

be dismissed as political naiveté on the part of foreigners were it not that most of the native German mathematicians do not seem to have been much more politically active or interested. Exceptions were people like Gumbel, who was apparently a committed communist, and Reidemeister, who was personally interested in political philosophy (though apparently not politically active). This is in part an argument from the paucity of evidence of political activity, but as already delineated, it fits the standard mode of behavior that expressed the long-standing relationship between the German state and the professors in its universities. There were also some mathematicians initially convinced by Hitler. Günther Höwe, the quondam friend of Max Zorn, had translated one of Oswald Veblen's books from English into German and wrote him (in German) on April 14, 1933.⁸⁸

One is accustomed to calling what has occurred in Germany in the last weeks the "national Revolution." I would rather call it "Reform."

To begin with, the number of people who, as a result of this occurrence, have suffered bodily or financial damages, is vanishingly small compared to the number that is customary in revolutions in France, and France is respected above all in England and the U.S.A., also even today among many Germans, as the most civilized nation in the world.

Furthermore, all the essential (*wesentlichen*) changes were not carried out directly by the people (*Volk*) or even through "the barricades," but, as the German people has preferred (*liebt*) for centuries, by the government.

Finally, everything happened without any damage to the Weimar Constitution, and the constitutional changes that were undertaken took place on the basis of possibilities for their change foreseen in the constitution itself. The large number of people (*volker* [sic]) voting in the election (90 percent) shows that the people (*Volk*) have placed themselves on the side of the government created by Hindenburg in a way democrats also find satisfactory.

Hitler's government had held elections on March 5, 1933, in which the *National Sozialistische Deutschen Arbeiter Partei* (NSDAP) obtained 43.9 percent of the vote. The *Ermächtigungsgesetz* or "enabling act" by which the dying parliament committed suicide and officially gave Hitler dictatorial powers had been passed on March 23, and the law of April 7 "for reform of the civil service" had just appeared. I do not know what Höwe's prior politics were, but his apologies at this point would seem to represent either Nazi fellow-traveling or a singular naiveté. As has been seen, within a year, he would be struggling with his conscience about denouncing a former acquaintance—with his conscience impelling him to denunciation. Of course, it is true that many wealthy, aristocratic, and monarchically inclined right-wing conservatives supported Hitler at the time as a "wild man" whom they would soon tame, after he had served his purpose of bringing the plebs to their side as well as thoroughly destroying "parliamentarism."

⁸⁸ Veblen papers, Library of Congress (hereafter cited as VP), under H miscellaneous.

A striking example of such political naiveté can be seen in the distinguished German-Jewish mathematician Richard Courant. Immediately after World War I, Courant was a member of the Göttingen town council, toyed with running for the *Landestag* (or state parliament), and wrote a long anticommunist letter to a Göttingen newspaper. At the time of the Silesian plebiscite in 1921, Courant, as a born Silesian, agitated for the German cause. As late as March 30, 1933, Courant was blaming Einstein and other "agitators" for the anti-Semitic feeling in Germany and distinguishing between "good" and "bad" Jews:⁸⁹

Even though Einstein does not consider himself a German, . . . he has received so many benefits from Germany that it is no more than his duty to help dispel the disturbance he has caused. Unfortunately, as I see from the papers, a reaction to these events has set in. . . . I very much hope that it will be possible to deter the intended boycott [of the Jews] at the last moment. Otherwise I see the future very black.

What hurts me particularly is that the renewed wave of antisemitism is . . . directed indiscriminately against every person of Jewish ancestry, no matter how truly German he may feel within himself, no matter how he and his family have bled during the war and how much he himself has contributed to the general community. I can't believe that such injustice can prevail much longer—in particular, since it depends so much on the leaders, especially Hitler, whose last speech made a quite positive impression on me.

Ironically, two years later, Courant, a "sadder but wiser" emigré in New York, would criticize similar naiveté on the part of the famous mathematician Carl Ludwig Siegel.

