

In Appreciation

Fritz Reiche and the Emergency Committee in Aid of Displaced Foreign Scholars

Benjamin Bederson*

I discuss the family background and early life of the German theoretical physicist Fritz Reiche (1883–1969) in Berlin; his higher education at the University of Berlin under Max Planck (1858–1947); his subsequent work at the University of Breslau with Otto Lummer (1860–1925); his return to Berlin in 1911, where he completed his Habilitation thesis in 1913, married Bertha Ochs the following year, became a friend of Albert Einstein (1879–1955), and worked during and immediately after the Great War. In 1921 he was appointed as *ordentlicher Professor* of Theoretical Physics at the University of Breslau and worked there until he was dismissed in 1933. He spent the academic year 1934–1935 as a visiting professor at the German University in Prague and then returned to Berlin, where he remained until, with the crucial help of his friend Rudolf Ladenburg (1882–1952) and vital assistance of the Emergency Committee in Aid of Displaced Foreign Scholars, he, his wife Bertha, and their daughter Eve were able to emigrate to the United States in 1941 (their son Hans had already emigrated to England in 1939). From 1941–1946 he held appointments at the New School for Social Research in New York, the City College of New York, and Union College in Schenectady, New York, and then was appointed as an Adjunct Professor of Physics at New York University, where his contract was renewed year-by-year until his retirement in 1958.

Key words: Fritz Reiche; Albert Einstein; Fritz Houtermans; Alvin S. Johnson; Hartmut Kallmann; Rudolf Ladenburg; Philipp Lenard; Edward R. Murrow; Siegfried Ochs; Max Planck; Clemens Schaefer; Harlow Shapley; New York University; University of Berlin; University of Breslau; Emergency Committee in Aid of Displaced Foreign Scholars; New School for Social Research; Nazi Germany; German bomb project; refugees; quantum theory; nuclear physics.

Introduction

In 1949 I was completing course work for a Ph.D. degree at New York University (NYU) but needed one additional course in statistical mechanics as a degree requirement. The course was given by a diminutive professor with a slight German accent whose name was Fritz Reiche. This course turned out to be the most memorable one I was ever to take at NYU, on a par in quality with courses I had taken elsewhere, from

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such luminaries as Hans Bethe and Edward Teller at Los Alamos,¹ and by all the famous Nobel Prize winners at Columbia University. The clarity, the seeming simplicity of the concepts (similar to the deceptively simple lectures given by Julian Schwinger), succeeded in transmitting to the listener the impression that he or she was able to follow deeply and with brilliant clarity the true essence of statistical mechanics. Professor Reiche was in a class by himself, at least at NYU.

Later, when I joined the NYU faculty, I learned a lot more about Reiche, and recently I have learned still more. I became interested in the fates of displaced scientists before and during the Second World War, so I decided to probe more deeply into Reiche's life and the problems he encountered before, during, and after his emigration to the United States. Inevitably, during this quest, I was led to the Emergency Committee in Aid of Displaced Foreign Scholars,* an organization that I am sorry to say I was unfamiliar with before researching the travails of Reiche. Its story, while well known to historians of the prosecution of scientists and other scholars by the Nazis, is neither as widely recognized, nor as celebrated as it should be. I describe below Reiche's contributions to physics in Germany and his later experiences in America with reference to the activities of the Emergency Committee. My account is based in part on Reiche's short curriculum vitae,² which he wrote in German, and which I reproduce in English translation in the Appendix.

Reiche in Germany

Fritz Reiche (1883–1969, figure 1) was born in Berlin to cultured, assimilated Jewish parents. He completed his secondary education in 1901, at age 18, at the College Royal Français, one of the most famous Gymnasia in Berlin, which his father and several relatives had attended earlier. He then went to Munich for a year, studying physics, mathematics, and chemistry, attending lectures by Wilhelm Conrad Röntgen (1845–1923), the discoverer of X rays, among others. Returning to Berlin, by chance he happened to hear a lecture on thermodynamics by Max Planck (1858–1947) at the University of Berlin and was so impressed that he immediately decided to study further with Planck – a decision that was reinforced when, during the following semester, he witnessed Planck derive his recently published law of blackbody radiation. Reiche received his Ph.D. degree under Planck in 1907.

The following year, on the advice of Planck and Eugen Goldstein (1850–1930), the discoverer of the “canal rays,” Reiche went to the University of Breslau to work with Otto Lummer (1860–1925) on blackbody radiation. He also met his lifelong friend Rudolf Ladenburg (1882–1952) there, who later would play a key role in getting Reiche to the United States. In his curriculum vitae,³ Reiche admits that in Breslau,

* The Emergency Committee in Aid of Displaced Foreign Scholars, originally German Scholars, before the Nazis conquered most of Europe. Records, 1933–45, stored in 199 archival boxes, are deposited in the Manuscripts and Archives Division of the New York Public Library. They were transferred there in June 1946 by virtue of a resolution adopted at the final meeting of the Committee, with an instruction not to release them for 25 years. See the Committee's website <www.nypl.org/research/chss/spe/rbk/faids/Emergency>.

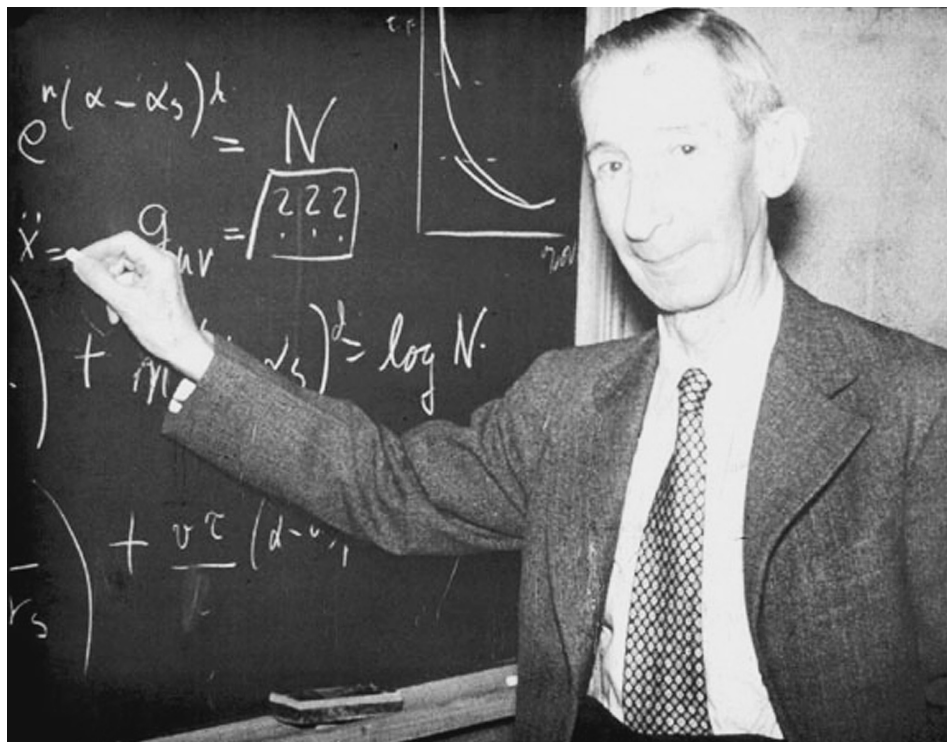


Fig. 1. Fritz Reiche (1883–1969) ca. 1949. Photograph by the author.

