

that this wealthy, well-established, well-connected, brilliant man whose mathematical work had been more than once groundbreaking, and whose students included some of the best-known mathematicians of the next generation,¹¹⁸ should have underestimated the Nazis? There is a story that reveals both Landau's cynicism and this underestimation. Once, on a visit in 1932, Fritz Rathenau told Landau that he didn't know whether the Nazis would come to power, but if they did, he had heard they planned to construct a concentration camp for Jews on the Lüneburg heath. Landau's response is supposed to have been, "In that case I should immediately reserve for myself a room with a balcony with a southern exposure."¹¹⁹

Teichmüller recognized Landau's genius and would have gladly studied advanced material from him (and Landau would have gladly taught him). Bieberbach saw the wealthy, brilliant, somewhat arrogant, and not entirely pleasant man with whom he had already had some mathematical differences, and whom he made a convenient archetype of "Jewish mathematics." Teichmüller had a leading role in expelling Landau from his position, Bieberbach in exploiting that expulsion. Landau died in retirement in Berlin, five days after his sixty-first birthday in 1938.

FELIX HAUSDORFF

Neither Landau nor Courant saw the "transvaluation of all values" that the Nazi hegemony meant, at least for academics. Even more poignant is the story of Felix Hausdorff, without question one of the great mathematicians of the early twentieth century—a seminal codifier and creator in both set theory and general topology. Hausdorff's disastrous fate ironically may have stemmed in part from the fact that, unlike Courant or Landau, he did not suffer the immediate loss of his job. Like Courant and Landau, Hausdorff fell under the exceptions to the April 7 law; however, perhaps because Bonn was not Göttingen, either in mathematical prominence or in the rabid right-wing orientation of the town or student population, Hausdorff remained a full professor until he retired on grounds of age in March 1935.

Felix Hausdorff was born in Breslau (modern Wrocław) on November 8, 1868; however, when he was still young, his well-to-do family moved to Leipzig, where he grew up.¹²⁰ He showed such great musical ability as a youth that he wanted to be a composer, and only the persistent pressure of his father made him give this idea up. So he studied mathematics, achieving his doctorate

¹¹⁸ Among others, Konrad Knopp, Dunham Jackson, Henry Blumberg, Paul Bernays, Erich Kamke, Gustav Doetsch, Carl Ludwig Siegel, Alexander Ostrowski, Arnold Walfisz, Werner Rogosinski, and Hans Heilbronn. There were thirty-three doctorands (including four in which Landau acted with [for] Emmy Noether) in all.

¹¹⁹ Kluge 1983: 93. All otherwise unannotated biographical information above about Landau can be found in Kluge.

¹²⁰ Information about Hausdorff not otherwise footnoted comes from Magda Dierksmann et al., "Felix Hausdorff zum Gedächtnis," *JDMV* 69 (1967): 51–76, and the article "Felix Hausdorff," in *Dictionary of Scientific Biography* 1970: vol. 6, 176–177.

in 1891, and "habilitating" in 1895. It is perhaps surprising, since Hausdorff became famous for his work in set theory and topology, that both of these efforts were in astronomy, and Hausdorff's first four papers dealt with astronomical and optical matters. Actually, at the time, Hausdorff was developing a career as a litterateur. Under the pseudonym Paul Mongré, he published poems and books with a Nietzschean flavor—indeed, the first of these, *Sant' Ilario*, had 378 pages and appeared in 1897 with the subtitle, *Thoughts from Zarathustra's Country*. Thus the young "mathematician" Hausdorff was primarily interested in literature and philosophy and mixed in those circles. As the scion of a wealthy family, he did not have to worry about making a career as a mathematician; for him, mathematics, both as research and as a subject to teach, was more an avocation than anything else. However, around 1904, his literary production as Paul Mongré slacked off, though a satirical play he wrote in that year was produced with substantial success in 1912. Nevertheless, he seems around this time to have become primarily a mathematician. Hausdorff's most productive mathematical period began around 1909 (when he was forty-one). For all his seminal importance in set theory, one should not forget that he made distinctive and distinguished contributions to other areas of mathematics as well (e.g., Hausdorff measure, Hausdorff matrices, and the Baker-Campbell-Hausdorff formula in noncommutative algebra).