Werner Weber was a young *Privatdozent*, and a Nazi sympathizer prior to 1933, though he was a student of Emmy Noether and Edmund Landau (they called his dissertation "excellent").⁹⁰ In the summer of 1935, he was appointed professor at Frankfurt as a substitute for Siegel, who was then visiting at the Institute for Advanced Study in Princeton. Siegel determined to return to Frankfurt and attempt to drive out Weber.⁹¹ While the fact that Siegel was a "pure Aryan" might have given him some private hope of success, by April 1935 so much had happened that one wonders at his expectations. It is true that Siegel was partly motivated by the fact that he wanted to protect his friends Max Dehn and Ernest Hellinger, both well-known mathematicians and Jewish. Both Dehn (born 1878) and Hellinger (born 1883) had served during World War I and had appointments dating prior to 1918. Thus they technically did not come under the law of April 7, 1933. Both were dismissed in 1935, but remained in Germany until early 1939 (Hellinger spent six weeks in Dachau, from mid-November 1938 until his release, apparently effected by his sister, already in

⁸⁹ Reid 1976: 139–140. The translation is hers.

⁹⁰ Wolfgang Kluge, "Edmund Landau, Schriftliche Hausarbeit vorgelegt im Rahmen der Ersten Staatsprüfung," thesis, University of Duisburg (1983), 128. Weber received his degree in 1929, and from then until Landau's forced retirement was his *Assistent*. For this last event, and more on Weber, see below; chapter 4, "Hasse's Appointment at Göttingen."

⁹¹ VP, Courant to Veblen, Apr. 22, 1935, under Courant.

America). As for Siegel, he actually did not return to Germany until after Dehn's dismissal.⁹² The motives he expressed in a letter to Oswald Veblen did not mention Weber, but rather fear (based on a telegram from the Frankfurt Rektor) that if he accepted an offer to teach at Princeton in 1935–36, he would lose his post in Frankfurt without getting any pension, and "as my health is not very strong and since I am obliged to give a part of my income to my father, it seems to be advisable for me to return to my place in Frankfurt and to try to live there for the next time. Moreover my friend Hellinger is still there and I will not leave him alone" (English original).⁹³ Siegel left Germany for Norway in March 1940, received another appointment at Princeton in June 1940, and left by one of the last boats for the United States.⁹⁴

While Siegel may seem naive in hindsight, his "naiveté" was that of a good man truly concerned about his friends. The feelings of Courant or Eberhard Hopf cited earlier reflect what seem to have been much more common attitudes: either the initial feeling that as a "good German" one should not be personally affected (Courant), or a political naiveté whose depth is almost unfathomable fifty years later (Hopf). While the personal attitudes of mathematicians toward the Nazi regime will be discussed in more detail later, one important fact should be noted here: liberal-thinking democratically inclined German mathematicians, foreigners with a different point of view, anyone, like Reide-meister, who did not simply "go along" with the ruling dictates, are salient just because so many of the German-speaking academics, mathematicians or not, did "go along" more or less willingly.⁹⁵ There were also mathematicians, as well as other scientists, some quite prominent, who did not hesitate to advocate Nazi ideas. They were also exceptions. The majority of German academics simply went along: it was within the academic tradition, reversed their perceived loss of status under Weimar, and could be given academic justification. As Karl Dietrich Bracher has remarked, not only was politics a dirty business so far as the professoriat was concerned, but there was an almost schizophrenic split between classical-humanistic education and a *Realpolitik* concerned with power.

⁹² Carl Ludwig Siegel, in his *Gesammelte Werke* (1966), vol. 3, pp. 468–471. (A brief history of mathematics at Frankfurt is given there as well, pp. 462–474.)

⁹³ VP, Siegel to Veblen, July 8, 1935, under Siegel.