despite his preparatory work in experimental physics, his experimental abilities proved to be nonexistent. Indeed, by causing flooding and small explosions in the laboratory, he was deemed to be a danger to the institute. He remarked, however, that he “took comfort” that his colleague and friend, Max Born (1882–1970), was “not inferior to me in these ‘mishaps’.” Historian Scott Walter notes that at Breslau Reiche and another young theoretical physicist, Stanislaus Loria, first brought Born’s attention to the 1905 paper on special relativity by Albert Einstein (1879–1955).⁴ Born, in fact, first studied Einstein’s theory under Reiche’s tutelage. Reiche himself first heard Einstein lecture in Salzburg, evidently in September 1909.⁵

Reiche remained in Breslau until 1911 and then returned to Berlin, where he completed his Habilitation thesis and became *Privatdozent* in 1913. The following year he married Bertha Ochs, the daughter of Siegfried Ochs (1858–1929), the founder and longtime Director of the Philharmonic Choir in Berlin. They had two children, Hans, now deceased, and Eve, now Mrs. Eve Reiche Bergmann, who lives in Queens, New York City. Love of music played a central role in their family life, as described by Hans Reiche:

His [my father’s] phenomenal memory and his great interest in music was admired by all. Many times did he discuss with great details technical problems with such

well-known musicians as his father-in-law Prof. S. Ochs, ...Prof. K. Oppenheim and Prof. C. Ebet, both connected with the direction of the Glyndebourne music festivals.... For the 70th birthday of my grandfather [in 1928] my parents wrote a complete opera which our family staged with the help of the Berlin Opera House.* Although the performance was a great success, I know my father was not too pleased with me getting fed by the famous soprano Lotte Lehman with an ample share of the champagne.⁶

From 1915 to 1918, during the Great War, Reiche was an assistant to Planck, and in the last year of the war, surprisingly, considering his theoretical bent, he worked in the gas-mask department of the Osram company under the directorship of Fritz Haber (1868–1934). Reiche was now often with Einstein, walking with him through the Tiergarten to the Physical Institute of the University of Berlin on the Reichstagsufer to participate in the physics colloquium, where he came to know well the “circle of great scientists” that included Einstein, Planck, Max von Laue (1879–1960), Heinrich Rubens (1865–1922), Walther Nernst (1864–1941), James Franck (1882–1964), and Gustav Hertz (1887–1975). Einstein later would lend Reiche the use of his home in Princeton during the first summer after he emigrated to the United States.

Immediately after the war, Reiche became a theoretical advisor at Haber’s Kaiser Wilhelm Institute for Physical and Electrochemistry in Berlin-Dahlem, where he interacted with such outstanding physicists as Ladenburg, Franck, Hertha Sponer (1895–1968), and Hartmut Kallmann (1896–1978). Reiche also recalled that he attended the notorious meeting in Bad Nauheim in September 1920, where Einstein lectured on general relativity and was attacked by Philipp Lenard (1862–1947).⁷ Reiche remarked on Einstein’s calmness, patience, and objectivity as he rebutted all of Lenard’s criticisms.

In 1921 Reiche was appointed as *ordentlicher Professor* of Theoretical Physics at the University of Breslau as successor to Erwin Schrödinger (1887–1961), who stayed there only one term before moving on to the University of Zurich. Reiche spent twelve years in Breslau, collaborating first with Otto Lummer until his death in 1925, and then with Clemens Schaefer (1878–1968), who later declared that Reiche was “always my advisor in theoretical physics,” and that “no one understood the difficulties of experimental physicists as well and could solve them as easily as Reiche.”⁸ This was the period of Reiche’s greatest scientific productivity.

Reiche carried out theoretical research during those twelve years on a broad array of topics of current interest, including radiation theory, the theory of diffraction, the absorption of spectral lines, the quantum theory of the helium atom, paramagnetism, specific heat, rotational spectra, and the Zeeman effect.** He is best known to physicists and historians today for the Thomas-Reiche-Kuhn (TRK) sum rule of 1925, named after Willy Thomas (one of Reiche’s students in Breslau), Reiche, and Werner

* I suspect that Siegfried Ochs, a composer as well as a conductor of choral music, had something to do with this opera.