Hausdorff was also an extremely modest man—in fact, so modest, and so unworried about career, that, in 1902, comfortably esconced as an "associate professor" in his hometown of Leipzig, he turned down a comparable offer at Göttingen. Admittedly, Göttingen was not yet the premier center it would become when, within a few years, Klein and Hilbert would be joined by Minkowski and Runge, and the young Prandtl would begin his aerodynamical work (as a member of the technical physics faculty). It seems to have been the geometer Eduard Study who convinced Hausdorff to abandon Leipzig for Bonn in 1910, but after three years as an "associate professor," he left to be Ordinarius at Greifswald, returning to Bonn in 1921. One gets a feeling for Study's help by noting that at Greifswald, Hausdorff succeeded the algebraist Friedrich Engel, who himself had been Study's successor there. This apparent friendship between the two men throws additional light on Hausdorff's support for Ernst August Weiss, discussed earlier.¹²¹ Of course, by the time he returned to Bonn, Hausdorff was a famous mathematician—his groundbreaking book *Foundations of Set Theory* had appeared in 1914, as had a number of significant papers.

In 1928 the Nazis had won twelve parliamentary seats, in 1930, 107. When Heinrich Brüning, who had been governing by emergency decree, resigned in June 1932, the Nazi vote the following month yielded 230 parliamentary seats, making them by far the largest single party in the Reichstag, though they did not have a majority. Thus it was small wonder that when Hausdorff's student Magda Dierksmann that same year said good-bye and promised to see him

¹²¹ Above, chapter 5, "Mathematical Camps."

on his seventieth birthday in 1938, he replied: "By then everything will be different."¹²²

Hausdorff had never denied his Jewish origins, nor had he ever opted for baptism. In a Nazi civil-service formulary that he apparently filled out in early 1935, he listed in his distinctive small hand his religion as *israelitisch* and his racial status as non-Aryan. His wife, the former Charlotte Goldschmidt, though likewise non-Aryan, had long before converted to Lutheranism, as had her sister. One day before his sixty-sixth birthday, Hausdorff took the new civil-service oath sworn to Adolf Hitler.¹²³ However, the following January, a new law was decreed enforcing the retirement of all civil-service faculty who had passed their sixty-fifth birthday, unless there were "supervening university interests." Accordingly, Hausdorff, who had continued teaching since he fell under the exceptions to the April 7 law, was retired in March 1935.¹²⁴ The situation for Jews in Germany grew progressively bleaker. Apparently in early 1939 Richard Courant received a "very touching" letter from the seventy-one-year-old Hausdorff inquiring about the possibility of a research fellowship,¹²⁵ but this attempt at emigration failed.

The only Bonn mathematician who maintained contact with Hausdorff after this forced emeritization, ostensibly on account of age, was Erich Bessel-Hagen.¹²⁶ The story of Hausdorff's last year appears in papers collected by Bessel-Hagen as well as in his personal correspondence.¹²⁷ In April 1941, he wrote Elisabeth Hagemann:¹²⁸

Things go tolerably well with the Hausdorffs, even if they can't escape from the vexation and the agitation over continual new anti-Semitic chicanery. The tax burden and the monetary subtractions that are imposed on them are so high that he can no longer live from his income alone and must use his savings (*Vermögen*); it's good that he still has these reserves. Besides, they have been compelled to give up a part of their house, whereby their space is very crowded. However, I am glad that there are more people who worry about the Hausdorffs, as I occasionally verify when during a visit I meet one or another. Recently I met, for example, a musician who had just played together

¹²² Dierksmann et al. 1967: 54.

¹²³ Both oath and formulary in Personalakten Hausdorff, Universität Bonn.

¹²⁴ Personalakten Hausdorff, Universität Bonn, Rust to Kurator, Mar. 5, 1935.

¹²⁵ See Reinhard Siegmund-Schultze, *Mathematiker auf der Flucht vor Hitler*, Dokumente zur Geschichte der Mathematik no. 10 (Braunschweig and Wiesbaden: Friedr. Vieweg, 1998), 121. Hausdorff's letter is apparently not extant.

¹²⁶ *Nachlass Zermelo*, Universität Freiburg, Bessel-Hagen to Zermelo, Dec. 23, 1940; Hans Bonnet in Dierksmann et al. 1967: 76.