⁹⁴ Norbert Schappacher, "Das Mathematische Institut der Universität Göttingen, 1929–1950" (unpublished), 49; a condensed version appears in H. Becker, H.-T. Dahms, and C. Wegeler, eds., *Die Universität Göttingen unter den Nationalsozialismus* (1987), 344–373, here 359–360. The German invasion of Norway began on April 9, 1940.

⁹⁵ On this point, see Faust 1973. While according to Faust (cf. above, note 55) only 1.2% of university professors were actually Nazi party members prior to 1933, only 10% of university professors were "actively political" in any way. Furthermore, there were a number of very active pro-Nazi professors who were not necessarily party members (like Phillip Lenard). Faust argues persuasively that pro-Nazi sentiments among the professoriat were far more widespread than is usually assumed. As discussed above, the general university atmosphere was certainly not inimical to Nazi rhetoric, despite the undeniable existence of prominent prorepublican professors like Gustav Radbruch and Willy Hellpach. For Tübingen as a case in point, see Uwe Adam, *Hochschule und Nationalsozialismus, Die Universität Tübingen im Dritten Reich* (1977), 31–32.

Moreover, this provided an opportunity readily seized by the "National-Socialistic pseudo-reformers" with a powerful slogan that overcame many private demurrers: "The hour of the synthesis between Spirit (*Geist*) and Power has now arrived."⁹⁶ The German university was a mixture of political unconcern and openly antidemocratic sentiment. As Bracher remarked, "The real fate [of the German university under Hitler] lay not in the crimes of a minority, but in the failure of the majority of the educated."⁹⁷

The same was true elsewhere as well. For example, the well-known mathematician Karl Menger wrote Oswald Veblen on October 27, 1934:⁹⁸

What I could not write you from Vienna is a description of the situation there. . . .

First of all the situation at the university is as unpleasant as possible. Whereas I still don't believe that Austria has more than 45% Nazis, the percentage at the universities is certainly 75% and among the mathematicians I have to do with, except, of course, some pupils of mine, not far from 100%.

It should be noted that this letter was written three months after Engelbert Dollfuss' assassination and the failure, partly through Mussolini's intervention, of the Nazi attempt at an Austrian coup d'état—*Anschluss* was still three-and-a-half years away.

There is evidence, moreover, of similar attitudes in Switzerland. The mathematician Henrich Behnke recalls in his memoirs that when he traveled to Switzerland in the summer of 1933, "Everywhere the children in the streets greeted the car with the raised-hand salute—even more than in Germany, German citizens cheered it with Nazi shouts, and Swiss hurried to express their respect for the new regime."⁹⁹ Though Behnke does say that more moderate attitudes prevailed among his Swiss colleagues—a general neutrality toward the Hitler government and a horror at the dismissals of professors—his experiences are echoed by letters from Heinz Hopf to George Pólya and Oswald Veblen. Both Pólya and Hopf had very famous mathematical careers. At the time, Hopf's was just beginning, and Pólya was already at mid-career. In May 1933, Hopf wrote Pólya,¹⁰⁰

It is quite unpleasant that now also here in Zurich nationalists and anti-Semites have become powerful. There are continual assemblies of "fronts," namely the "nationals," the "federals" and others among the students—(and even more among the school-children)—these tendencies seem therefore to be rather strong.

In July of the same year, he wrote to Veblen,¹⁰¹

⁹⁶ Karl Dietrich Bracher, "Die Gleichschaltung der deutschen Universität," in *Universitätstage* 1966: 129.

⁹⁷ *Ibid.*: 142.

⁹⁸ VP, Menger to Veblen, Oct. 27, 1934, under Menger.

⁹⁹ Behnke 1978: 127. As early as 1923, Hitler obtained financial support from Switzerland. See Ernst Deuerlein, *Der Aufstieg der NSDAP in Augenzeugenberichten* (1974), 180.

¹⁰⁰ VP, under Pólya.

¹⁰¹ VP, under Hopf.