** I provide a complete list of Reiche’s publications on my Reiche website (ref. 2).

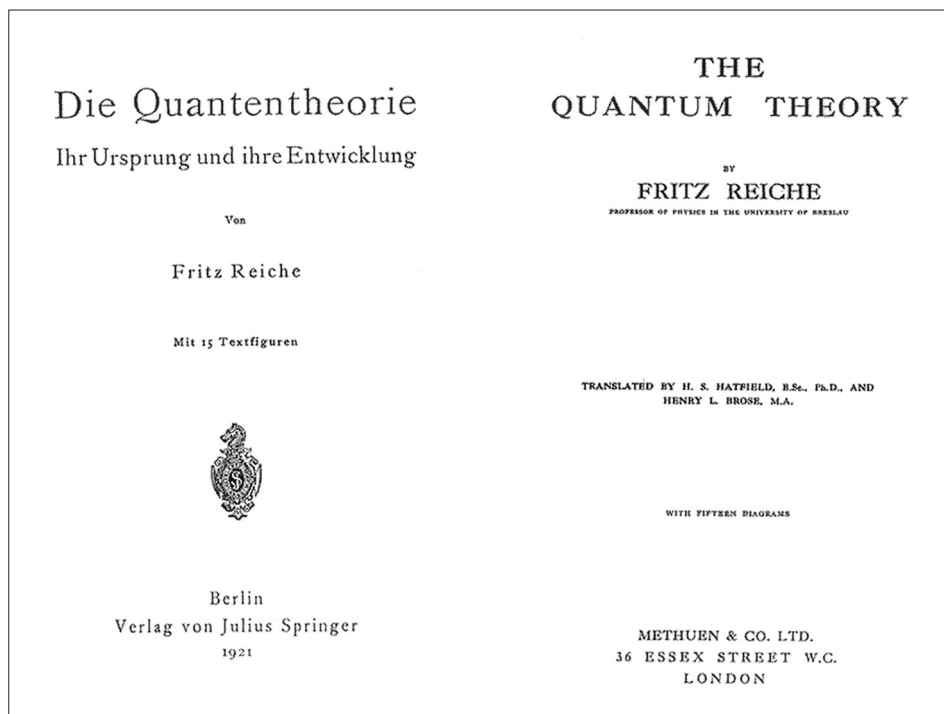


Fig. 2. Title pages of Fritz Reiche's *Die Quantentheorie* (first German edition, 1921) and *The Quantum Theory* (first English edition, 1922).

Kuhn.⁹ The earlier Kuhn sum rule states that the sum of all oscillator strengths to the ground state of any atom is approximately equal to unity, which is an important bridge connecting classical to quantum radiation theory. The more general TRK sum rule states that the sum of all oscillator strengths to and from an atomic state equals the total number of participating electrons, which is enormously helpful in calculating radiation transition probabilities.

To me, a particularly surprising – and poignant – publication is Reiche's paper, "On the Passage of Moving Molecules through Inhomogeneous Fields," which he wrote in collaboration with Hartmut Kallmann in 1921.¹⁰ Sixty years later, I became interested in exactly the same problem and carried out a number of experiments on the passage of alkali halide molecules through inhomogeneous electric fields. During the course of this work, I redeveloped exactly the same deflection analysis, unaware that Reiche and Kallmann had done so six decades earlier.

Reiche is also well known as the author of an influential textbook, *Die Quantentheorie: Ihr Ursprung und ihre Entwicklung* (*The Quantum Theory: Its Origin and Development*, figure 2), which was published by Julius Springer in 1921 and went through three English editions, in 1922, 1924, and 1930.¹¹ To the last of these, its translators, H.S. Hatfield and Henry L. Brose, added a chapter on Reiche's request on developments after 1922, that is, on the new quantum theory. When reading Reiche's book I

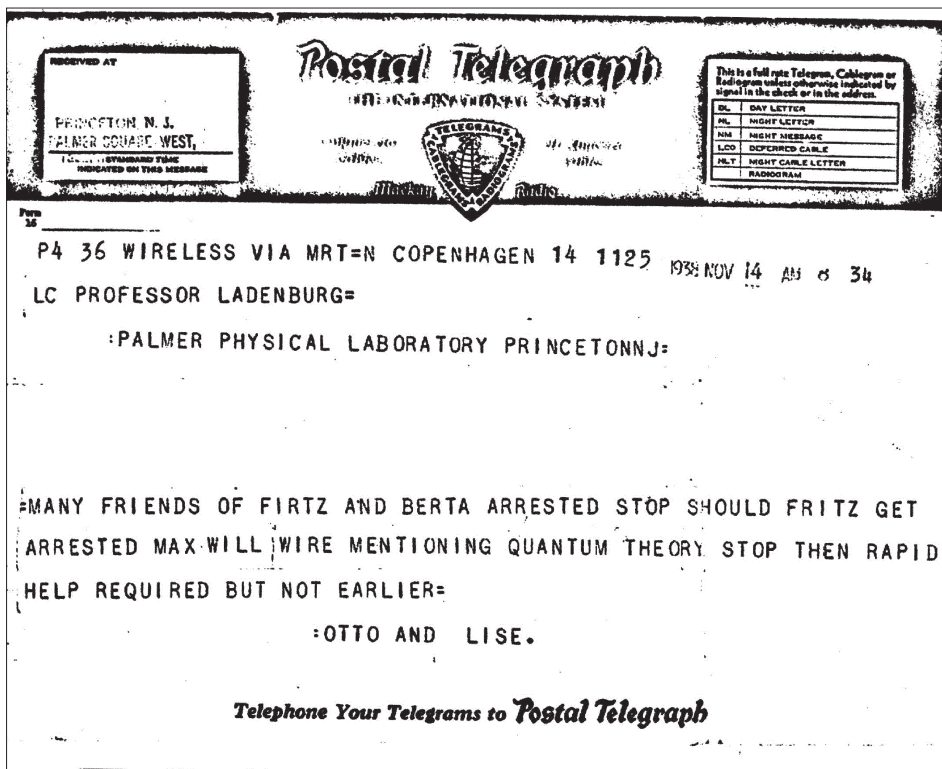


Fig. 3. Telegram from Otto Hahn and Lise Meitner to Rudolf Ladenburg, dated November 14, 1938. Reproduced by permission of the Manuscripts and Archives Division, New York Public Library.

discovered, not to my surprise, that it had precisely the same flavor that I recalled from Reiche's lectures at NYU. A significant innovation was that he divided his book into two parts, first, a narrative with little mathematics following a historical line of development (which makes it valuable reading for historians), and second, extensive "Mathematical Notes and References." It remains one of the most accessible, and substantive textbooks I have ever read. My opinion is shared, for example, by Hideki Yukawa (1907-1981), who has stated that, "I was intellectually stimulated above all by Fritz Reiche's Quantum Theory."¹²

These happy and fruitful years for Reiche came to a bitter end when Adolf Hitler became Chancellor of Germany on January 31, 1933, and the Law for the Restoration of the Career Civil Service was promulgated on April 7.¹³ Reiche was dismissed from the University of Breslau along with over one thousand other Jewish scientists and scholars from Breslau and other German universities.¹⁴ He left Breslau in early 1934, returned briefly to Berlin, and then, with the intervention of his friend Ladenburg, who was now safely ensconced in Princeton, was called as a visiting professor to the German University in Prague, under a Rockefeller Fellowship, where he became a close colleague of the physicists Phillip Frank (1884-1966) and Reinhold Fürth (1893-1979)

and the mathematician Karl Loewner (1893–1968). His good fortune ended a year later in 1935 when his appointment expired and he was forced to return to Berlin, where he lived as a Jew, with all that entailed.