¹²⁷ The historian of mathematics Erwin Neuenschwander devotes a preprint of the *Fachbereich Mathematics*, Technische Hochschule Darmstadt, dated January 1992 (for the fiftieth anniversary of Hausdorff's death), to this: "Felix Hausdorff's letzte Lebensjahre nach Dokumenten aus dem Bessel-Hagen Nachlass." As Prof. Neuenschwander managed to seal Bessel-Hagen's *Nachlass* against the use of others, the material below is cited from this preprint. Material cited earlier in chapter 5 from Bessel-Hagen is from the original sources, as it was seen prior to Prof. Neuenschwander's action.

¹²⁸ Neuenschwander, *ibid.*: 5-6.

with Hausdorff. That is really lovely, that in this way some joy will be brought to them in the house.

However, less than four months later, he would write the same correspondent:

I often had great anxiety (*Sorge*) about the Hausdorffs. Mrs. Hausdorff was for a long time seriously ill from an old ailment—I don't know what it is. Scarcely was she over the worst than there came the agitation about the intended internment of the Jews. Here the procedure was mad. In the early part of the year, old nuns were forcibly driven out of a cloister on the Kreuzberg; these poor old women who never harmed anyone and only carried on a retiring life devoted to their pious usages, and who naturally are completely estranged from the machinery (*Getriebe*) of the outer world. Now all the Jews still living in Bonn will be compulsorily interned in this stolen building; they must either auction their things, or place them for preservation in "faithful" hands.

In Hausdorff's case, the university ("for once," says Bessel-Hagen) behaved decently and stood up for Hausdorff, saying that he should be allowed to remain in his house.¹²⁹ Hausdorff's sister-in-law hoped to go to her daughter in America, but the American authorities made difficulties, and few neutral boats sailed the Atlantic in mid-war. In October, the Hausdorffs were forced to wear the "yellow star," among other indignities. Toward the end of 1941 they were threatened with deportation to Cologne, but as Bessel-Hagen realized, this would only be "a preliminary to deportation to Poland. And what one hears concerning the accommodation and treatment of Jews there is completely unimaginable."¹³⁰ By New Year's, however, the threat had vanished. In mid-January came a new order that the Hausdorffs were to be interned in Eindhoven (a suburb of Bonn); Bessel-Hagen learned of this during a visit on Thursday, January 22, and was somewhat surprised to hear Hausdorff say definitively that the family would no longer live to see the day when things got better. On the next Sunday, Hausdorff wrote the following letter to the Jewish lawyer Hans Wollstein:¹³¹

Dear Friend Wollstein:

By the time you receive these lines, we three will have solved the problem in another way—in the way from which you have continually attempted to dissuade us. Whenever we first may have overcome the difficulties of removal, the feelings of security that you have predicted for us totally do not wish to appear, on the contrary,

Also Eindhoven is still perhaps not the end!¹³²

¹²⁹ Neuenschwander, *ibid.* The same was done for Alfred Philippson, an emerited Jewish geography professor in Bonn. Philippson was eventually deported to Theresienstadt, but managed to survive through influential help. For Philippson, see also Hannah Arendt, *Eichmann in Jerusalem* (1994), 134.

¹³⁰ Neuenschwander (as in note 127), 7.

¹³¹ First published *ibid.*: 12–13, together with a facsimile. A copy of the original is also in my possession.

¹³² In German, this involves a pun: *Auch Eindhoven ist noch vielleicht das Ende nich(t)*. Hausdorff omits the *t* in *nicht* to make clear he is punning.

What has been done against the Jews in recent months arouses well-founded anxiety that we will no longer be allowed to experience a bearable situation.

Tell the Philipppsons¹³³ whatever you think is good, along with thanks for their friendship (which, however, above all you deserve). Also give Herr Mayer¹³⁴ our heartfelt thanks for everything that he has done for us and if need be would have still done, we have sincerely wondered at his organizational achievements and successes, and, had we not that anxiety, would have gladly given ourselves over to his care which indeed would have brought along a feeling of relative security—unfortunately only a relative one.