I am very dismayed that presently there is absolutely no prospect of a German Jew obtaining a position in Switzerland: professorships are not open, new ones will not be created since there is no money, a large number of good Swiss wait for positions as Assistant that are becoming open, and besides, the tenor among the students is very nationalistic—anti-Semitic.

While Heinz Hopf may have been one of the “rational” Swiss colleagues visited by Behnke when he crossed the border for a breath of fresh air, Hopf himself seems also to have been very aware of the pro-Nazi sentiment in Switzerland. Nor was he likely to have been “neutral,” as his relative Ludwig Hopf, ten years his senior and Jewish, was one of the mathematicians dismissed by the Nazis from the *Technische Hochschule* in Aachen. Hopf’s letter to Veblen was a vain attempt to find a place for this cousin who, after 1933, had visited him regularly.

Hopf’s father, Wilhelm, had converted from his father’s Judaism to his wife’s Lutheranism in 1895. Heinz Hopf had been born in a village near Breslau (modern Wrocław) in 1894. For the Nazis, of course, Wilhelm Hopf was a Jew, but together with his wife he remained in Breslau in progressively worsening circumstances. Heinz Hopf visited his parents regularly until 1939, and attempted successfully to obtain a Swiss immigration permit for them. However, his father became seriously ill, and then World War II intervened. Wilhelm Hopf died in Breslau in 1942. Hopf’s Jewish ancestry also caused him difficulties, and in 1943 he was threatened with having to return to Germany, but he managed to obtain Swiss citizenship guaranteeing his ability to stay in Zurich.¹⁰² It is interesting to contrast the reactions of the “Jewish” foreign-born Swiss citizens, George Pólya and Heinz Hopf, to the menace across the border—Pólya chose to emigrate, Hopf to stay (despite the ability to leave).

The university professors, by their overwhelmingly antidemocratic “unpolitical” stance, their feeling of having been declassed by the Weimar Republic, and their long tradition of independence from and consequent obedience to the state, were for the most part readily able to accept the Hitler government (already on March 3, 1933, 300 postsecondary teachers had declared themselves for Hitler).¹⁰³ However, there was yet another traditional factor in German university life that made the Nazi success there easier: anti-Semitism.

While it is true that Jews were represented in German universities far out of proportion to their numbers in the population, especially as *Privatdozenten*, it is also true that academic advancement was extraordinarily difficult for them. Furthermore, a large number of these “Jews” were either baptized or at least *kofessionslos*, that is, officially without religion, and distant from any Jewish community.¹⁰⁴ Indeed, from the 1880s on, it was common in Berlin for the sons of Jewish families who became academics or professionals to be baptized, and for

¹⁰² Günther Frei and Uri Stambach, “Heinz Hopf,” chap. 38 in I. M. James, ed., *History of Topology* (Amsterdam: Elsevier, 1999), 1002.

¹⁰³ Bracher 1966: 132. See also Faust 1973.

¹⁰⁴ Ringer 1969: 136.

the daughters to be baptized preparatory to marriage to a Christian, while those sons who went into business or industry would remain Jews.¹⁰⁵ Nevertheless, advancement was difficult, even for the baptized, especially prior to World War I.¹⁰⁶ Kurt Hensel (baptized) was promoted in 1902 at Marburg, at age forty-one, where he had been an "associate professor" (*Extraordinarius*), but without pay, since 1891—without pay because the Wilhelminian education minister told him, "You have anyway enough money without it."¹⁰⁷ Another example of "late promotion" was Paul Epstein, who was still a *Privatdozent* at Strassbourg in 1918 when the French dismissed him in the aftermath of World War I. He never was more than an "associate professor" at Frankfurt in the succeeding fourteen years before the Nazis came to power. There were many Jewish *Privatdozenten*, because being such an instructor was a "free" profession, outside an official career with payment from the state. Advancement to *Extraordinarius* and then *Ordinarius*, though, meant advancement through the agency of the already established professors and a status as a state civil servant. In 1909–10, over 93 percent of the *Ordinarien*, or full professors, in Germany were Protestants or Catholics, but less than 81 percent of the *Privatdozenten* were. Fritz Ringer cites this as a statistical indication of the bias against Jews complementing the anecdotal evidence that can be gathered for each academic discipline.¹⁰⁸ Under the Weimar government, the official state position on Jewish advancement in the universities may have improved somewhat, but advancement was still largely in the hands of the older academics, and so was a continuation of the prewar situation—although "corrections" like the eventual appointment of Friedrich Hartogs in Munich were made. Concerning anti-semitism in universities in the 1920s, Abraham Fraenkel describes his own "superficial experiences" as follows:¹⁰⁹

