctors' League)

NSDAP - *Nationalsozialistische Deutsche Arbeiterpartei* (National Socialist German Workers' Party, i.e., Nazi Party)

RSHA - SS Security Main Office

SA - *Sturmabteilung* (Storm troopers, Nazi "brown shirts")

SS - *Schutzstaffel* (Nazi black shirts, elite Nazi organization)

Neuroscientific, Society, and Academic Terms

CSF - cerebrospinal fluid

ECADFP - Emergency Committee in Aid of Displaced Foreign Physicians

MS - multiple sclerosis

PUMC - Peking Union Medical College in China (Rockefeller-funded initially)

RAC - Rockefeller Archive Center

RF - Rockefeller Foundation

SPSL - Society for Protection of Science and Learning (British rescue agency)

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- ⁷⁵ Müller-Hill, B. Conversations: Professor Edith Zerbin-Rüdin, the daughter of Professor Ernst Rüdin. In: *Murderous Science: Elimination by Scientific Selection of Jews, Gypsies, and Others in Germany, 1933–1945*. New York: Cold Spring Harbor Press, 1998: 130–133.
- ⁷⁶ RAC, RF, RG 1.1 Series 717A: Germany—Medical Sciences, Box 10, Folder 57, Forschungsanstalt Für Psychiatrie, Munich—Research, 1935–1940, 1945–1948, 1950. (Of note, no pagination exists in this file, but I have listed the pdf pages in my scanned version of the original.)

⁷⁷ Spielmeier's wife's father was part-Jewish, and he feared for his daughter's future. He considered immigrating to Holland, Scandinavia, England, or America (in that order), since as a 54-year-old scientist, he could not afford to wait two to three years even for the political situation in Germany to improve, which he didn't believe would happen. However, as of September 1933, he still felt he could wait six months to a year, and was advised as such by the RF. See: RAC, RG 1.1, Series 717, Box 9, Folder 56.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Peiffer, J. 1933–1945, Jahre der nationalsozialistischen Verführung. In: Peiffer J. *Hirnforschung in Deutschland 1849 bis 1974* Berlin: Springer Verlag: 2004: 94–120.

⁸¹ Weber, MM. Psychiatric research and science policy in Germany: The history of the Deutsche Forschungsanstalt für Psychiatrie (German Institute for Psychiatric Research) in Munich from 1917 to 1945. *Hist Psychiatry* 2000; 11:235–258.

⁸² Lewis A. German eugenic legislation: An examination of fact and theory. *Eugen Rev* 1934; 26:183–191.

⁸³ RAC, RF, Paris office, Medical Sciences Germany, RG 6.1, Series 1.1, Box 4, Folder 47, Kaiser Wilhelm Institute for Psychiatry 1935–36.

⁸⁴ RAC, RF, RG 1.1, Series 717, Box 9, Folder 56.

⁸⁵ RAC, RF, RG 1.1 Series 717A: Germany—Medical Sciences, Box 10, Folder 57, Forschungsanstalt für Psychiatrie, Munich—Research, 1935–1940, 1945–1948, 1950. (Of note, no pagination exists in this file, but I have listed the pdf pages in my scanned version of the original.)

⁸⁶ Plaut asked for RF assistance in finding a post abroad, but he stayed in Munich for four more years, enduring escalating persecution, ostensibly because his pension would be voided if he left the country. See: Oxford Bodleian SPSL file 535-3, Plaut, Felix. He finally immigrated to England in 1939, supported for six months by an SPSL grant and thereafter by an RF grant, but in June 1940 he was forced to suspend his work at the Horton Mental Hospital because of new English decrees that aliens couldn't work in hospitals with military personnel, since the war was ongoing at that point. With impending deportations of "enemy aliens" Plaut committed suicide by overdosing on sedatives, his supervisor stating, "He had been depressed for some time and apparently when there was talk of [internment]...he felt he could not face up to the situation any longer." Thus, shamefully ended the career of a pioneering neuroserologist, dismissed 20-year faculty member of Munich University, and exiled DFA director with at least 137 publications. After his second dismissal (this time in England), the RF had actually attempted unsuccessfully to find Plaut a position in Iowa with Woods, and an RF official stated after Plaut's death: "I can be thankful only that this last year was made endureable [sic] by our grant for his unfinished work. All the rest of it is tragic." See: Oxford Bodleian SPSL file 535-3, Plaut, Felix, p.447. See also: RAC, RF, RG 1.1, Series 401A, Box 18, Folder 242, Horton Mental Hospital, Neuro-syphilis, 1938–40. (Of note, no pagination exists in this file, but I have listed the pdf pages in my scanned version of the original.)