An indication of the constant fear of arrest and deportation to a concentration camp that Reiche, his wife Bertha, and their children Hans and Eve lived through in Berlin is provided by a telegram that Otto Hahn (1879–1968) and Lise Meitner (1878–1968) sent to Ladenburg in Princeton from Copenhagen on November 14, 1938 (figure 3).^{*} He and his wife and their daughter finally got out of Germany in March 1941 (their son had already emigrated to England in 1939). That was long after most German-Jewish scientists had emigrated or, worse, been arrested and deported. Reiche never said much about those bad six years later in life; he was “tolerated,” living on a small pension, and perhaps aided by his family connection to his distinguished father-in-law. (His good friend and colleague Hartmut Kallmann, who also became an NYU professor after World War II and established a highly successful luminescence laboratory there, spent the war years in Berlin where he invented the scintillation counter, but that is another story.^{**})

Reiche in America

Reiche’s old friend Rudolf Ladenburg and Mark W. Zemansky (1900–1981), another of my former teachers who also taught a memorable thermodynamics course at City College,^{***} took the lead in securing U.S. Visas for Reiche, his wife, and their daughter,¹⁵ which in 1941 was a difficult task. Ladenburg also was instrumental in obtaining a grant of \$1000 from the Emergency Committee in Aid of Displaced Foreign Scholars for

* This telegram also substantiates Ruth Lewin Sime’s claim that Lise Meitner met with Otto Hahn in Copenhagen in November 1938 and stimulated him to reexamine the puzzling results of the experiments that he and Fritz Strassmann had carried out in Berlin on the neutron bombardment of uranium, and consequently that Meitner, even though she was then in exile in Stockholm, was a full participant in the Berlin team during their route to the discovery of nuclear fission at the end of the following month. See Ruth Lewin Sime, *Lise Meitner: A Life in Physics* (Berkeley, Los Angeles, London: University of California Press, 1996), pp. 225-226.

** The Kallmann story would be best written by his former graduate student Grace Spruch. She explains the reason why he was able to remain, relatively safely, in Berlin throughout the entire war. It turned out that he was only 7/8 Jewish, since one of his great-grandparents was not Jewish. His wife was not Jewish. Accordingly, his children were over 50% non-Jewish, which meant that by the Nuremberg laws of 1935, they were officially non-Jewish. Thus, since his entire family, excepting himself, was non-Jewish, he was tolerated. His meritorious service in World War I also helped. Kallmann is famous for having conceived the idea of the scintillation counter, using ordinary mothballs (naphthalene), and actually trying out his idea in his apartment in Berlin, to which he had been confined under house arrest. Some of his contemporaries believe this discovery warranted a Nobel Prize. He obtained a tenured position at the Washington Square campus of New York University in 1948, where he established a world-class laboratory specializing in various aspects of luminescence. See Grace Marmor Spruch, “One man’s adventures in a shiny suit,” *The Saturday Review* (December 4, 1965), 88.

*** Mark W. Zemansky wrote the famous, highly popular textbook on thermodynamics and was coauthor with Allan C.G. Mitchell of the seminal treatise, “*Resonance Radiation and Excited Atoms*” (Cambridge University Press, 1934).

him. In addition, Ladenburg and Zemansky chipped in some of their own money, \$400 and \$350 respectively, so that Reiche and his wife and their daughter had the munificent sum of not quite \$2000 with which to start their new lives in the new world. Their first residence in America was in Einstein's home at 112 Mercer Street in Princeton, which Einstein offered to them for the summer of 1941. They evidently lived there the following summer as well (figure 4).

Thomas Powers, in his book *Heisenberg's War*,¹⁶ describes Reiche's life in Germany, especially during the period 1935–1941, and the role he played in bringing news of the German nuclear project to America. Friedrich (Fritz) Houtermans (1903–1966),¹⁷ who had just been released from the Gestapo prison in Berlin in January 1941 and soon thereafter wrote a report in which he proposed means of producing element 94 (plutonium),* had Reiche commit to memory a message to the effect that the German government was serious about making atomic bombs, and that scientists in America should accelerate their efforts. According to Powers, as related to him by Reiche, Werner Heisenberg (1901–1976), among others, was trying to hinder the German effort,** but they could not withstand the pressure from the Nazi regime to do so much longer. Reiche delivered this message when he reached Princeton to an assembly of luminaries that included Eugene Wigner (1902–1995), Wolfgang Pauli (1900–1958), John von Neumann (1903–1957), and Hans Bethe (1906–2005). As dramatic as Reiche's message was, however, Powers concluded that it seems to have had no significant effect on the thinking of these people.***

After three temporary teaching jobs, at the New School for Social Research in New York, at the City College of New York, and at Union College in Schenectady, New York, Reiche obtained a more or less permanent position at the University Heights campus of New York University. I say "more or less," because Reiche was never granted tenure; he was officially an adjunct professor, depending upon year-by-year appointments. During his years at NYU, and after his retirement in 1958 until his death in

* Between 1927 and 1937, Houtermans worked in Göttingen, Berlin, London, and Kharkov, and in December 1937, although he had been a member of the German Communist Party since the 1920s, he was arrested in Moscow by the NKVD (the People's Commissariat of Internal Affairs), imprisoned, and tortured. His wife Charlotte neé Riefenstahl (no relation to the notorious German film maker Leni), who also received her Ph.D. degree in physics at the University of Göttingen in 1927 and whom he had married in 1930, managed to get away to England with their two children, Giovanna and Jan, from where she made extraordinary efforts to get him released, but to no avail. He was not released until April 1940 – and then into the hands of the Gestapo. Only the courageous efforts of Max von Laue (1879–1960) secured his release from the Gestapo prison in Berlin and, in January 1941, obtained a position for him in a private laboratory in Lichterfelde near Berlin where he worked during the war. See Khriplovich, "Eventful Life" (ref. 17); Amaldi, "adventurous life" (ref. 17); and Landrock, "Friedrich Georg Houtermans" (ref. 17).

** Heisenberg's motives and role in the German nuclear project remain a subject of controversy among historians and physicists to this day.

*** In his reminiscence of his father (ref. 6), Reiche's son Hans claimed that his father's message had an important effect on the thinking of Einstein and Leo Szilard and influenced Einstein's famous letter to President Franklin D. Roosevelt. This, however, cannot be the case, since Einstein's letter was dated August 2, 1939, almost two years before Reiche arrived in America.