With a will dated October 10, 1941, we have made our son-in-law, Dr. Arthur König, Reichardstieg 14, Jena, our heir. Help him insofar as you can, dear friend! Help also our live-in Minna Nickol or whoever else asks you; our thanks must we take with us to the grave. Perhaps the furniture, books, etc. can still remain in the house beyond January 29 (our removal date); perhaps also Frau Nickol can also still remain in order to wind up the running obligations (bills for city services, etc.)—tax records, bank correspondence and the like that Arthur needs are in my study.

If it is possible we wish to be cremated, and enclose for you three declarations to this effect. If not, then either Herr Mayer or Herr Goldschmidt must arrange what is necessary.* We will take care of defrayal of costs insofar as possible; besides my wife is a member of a Lutheran burial fund—the documents are in her bedroom. What monetarily still is lacking to cover costs, either our heir or Nora¹³⁵ will undertake.

Forgive us, that we still cause you trouble beyond death; I am convinced that you will do what you *are able* to do (and which perhaps is not very much). Forgive us also our desertion! We wish you and all our friends will experience better times.

Yours faithfully,
Felix Hausdorff

* My wife and sister-in-law, however, are of the Lutheran religion.

That evening they took lethal doses of barbiturates (veronal); in the morning Hausdorff and his wife were dead; her sister lingered for a few days in a coma. After some struggle, a place was found in the Poppelsdorf cemetery for the urns with their ashes.¹³⁶ In 1948, Hindenburgstrasse, on which the Hausdorffs had lived, was renamed Hausdorffstrasse.

A note is in order about the succession to Hausdorff's chair. Following his enforced retirement, the faculty's first list of suggestions on May 31, 1935, was Helmut Hasse; Eberhard Hopf (still on leave from Berlin at MIT) and F. K. Schmidt (tied in second place); and Emanuel Sperner and Erich Kamke (tied for third). This was clearly an impossible list of fine mathematicians, none of whom (except Sperner) had at the time pro-Nazi ideological connections: Hasse had just gone to Göttingen, Hopf was in America and had already turned down a

¹³³ See note 129.

¹³⁴ Dr. Siegmund Mayer was a lawyer. He died in Auschwitz (Neuenschwander, as in note 127,

n. 14).

¹³⁵ I.e., Hausdorff's daughter Lenore, married to Arthur König.

¹³⁶ Neuenschwander, as in note 127, p. 9, Erich Bessel-Hagen to Elisabeth Hagemann, Mar. 26, 1942.

call from Heidelberg (though he would later return to Leipzig), and Schmidt had just gone (from substituting for Emmy Noether in Göttingen) to Jena. Sperner had been a foreign group leader for the NSDAP in Peking in 1933–34 and had just gone to Königsberg, while Kamke was the oldest of the five at forty-five, and was known as a non-Nazi (the faculty's recommendation avoided mentioning his wife).¹³⁷

On December 3, Rudolf Mentzel at the DFG suggested Erhard Tornier's name—the first truly ideological suggestion.¹³⁸

On December 18, Hans Beck, a good Nazi, and the only mathematics Ordinarius remaining in Bonn (Otto Toeplitz had been forcibly placed on leave in 1935), traveled to Berlin and was told that the first four on the above list were impossible for the reasons already indicated (it is unclear whether Kamke was discussed).

The university was asked to consider the Hausdorff and Toeplitz successions together; on February 26, 1936, they submitted the following names for the Hausdorff succession: Ernst Kähler, Konrad Knopp, and Karl Dörge; for the Toeplitz succession: Eberhard Hopf (again), Egon Ullrich, and Kamke (again). Kamke was described accurately as "a man who stands fast in storm and bad weather, . . . a war veteran, a Lutheran, married, and with three children." The faculty rejected the possibility of appointing the resident E. A. Weiss or Fritz Rehbock on the grounds that they were geometers; there already was a geometric Ordinarius (Beck), and what was needed were two analysts.

A month earlier, the then-Dekan of the philosophical faculty had written a letter to the ministry rejecting the Nazi Tornier as an appointment at Bonn on grounds of the narrowness of his research, and as someone who, at forty-two, was unlikely to broaden his interests; furthermore, all evidence pointed to his being a poor teacher, which Bonn could ill afford. It is unclear whether there was malice in Dekan Oertel's mentioning that Tornier had collaborated with Willy Feller (who was Jewish), or in saying (given the atmosphere):¹³⁹

He [Tornier] conceives, as does Hausdorff, of probability as an additive set function, and specializes this in a very particular way. From this he develops then a mathematical-logical theory, which is spoken of with appreciation. That can also not alter the fact that certain not-insignificant particular points originate, as Tornier himself admits, with Kaluza and Feller.