As concerns the universities, anti-Semitic tendencies were at that time [the 1920's] reversed from the situation before the Revolution [of 1918]—that is, in Bavaria they were much more pronounced than in North and West Germany. The naming, though not the preferment (*Beförderung*), of Jews to positions as full professors (*Ordinarie*) remained infrequent with the exception of the new city-universities of Frankfurt and Hamburg.

¹⁰⁵ Fraenkel 1967: 97.

¹⁰⁶ Examples among well-known mathematicians include Friedrich Hartogs (*konfessionslos*), who became a full professor at age fifty-three in 1927 in Munich (*ibid.*: 84); and Alfred Pringsheim (*konfessionslos*), a full professor at age fifty-one in 1901 in Munich (*ibid.*: 82). Max Noether (Jewish), age forty-four, became a full professor in 1888 in Erlangen (see his obituary by A. Brill in *JDMV* 32 [1923]: 211–233, pp. 212, 229). Noether never received a desired and deserved call to a larger university. The characterization of him as Jewish follows Auguste Dick 1970: 4–5. The name Noether, distinctly non-Jewish for centuries, was given his father at the time of the Baden edict of tolerance in 1809 (*ibid.*).

¹⁰⁷ Fraenkel 1967: 97.

¹⁰⁸ Ringer 1969: 136.

¹⁰⁹ Fraenkel 1967: 184–185.

Fraenkel was a religiously observant "Orthodox Jew," and though he himself had no complaint about anti-Semitism in either Marburg or Kiel, where he had posts prior to 1933,¹¹⁰ as a young man of eighteen, because of some early success, he decided to study mathematics and become an academic "despite the restricted possibilities for advancement open to Jews"¹¹¹—indeed, a prewar friend of the family who helped him get a start became a postwar anti-Semite.¹¹²

It is true that there were exceptions to the dismal promotion record of Jews at German universities—for mathematics, this was particularly true at Göttingen, where Karl Schwarzschild became professor and observatory director at age twenty-eight, in 1901, moving on to Potsdam eight years, later despite a refusal to be baptized.¹¹³ Hermann Minkowski became an Ordinarius at Königsberg in 1895 at age thirty-one, but moved the following year to Zurich, and then, largely through the influence of his friend David Hilbert, to Göttingen in 1902. When Minkowski died in 1909, he was succeeded at Göttingen by Edmund Landau, who was thirty-two at the time.¹¹⁴ But Schwarzschild, Minkowski, and Landau truly were exceptions, and their presence at Göttingen was aided by the fact that Felix Klein and David Hilbert were not themselves anti-Semitic,¹¹⁵ in contrast to the academic profession as a whole, as brought out by the figures cited by Ringer.