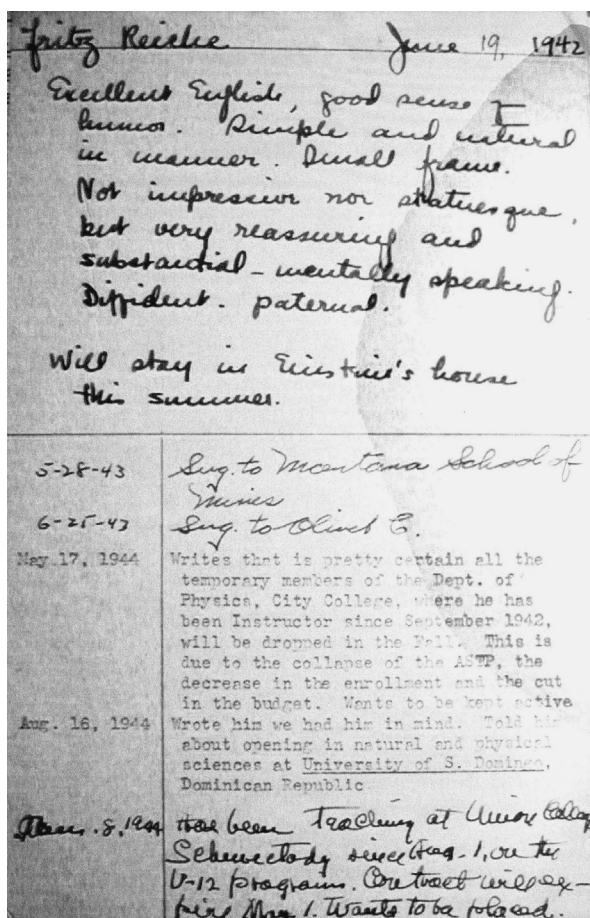


Fig. 4. Evaluation of Fritz Reiche by the Emergency Committee in Aid of Displaced Foreign Scholars, June 19, 1942, stating that he (and his family) “Will stay in Einstein’s house this summer.” Reproduced by permission of the Manuscripts and Archives Division, New York Public Library.

1969,¹⁸ he worked closely with his former assistant in Breslau, Hanfried F. Ludloff at NYU, and also with Joseph B. Keller and Morris Kline at the NYU Courant Institute for Mathematical Sciences, on problems in hydrodynamics and electromagnetic-wave transmission.

The Emergency Committee

The Emergency Committee in Aid of Displaced Foreign (formerly German) Scholars never made generous grants: Typical awards were in the range of one to two thousand dollars per year, and in all only slightly more than 300 grants were made.¹⁹ Each of these awards, however, carried with it a priceless asset: a U.S. Visa. Still in the throes of

With regard to the question of bond, it is believed to be in accord with the law that a consular officer, before issuing an immigration visa, should require evidence to show that the alien's support in the United States will be sufficiently assured to establish that it is not likely, or probable, that he will become a public charge. There is no authority of law by which the Department or a consular officer may accept bond in a visa case. The willingness and ability to post a bond, if required by the immigration authorities at the port of entry, is always presumed whenever a visa is granted, and it is not believed that such willingness to post bond is merely by itself adequate to meet the public charge requirements of the law. The provisions of Section 21 of the Act of 1917 for the posting of bond at a port of entry would, of course, be applicable in the case of an alien who has established his admissibility before a consular officer abroad, has obtained a visa appropriate to his case, and has arrived at a port of entry. At that time the alien might be required by the immigration authorities to post a bond, possibly because of a change in his circumstances since receiving a visa, or for other reasons.

Fig. 5. Excerpt from a letter from W. Phillips, Acting Secretary, U.S. Department of State, to the American Jewish Committee, August 5, 1933, stating the official U.S. policy on the granting of U.S. Visas to potential emigres. Reproduced by permission of the Manuscripts and Archives Division, New York Public Library. The entire four-page letter is reproduced on my Reiche website (ref. 2).

the Great Depression, the U.S. government was understandably concerned that refugee scientists and other scholars would compete with young Americans for jobs. Applicants therefore had to demonstrate that they would not displace Americans, and that they would not become “public charges” (figure 5). The Emergency Committee thus adopted a policy of supporting only established scientists and other scholars. That did not constitute a problem for Reiche, as it did for many others. Still, Betty Drury, Executive Secretary of the Emergency Committee, made certain of that by writing a letter to Ladenburg asking if Reiche deserved the Committee’s support (figure 6).

Every refugee was faced with unique problems involving his or her career, family, finances, and emotions.²⁰ But Ladenburg and others did what they could to help. Leo Szilard (1898–1964), for example, wrote to Gregory Breit (1899–1981), Chairman of the NYU Physics Department at University Heights, suggesting that professors whose income was greater than \$4000 per year should contribute a small percentage of their salaries to refugee organizations.²¹ Szilard’s suggestion did not gain support.

Many Americans, often without the assistance of the government, helped the refugees. I single out three, each of whom was closely connected with the Emergency Committee: Alvin S. Johnson (1874–1971), Harlow Shapley (1885–1971), and Edward R. Murrow (1908–1965). Johnson was instrumental in establishing the Emergency Committee; he was President of the New School for Social Research in New York, an innovative and feisty institution that was founded after the First World War. Its emphasis was then and remains today on the social sciences. Indeed, between the two world

May 2, 1939

~~Professor Rudolf Ladenburg~~
Palmer Physical Laboratory
Princeton University
Princeton, New Jersey

My dear Professor Ladenburg:

As you probably know, we have received an application from the New School for Social Research for a grant of \$1,000 for Professor Fritz Reiche during the coming academic year, as well as a similar grant for the year following.

Although we have had Professor Reiche's case in our files for some six years, I believe it was you who first brought him to Mr. Murrow's attention. We have little about him in the way of testimonials, and referring to a letter you wrote to Mr. Murrow on January 4, 1934, I should be glad if you would send us a brief statement concerning Professor Reiche's position in the world of physics. I have in mind not so much a factual statement, as a testimonial which will give the Committee some idea of his personal qualifications and scientific standing in general.

Sincerely yours,

Betty Drury
Assistant Secretary

BD:OD
Enclosure

Fig. 6. Letter from Betty Drury to Rudolf Ladenburg dated May 2, 1939, asking for information about Fritz Reiche. Reproduced by permission of the Manuscripts and Archives Division, New York Public Library.

wars it became a home for many distinguished Freudian scholars, philosophers, and social scientists. In 1933 Johnson organized a "school within a school," the "University in Exile,"* specifically to create a home for European refugee scholars;²² this offshoot was reabsorbed later into the main body of the New School. This was Fritz Reiche's

* The University in Exile was conceived and founded by Alvin Johnson. It was supported by the philanthropist Hiram Halle and the Rockefeller Foundation, initiating a historic effort to rescue endangered scholars who had been dismissed from teaching and government positions by totalitarian regimes in Europe. Among the 167 scholars, along with their families, it rescued, were Max Wertheimer (1880–1943), a founder of the Gestalt school of psychology, and a number of other distinguished psychiatrists, economists, and philosophers. See the New School website <www.newschool.edu/aboutnsu/content/fr_ata/history5c.html>.