⁸⁷ Rürup, R. Felix Plaut: Deutsche Forschungsanstalt für Psychiatrie (Kaiser-Wilhelm-Institut), München. In: *Schicksale und Karrieren: Gedenkbuch für die von den Nationalsozialisten aus der Kaiser-Wilhelm-Gesellschaft vertriebenen Forscherinnen und Forscher*. Göttingen: Wallstein Verlag, 2008: 290–292.

⁸⁸ RAC, RF, Paris office, Medical Sciences Germany, RG 6.1, Series 1.1, Box 4, Folder 47, Kaiser Wilhelm Institute for Psychiatry 1935–36.

⁸⁹ Klee, E. *Das Personenlexikon zum Dritten Reich: Wer war was vor und nach 1945*. Frankfurt: Fischer-Taschenbuch-Verlag, 2005.

⁹⁰ Scheid, KF. Bericht über die Deutsche Forschungsanstalt für Psychiatrie, Kaiser Wilhelm-Institut in München. (Bericht über die Zeit vom 1. April 1935 bis 31. März 1936.) *Zeitschrift für die gesamte Neurologie und Psychiatrie* 1936; 156(1): 309–328.

⁹¹ In Sweden, eugenic sterilizations peaked as late as 1945, when 75% of sterilizations took place for “eugenic” (vs. “medical” or “social”) indications. These continued in high numbers until 1949, after which the eugenic cases precipitously declined and medical reasons became the primary indication. It should be noted that in contrast to Nazi Germany, sterilization was mostly voluntary in all the Scandinavian countries, except in cases of severe chronic intellectual or psychiatric disability in which the individual in question was not seen as being able to give consent. As a result, for instance, roughly 40% of eugenic sterilizations in Sweden were involuntary. Additionally, violence was not permitted in compulsory cases (except after the 1942 Norwegian Nazi law was passed, police could be involved).

⁹² Zeidman, LA. *Brain Science under the Swastika: Ethical Violations, Resistance, and Victimization of Neuroscientists in Nazi Europe*. Oxford, UK: Oxford University Press, May 2020.

⁹³ Wimmer to O’Brien, 7 March 1936, RAC, RF, Paris office, Medical Sciences Denmark, RG 6.1, Series 1.1, Box 1, Folder 15, Denmark Psychiatric file 1936–40.

⁹⁴ Bielschowsky grew up in a well-educated Jewish bourgeois family. His decisive scientific development occurred in the Frankfurt Neurological Institute. In 1902, Bielschowsky invented the famous and still used silver-staining method for neuronal axon cylinders and nerve fibers, called the Bielschowsky method. In 1904, he moved to the Vogts’ Neurobiology Laboratory. From 1919 onward, he headed the neuropathology department at the newly founded KWIHF and in 1925 was named a KWI scientific member. Beside interest in multiple sclerosis (MS), myelitis, and optic neuritis, Bielschowsky published on peripheral nerve trauma, brain cytoarchitectonics, neurofibromatosis, tuberous sclerosis, and neuronal ceroid lipofuscinosis (NCL). The Jansky–Bielschowsky type is the late juvenile form of NCL. With over 180 publications and international fame, Bielschowsky was made an honorary member of the American Neurological Association in 1932. See: (a) Rürup, R. Max Bielschowsky: Kaiser Wilhelm Institut für Hirnforschung, Berlin-Buch. In: *Schicksale und Karrieren, editors. Gedenkbuch für die von den Nationalsozialisten aus der Kaiser-Wilhelm-Gesellschaft vertriebenen Forscherinnen und Forscher*. Göttingen: Wallstein Verlag: 2008: 156–158; and (b) Kaminski HJ. Max Bielschowsky. In: Ashwal, S, editor. *The Founders of Child Neurology*. San Francisco, CA: Norman Publishing, 1990: 426–430.