German academic anti-Semitism of the 1920s was a continuation of attitudes already set by the 1890s. Peter Pulzer has documented the rise of political anti-Semitism in Germany and Austria in the 1870s and 1880s; in the forefront of the academic side of the movement was the famous historian Heinrich von Treitschke. Although Treitschke initially believed in the possibility of Jewish assimilation as a "solution," gradually he vacated this position for one of the Jew as the eternal foreigner within the people.¹¹⁶ In 1893 the Austrian journalist Hermann Bahr interviewed intellectuals in various European countries, but primarily Germany and France, on the subject of anti-Semitism. Bahr himself was of the opinion that "anti-Semitism is the morphine addiction of small people" and concluded his preface with the statement:¹¹⁷

He who is an anti-Semite is one out of the appetite for intoxication and the ecstasy of a passion (*Begierde nach dem Taumel und dem Rausche einer Leidenschaft*). He takes the nearest arguments. If one disproves them, he will seek others. . . . Therefore I wish in no way to "disprove" anti-Semitism, something that has been done a thousand times and is always in vain. I simply ask with what feelings and what answers the educated of different nations take a position toward this appearance in the people (*Volk*). Per-

¹¹⁰ Ibid.: 185.

¹¹¹ Ibid.: 78.

¹¹² Ibid.: 27, 76.

¹¹³ Ibid.: 86.

¹¹⁴ Ibid.: 87.

¹¹⁵ See David Rowe, "Jewish Mathematics' at Göttingen in the Era of Felix Klein," *Isis* 77 (1986): 422–449, for a discussion of this fact.

¹¹⁶ P. J. Pulzer, *The Rise of Political Antisemitism in Germany and Austria* (1964), 226, 298, for the first attitude; 249–250 for the second.

¹¹⁷ Hermann Bahr, *Der Antisemitismus. Ein Internationales Interview* (1894), 2, 4.

haps this produces a very curious document for some future time on the state of mind (Geist) in 1893.

Not all Bahr's German interviewees were anti-Semites; indeed, one of the most distinguished, the historian Theodor Mommsen, was an ardent opponent of Treitschke and anti-Semitism. What is striking, however, is the sort of snobbish anti-Semitism that appears in the statements of such luminaries as the economists Gustav Schmoller and Adolf Wagner, the biologist Ernst Haeckel, the publicist Maximilian Harden (himself of Jewish ancestry, his real name being Felix Ernst Witkowski),¹¹⁸ and the liberal (in the 1848 sense) writer Friedrich Spielhagen.¹¹⁹ In brief, for such people, anti-Semitism was justified on a variety of grounds, provided only that it was not too plebeian. Thus they could condemn the rabble-rousing anti-Semitic agitator Hermann Ahlwardt, very much a presence in the 1890s, while "understanding" and condoning the sentiments to which he appealed.¹²⁰ This same sort of elitist anti-Semitism persisted in the universities through the 1920s despite the occasional Mommsen, Virchow, Hilbert, or Klein, and made the events of the 1930s easier for the professors to accept without a great deal of fuss. Indeed, anti-Semitism ran so deeply in elite German society, and the Nazi campaign evoked such feelings, that even resistance circles such as that around Carl Goerdeler felt that there would need to be some sort of "solution of the Jewish problem" even if Hitler should be overthrown.¹²¹ Similar sentiments were echoed by such distinguished *Vernunftrepublikaner* as Friedrich Meinecke.¹²²

Before leaving the subject of German academic anti-Semitism, it is well to point out that it was hardly just a German or German-speaking phenomenon in the 1920s or later, nor were mathematicians in other countries immune to it. Some examples from mathematics in the United States will suffice to indicate the problem even in such a purportedly "pure" subject. On March 30, 1927, C. C. MacDuffee, a student of Oswald Veblen, and then at Ohio State University, wrote to him:¹²³

¹¹⁸ Harden was a remarkable character of the late Wilhelminian period. An ardent and vocal opponent of aspects of Wilhelminian practice, he was also no friend of Weimar. Despite the latter, in 1918 he was attacked by anti-Semites, and in 1922 survived an assassination attempt. For the details of this last, see Gumbel 1984: 86–90.