These lists (and other suggestions) also led to nothing, but both lists and the letter about Tornier make it clear that in 1935–36, the Bonn faculty was attempting to keep the ideological wolf as far from the door as possible, while

¹³⁷ Personalakten Hausdorff, Universität Bonn, Dekan Rothacker to education ministry via Rektor and Kurator, Bonn, May 31, 1935.

¹³⁸ Personalakten Hausdorff, Mentzel to education ministry, Dec. 3, 1935; copied to Dekan Oertel, and by him to the chemist Paul Pfeiffer (who was a sort of subdean of the mathematics and natural sciences division of the philosophical faculty).

¹³⁹ Oertel to ministry, Jan. 23, 1936, in Personalakten Hausdorff, Universität Bonn.

obtaining solid analysts for the faculty.¹⁴⁰ In the end, the Hausdorff chair was converted into that of an associate professor, and filled from 1937 on by Ernst Peschl (who had only "habilitated" in 1935), while Toeplitz was not succeeded until 1939, and then by the well-known algebraist Wolfgang Krull.

ERNST PESCHL

Ernst Peschl is a good example of the young mathematician who, in order to begin a career, was forced into at least a nominal political stance in which he apparently did not believe. Born in 1906, he obtained his doctorate under Carathéodory at Munich in 1931, and then went for two years to Jena to work with Robert König, followed by eighteen months with Behnke at Münster; finally "habilitating" in 1935 back at Jena, where he remained König's *Assistent*. In 1937 he went to Bonn, and in 1941 was called up to be an army interpreter (Peschl spoke fluent French). Peschl had been a leader in a Roman Catholic youth group and was in Jena (in Thuringia, which "went Nazi" before Hitler's appointment as chancellor). His youth organization was dissolved by the Gestapo, just as he was about to "habilitate"; as a consequence, he yielded to the increasing pressure and joined both the SA and the NSDAP; however, he avoided all activity in either organization and did not hold any office. After about a year, he was able to "shake off" service in the SA. Among others who could testify to his inner anti-Nazi attitudes, he cited Behnke and Max Pinl.

From June 1934, he no longer did any SA service. As an *Assistent*, he willy-nilly became a compulsory member of the *Dozentenschaft* and the NSLB¹⁴¹ without any action on his part. In fact, Peschl resisted attempts to get him to become an individual instead of a corporative member of the NSLB, and around 1938 managed to drop out of it entirely by not paying his corporative dues. He refused to fill out various formularies for membership in the *Dozentenschaft*, despite warnings. Thus Peschl was the young Catholic, former activist, who determined to make a career in Germany believing, he says, that the fanaticism of the Nazis would be tempered by the realities of governing. Thus he suppressed his beliefs and "went along," but only as far as was *pro forma* necessary.¹⁴² In this he might be contrasted with the former Catholic activist Peter Thullen, who decided to leave Germany, and the considerably older former Catholic activist Gustav Doetsch, who became a "110% Nazi."¹⁴³ Indeed, Doetsch and Peschl had something of a run-in.

¹⁴⁰ A combined list for succession to both Hausdorff and Toeplitz is in Personalakten Toeplitz, Universität Bonn, Pfeiffer to Oertel, Oct. 26, 1935. See also in the Personalakten Toeplitz, Oertel to ministry, Mar. 18, 1936; Bachér (at ministry) to Kurator, Bonn, Apr. 15, 1936; and Oertel to Kurator, May 25, 1936.

¹⁴¹ *Nationalsozialistischer Lehrerbund*, the Union of National Socialist Teachers.

¹⁴² The above information is from Personalakten Peschl, Universität Bonn, Peschl's *Lebenslauf*, prepared Oct. 18, 1946, and *Fragebogen* replies, prepared May 25, 1946, for Allied authorities.

¹⁴³ Thullen had completed his studies. See above, chapter 5, "Students and Faculty before and during Wartime." For Doetsch, see above, chapter 4, "The Süss Book Project."