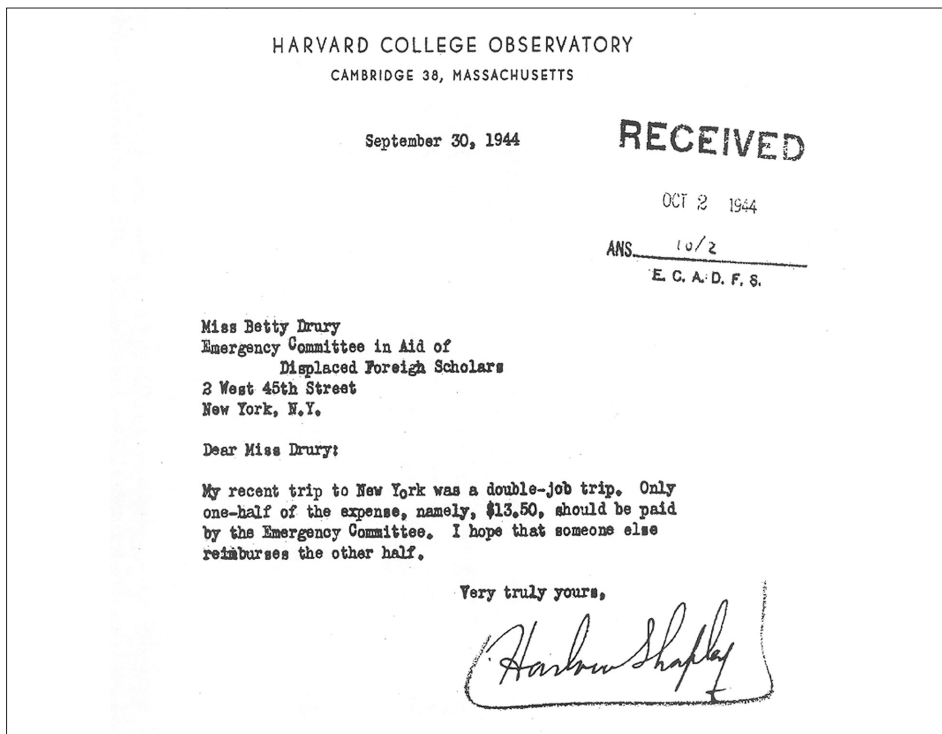


Fig. 7. Letter of Harlow Shapley to Betty Drury, September 30, 1944, requesting reimbursement of Boston-New York travel expenses in the amount of \$13.50 – a different world indeed! Reproduced by permission of the Manuscripts and Archives Division, New York Public Library.

first institutional home after arriving in America in 1941. He taught physics there, probably to some very poorly prepared social-science majors.

Harlow Shapley, the Harvard astronomer, actively recruited applicants for support by the Emergency Committee (figure 7). He was an outspoken anti-Nazi who never lost an opportunity to condemn the Nazi movement, both before and after Hitler came to power in 1933. Edward R. Murrow served as Assistant Executive Secretary of the Emergency Committee for two years after its inception in 1933. He stated its manifesto in its first annual report in 1934:

A thrust at the very soul of the University brought into existence the Emergency Committee. Ancient sanctions, rights treasured as inalienable ideals achieved through sacrifice have been destroyed.... Universities are at once the storehouses and the manufactories of the culture of a society. An attack upon them is an attack upon the very symbols by which a State lives.... To fail to strengthen them ... is to expose them and the States they serve to changes, expressed in doctrine, for which the common mind of the community is not prepared and which on mature deliberation it may not be willing to embrace.²³

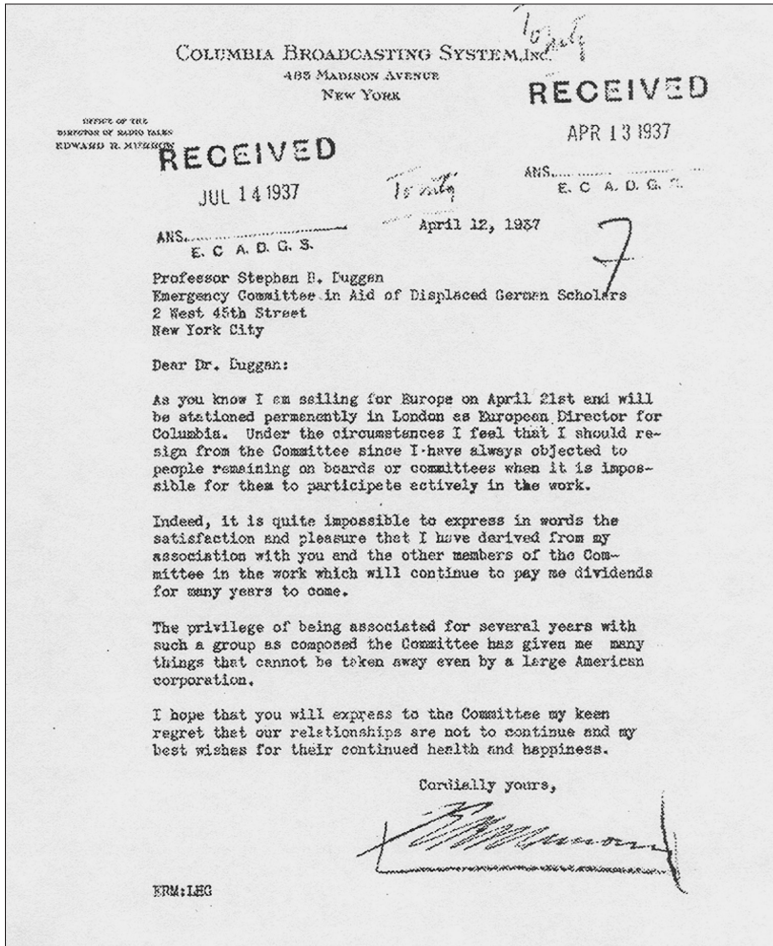


Fig. 8. Letter of resignation of Edward R. Murrow, reporter for the Columbia Broadcasting System, to Stephen R. Duggan, Director of the Emergency Committee in Aid of Displaced Foreign Scholars, April 12, 1937. Reproduced by permission of the Manuscripts and Archives Division, New York Public Library.