⁹⁵ RAC, RF, RG 1.1, Series 650A, Box 3, Folder 32, University of Utrecht–Bielschowsky, Max–(Neuro-Pathology, Refugee Scholar).

⁹⁶ RAC, RF, RG 1.1, Series 650A, Box 3, Folder 32, University of Utrecht–Bielschowsky, Max–(Neuro-Pathology, Refugee Scholar).

⁹⁷ Zeidman, LA. *Brain Science under the Swastika: Ethical Violations, Resistance, and Victimization of Neuroscientists in Nazi Europe*. Oxford, UK: Oxford University Press: May 2020.

⁹⁸ RAC, RF, RG 1.1, Series 6.1, Box 4, Folder 41, Deposed Scholars, Kurt Goldstein.

⁹⁹ Oxford Bodleian SPSL file 417-3: Hofer, Paul FA.

¹⁰⁰ Zeidman, LA. *Brain Science under the Swastika: Ethical Violations, Resistance, and Victimization of Neuroscientists in Nazi Europe*. Oxford, UK: Oxford University Press, May 2020.

¹⁰¹ Oxford Bodleian SPSL file 417-3: Hofer, Paul FA.

¹⁰² RAC, RF, RG 1.1, Series 200, Box 109, Folder 1337, Tufts College – Hofer, Paul – (Refugee Scholar, Physics and Medicine), Date: 1934-39.

¹⁰³ RAC, Rockefeller University, Alfred E Cohn Papers, Box 6, Folder 28, Boston Emergency Committee

¹⁰⁴ RAC, Rockefeller University, Alfred E. Cohn Papers, Box 5, Folder 17, Refugee materials-Putnam, Tracy

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- ¹⁰⁵ RAC, RF, RG 1.1, Series 200, Box 109, Folder 1337, Tufts College – Hoefler, Paul – (Refugee Scholar, Physics and Medicine), Date: 1934-39.
- ¹⁰⁶ RAC, RF, RG 1.1, Series 200, Box 109, Folder 1337, Tufts College – Hoefler, Paul – (Refugee Scholar, Physics and Medicine), Date: 1934-39.
- ¹⁰⁷ Ibid.
- ¹⁰⁸ Kreeger, KY. Obituary: Pioneering neuroscientist Berta Vogel Scharrer Dies. *Scientist* 1995;9(17):17.
- ¹⁰⁹ RAC Commonwealth Fund, Fellowships, RG 1, Series 3, Box 38, Folder 459 Ernst Scharrer 1960-65.
- ¹¹⁰ RAC, RF, RG 10.2 Drawer 2 Scharrer, (Dr.) Ernst (Germany).
- ¹¹¹ Ibid.
- ¹¹² Ibid.
- ¹¹³ Ibid.
- ¹¹⁴ RAC Commonwealth Fund, Fellowships, RG 1, Series 3, Box 38, Folder 459 Ernst Scharrer 1960-65.
- ¹¹⁵ Zeidman, LA. *Brain Science under the Swastika: Ethical Violations, Resistance, and Victimization of Neuroscientists in Nazi Europe*. Oxford, UK: Oxford University Press, May 2020.
- ¹¹⁶ RAC, RF, RG 1.1, Series 200A, Box 72, F872-874, Boston State Hospital Psych, 1934-46.
- ¹¹⁷ Zeidman, LA. *Brain Science under the Swastika: Ethical Violations, Resistance, and Victimization of Neuroscientists in Nazi Europe*. Oxford, UK: Oxford University Press, May 2020.
- ¹¹⁸ Zeidman, LA. *Brain Science under the Swastika: Ethical Violations, Resistance, and Victimization of Neuroscientists in Nazi Europe*. Oxford, UK: Oxford University Press, May 2020.