Murrow decided that he would have to resign from the Committee in April 1937, because he was being transferred to London (figure 8), where he soon would acquire worldwide fame as a CBS broadcaster during the London blitz.

The location and organization of the Emergency Committee is described in a historical note accompanying its archival collection:

The Emergency Committee, located in New York City at 2 West 45th Street in the Institute of International Education [figure 9], was organized in May, 1933, to serve the needs of university professors who had been dismissed by German universities because of political opinions or anti-Semitic legislation, and to preserve their attain-



Fig. 9. The nondescript office building at 2 West 45th Street in Manhattan where the Emergency Committee in Aid of Displaced Foreign Scholars was a tenant of the International Committee on Education. Photograph by the author.

ments for the benefit of scholarship in the United States. With the outbreak of Nazi aggression the Committee revised its mission so as to include refugee professors from all countries in Western Europe overrun by the Nazi armies. Dr. Livingston Farrand became Chairman of the Committee; Dr. Stephan Duggan became its Secretary, and after the death of Farrand, its Chairman; and Fred M. Stein became its Treasurer. Edward R. Murrow served as Assistant Secretary until 1935, followed by Professor John H. Whyte (1935–1937), Betty Drury (1937–1944) and finally, by Dr. Francis Fenton Park (1945). Professor Nelson P. Meade and Professor L.C. Dunn were added to Messers. Farrand, Stein and Duggan to form an Executive Committee. The Committee disbanded in June, 1945.²⁴

Although the Emergency Committee was joined by a number of other organizations in assisting refugee scientists and scholars, its influence nonetheless was far-reaching.* The Committee took the position that well-known refugees probably would be able to obtain support elsewhere, and hence the Committee generally denied them support. Reiche was not one of these; he fell into a group of highly regarded scientists whose name recognition, however, did not immediately warrant one of the few positions that were available in the academic world. Betty Drury thus wrote to Ladenburg, as we have seen, asking him for more details about Reiche's "personal qualifications and scientific standing..." – this at age 58! She received highly laudatory responses to her inquiry from Planck, Max von Laue, Max Born, and others, which are preserved in the Reiche papers.** Among the other successful applicants were theologian Martin Buber, mathematicians Richard Courant and Guilio Racah, physicists Max Delbrück and Rudolf Minkowski, diplomat Henry Morgenthau, and economist Otto Nathan. The unsuccessful applicants, because they were assured of other support, included philosopher Hannah Arendt, statesman Bernard Baruch, journalist Max Ascoli, and composer Béla Bartók.

The Emergency Committee abolished itself on June 1, 1945, after the defeat of Nazi Germany. To the best of my knowledge, no memorial exists to recognize its unique achievements, from which we now all reap the benefits.

Appendix: Fritz Reiche Curriculum Vitae²⁵

I was born on July 4, 1883, in Berlin. In 1891, after preparations at home, I entered the *Septima* of the College Royal Français, which at that time was under the directorship of Dr. Georg Schulze. Already my father, Ludwig Reiche, my cousin, Martin Wolff (later a well-known teacher of jurisprudence at Berlin University), and many other relatives had attended this famous Gymnasium. In October 1901 I graduated from this school, after passing the *Abitur*,*** along with nine others, of whom unfortunately most are already deceased. For my first year of study I went to Munich to attend introductory lectures in physics, mathematics, and chemistry. The great course in experimental physics at that time was given by Prof. Wilhelm C. Röntgen, who a few years earlier (1895) had made his world-famous discovery of X rays in Würzburg. I remember that in the first row of the great amphitheater-like, continually ascending lecture hall a young, very attractive girl sat with her brother: Katja, the daughter of the mathematician Alfred Pringsheim, who eagerly studied mathematics and who later became the wife of Thomas Mann. She appeared exactly as Thomas Mann portrayed her as Imma Spoelmann in his charming novel "Royal Highness" [of 1916].

* I provide a complete list of successful applicants on my Reiche website (ref. 2).

** The Fritz Reiche Papers were deposited by his family in the Niels Bohr Library, American Institute of Physics, College Park, Maryland. The Finding Aid can be found at the website <www.aip.org/history/ead/aip_reiche/20020127_content.html>. See also my Reiche website (ref. 2).

***The *Abitur* is the rigorous examination that students take on the completion of their Gymnasium education. Passing it is prerequisite to entering a university for further study.

Without having a clear idea about whether I should chose to study physics or chemistry, in October 1902 I returned to Berlin, where my parents lived.

As if by chance I happened to hear a thermodynamics lecture by Max Planck, the great theoretical physicist at the University of Berlin, who treated the then-known entire field of theoretical physics in six succeeding semesters. I don't believe that I was sufficiently prepared to really exactly understand thermodynamics (given in the fifth of the six semesters). Nevertheless, I was so strongly impressed and captivated by Planck's clear and thoroughly prepared presentation that I immediately decided to remain in Berlin to study further with Planck and, if possible, to choose theoretical physics as my major field of study. This decision was further reinforced because Planck, to the great enthusiasm of his students, introduced in the sixth semester for the first time his brilliant derivation of the previously unknown law of blackbody radiation, which was based on his revolutionary quantum hypothesis – an advance of singular significance, the foundation of modern atomic and nuclear physics!

After I completed my doctoral studies and passed my examination under Planck in 1907, on the advice of Planck and of Prof. Eugen Goldstein (the discoverer of the "canal rays"), I moved to Breslau, to broaden my too one-sided theoretical education through the thorough study of experimental physics, above all with Prof. Otto Lummer. These three Breslau years (1908–1911) belong to my fondest memories, because of the close, highly exciting joint work with Lummer, and the lifelong friendship I developed with Rudolf Ladenburg and Clemens Schaeffer. To be sure, I sadly admit that, despite the outstanding preparation, my experimental abilities proved to be nonexistent; indeed, that through flooding and small explosions, which I had caused, I came to be called a danger to the institute. I took comfort in the conviction that my colleague and friend, Prof. Max Born (the great theoretical physicist and Nobel Prize winner), is not inferior to me in these "mishaps."

In 1910 (or 1911) the members of the Physical Institute went to Salzburg to the Naturforscher meeting. There I saw and heard for the first time Albert Einstein: he spoke on the nature of light and developed, on the basis of Planck's quantum hypothesis, his so-called photon theory of radiation in a highly original, impressive manner.*

After my return to Berlin, I dedicated myself to the preparation of my Habilitation (as Privatdozent), which I attained in 1913. At the beginning of 1914 I established my personal household. My wife is the daughter of Siegfried Ochs, the founder and the longtime Director of the Philharmonic Choir in Berlin. Thus it was natural that the love of music has played a large role in our lives.

During the First World War, from 1915–1918, I was an assistant to Prof. Planck, and in its last years I was employed as a menial laborer in the gas-mask department ([of the] Osram [company]), which was under Prof. Fritz Haber's directorship. In these years I had the good fortune to get to know Prof. Einstein more closely and to admire him. We often walked together through the Tiergarten to the Physical Institute on the

* Reiche's memory evidently failed him here. The only time Einstein spoke in Salzburg in the period 1909–1911 was when he delivered his lecture, "Über die Entwicklung unserer Anschauungen über das Wesen und die Konstitution der Strahlung" (ref. 5), there at the 81st meeting of the Gesellschaft Deutscher Naturforscher und Ärzte on September 21, 1909.

Reichstagsufer to participate in the physics colloquium. The circle of great scientists who met there was overwhelming: I name only the names of Planck, Einstein, Max von Laue, Rubens, Nernst, James Franck, Gustav Hertz, and many others.

During the year 1920 I was employed as a theoretical advisor at the Kaiser Wilhelm Institute for Physical and Electrochemistry, under Prof. Haber, where I again met many old friends and acquaintances, among whom above all Rudolf Ladenburg, James Franck, Hertha Sponer, and Hartmut Kallmann.

In this period occurred, if my memory does not deceive me, the general Naturforscher meeting in Bad Nauheim, unforgettable owing to Einstein's great lecture on his general theory of relativity (of 1916) and the lively discussion (lasting many hours) in which Einstein's enemies, above all Ph. Lenard, Joh. Stark, E. Gehrke, etc., sharply attacked his new theory.* It was a pleasure to experience the calmness, patience, and objectivity with which Einstein reduced all objections to absurdities.

In the Summer of 1921, I received, to my great joy, a call as *persönlicher ordinar-ius* to the Chair of Theoretical Physics at the University of Breslau, which through the resignation of Erwin Schrödinger, the creator of wave mechanics, had become available. We therefore moved, in November 1921, with our two children, to this beautiful, old and to me very familiar city (which is now in Poland), and began twelve lively, and in every respect highly exciting academic years, which we enjoyed extraordinarily. Many old acquaintanceships with colleagues and other friends were deepened and new, interesting connections of a scientific and human kind were established.

Unfortunately, Otto Lummer, the Director of the Physical Institute, with whom I had been very close, died five years later. To my great pleasure, a steadfast, lifelong friendship developed with his successor, Clemens Schaefer, whose coworker I had been during my first stay in Breslau.

Hitler's seizure of power in 1933 abruptly ended this fortunate period in our lives through my so-called "transfer into retirement." We left Breslau at Easter 1934, and returned for a short time to Berlin. I had the good fortune, through the help of my friend Rudolf Ladenburg, who since 1931 was in Princeton in the U.S.A., to receive a call as a visiting professor to the German University in Prague. With great thankfulness my wife and I think about our stay in this singular, magnificent, old city and about the hospitality of our closest colleagues there, Prof. Phillip Frank, Prof. Reinhold Fürth, and the mathematician Prof. Karl Loewner.

In the summer of 1935 we (unfortunately!) returned to Berlin, and for us the difficult, tragic time began, which I do not need to mention here. One bright moment during these years was that I received an invitation from Prof. Niels Bohr in 1936 to participate in one of the regular conferences led by him in Copenhagen on atomic and

* Reiche is here referring to the discussions following Einstein's lecture at the 86th meeting of the Gesellschaft Deutscher Naturforscher und Ärzte in Bad Nauheim, September 23-24, 1920 (ref. 7). Johannes Stark (1874-1957) and Ernst Gehrcke (1878-1960) were bedfellows with Philipp Lenard in their anti-relativistic, anti-Semitic campaign against Einstein, but according to the published discussions only Lenard took part in them.

nuclear physics. The stay in this beautiful, bright, and happy city, and the circle of famous scientists assembled there, will always remain unforgettable to me.

Through the great and decisive help of many friends and colleagues in the U.S.A., above all of Rudolf Ladenburg, Princeton, N.J., and Mark W. Zemansky (City College, NY), I succeeded, after considerable difficulties, at the beginning of 1941, on the basis of a call to the New School for Social Research (New York) to obtain an American visa for myself, my wife, and our daughter. (Our son had already emigrated to England in the summer of 1939. He now lives in Ottawa, Canada, and works as a radio expert for the Canadian government.) In the middle of March we could leave Berlin, and going through occupied France on the way, reach Lisbon, from where the beautiful American ship *Excalibur* brought us after ten days to New York.

During our first year in America, I gave popular lectures on classical and modern physics at the New School for Social Research. I am obliged, with the deepest and lasting thanks, to the then-President of the New School, Prof. Alvin Johnson, and our friend (also a colleague) at the New School, Prof. Eduard Heiman.

From 1942–1944, thanks to the help of Prof. Zemansky, I was employed as an Instructor in the Physics Department of the City College in New York, which had greatly expanded during the war, and there for the first time in the U.S.A. I had the opportunity to teach large classes of students in elementary and advanced courses.

1944–1946 I found a position in Schenectady, N.Y., at the old, relatively small, but very beautiful and venerable Union College, as Lecturer in Physics. We spent there two very enjoyable years, although we were deeply saddened about the news we received from Germany at that time about the fate of our closest relatives and friends.

After the expiration of my contract with Union College, I looked in vain for several weeks for a new position – I was 63 years old, and 65 is the normal “retirement age.” But I was in luck: One evening the Chairman of the Physics Department of New York University, University Heights, called me from New York and offered me a position as Adjunct Professor of Physics – at first in any case for one year, but with the prospect of a further extension. Thus I came in the fall of 1946 to this large university and have been “extended” there, thanks to the friendly agreement of the Department Chairman, from year to year until my “retirement” in 1958 (I was meanwhile 75).

Aside from my substantially younger, closest colleagues in our department, I also came into contact again with my friend and former assistant in Breslau, Prof. H.F. Ludloff. I have worked together with him scientifically several times during these years.

I see as especially good fortune my meeting the mathematician Prof. Morris Kline, the Director of the “Division for Electromagnetic Research” in the Courant Institute for Mathematical Sciences, who had the great friendliness to ask me to serve as helper and “critic” in the publication of his mathematical-physical book. The years of working together with this good, outstanding man will always remain unforgettable to me.

Although since 1958 I no longer give lectures, I have continued my research insofar as my strength allowed, and I continue to be associated with the group directed by Morris Kline.

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