¹¹⁹ Bahr 1894. For Haeckel, see also Gasman 1971. Gasman argues that the wide distribution of Haeckel's Social Darwinist views provided a fertile medium for the growth of Nazi sentiments.

¹²⁰ For Ahlwardt, see Mosse 1964: 138–139.

¹²¹ On this point, see Christof Dipper, "Der Deutsche Widerstand und die Juden," *Geschichte u. Gesellschaft* 9 (1983): 349–380. It should be remembered that Goerdeler had been a member of the DNVP, a conservative party closed to Jews after 1929. See note 56.

¹²² Although no anti-Semite, and dismissed by the Nazis, Meinecke nevertheless managed in his 1946 book, *The German Catastrophe* (translated 1950 by Sydney B. Fay, [Cambridge, Mass.: Harvard University Press]) not only to criticize Prussian militarism and the German bourgeoisie, but to say about Germany after World War I: "Among those who drunk too hastily and greedily of the cup of power which had come to them were many Jews. They appeared in the eyes of persons with antisemitic feeling to be the beneficiaries of the German defeat and revolution" (32).

¹²³ VP, under MacDuffee. Henry Blumberg was a mathematician whose highly original work has only relatively recently received appropriate notice.

While the atmosphere is still a little strained, I do not believe that [Henry] Blumberg and I are in a serious position yet. [H. W.] Kuhn was much agitated toward me about the time that he saw you, and for fear that he said or implied things about me, I determined to tell you the situation. . . .

Although I think I can take care of myself here I am alarmed for Blumberg because of the degree of animosity toward Jews displayed by almost everyone in the University. The following is an incident, which I have never told to Blumberg, [and] is for you only at present. Blumberg was offered the position here by the late President Bohannen, and tendered his resignation to Illinois. Then a group from the department went to Dean Hitchcock (who is an absolute incompetent) and persuaded him to withhold his approval of the appointment. Kuhn tried to enlist my sanction for the move by saying that my advancement would be more rapid if Blumberg were not here. I told him that if such a thing were done Ohio [State] would be blacklisted by the [American Mathematical] Society, and moreover that I would stay just long enough to get another job. President Thompson confirmed Blumberg's appointment without the approval of Dean Hitchcock. However, I believe that Blumberg will never get a rise in salary here. He does not know anything of this.

Refugee scientists from Hitler's Germany were not always welcome in the United States; the reception of refugee mathematicians in America has been discussed in some detail by Nathan Reingold.¹²⁴ Part of this story is the "genteel anti-Semitism" that was widespread in American mathematics at the time. Several examples are cited by Reingold. Among them is George David Birkhoff, one of the leading American mathematicians of his day. In 1934, Solomon Lefschetz was the first Jew to be elected president of the American Mathematical Society. Birkhoff, only a few months older than Lefschetz, had this to say about the prospect (though in the end he was the reporter of Lefschetz's nomination for the presidency).¹²⁵

I have a feeling that Lefschetz will be likely to be less pleasant even than he had been, in that from now on he will try to work strongly and positively for his own race. They are exceedingly confident of their own power and influence in the good old USA. The real hope in our mathematical situation is that we will be able to be fair to our own kind. . . .

He will get very cocky, very racial and use the Annals [Annals of Mathematics] as a good deal of racial perquisite. The racial interests will get deeper as Einstein's and all of them do.

As one writer of a Birkhoff obituary noted:¹²⁶

After that [the attempt to help save Göttingen as a mathematical center during the depression] he was instrumental in bringing to the U.S. the finest of exiled talent,

¹²⁴ Nathan Reingold, "Refugee Mathematicians in the United States of America, 1933-1934: Reception and Reaction," *Annals of Science* 38 (1981): 313-338.

¹²⁵ *Ibid.*: 324.

¹²⁶ D. D. Kosambi, "George David Birkhoff, 1884-1944," *Mathematics Student* 12 (1945): 116 and 119.

though he could never have been mistaken for a pro-Semite by anyone who spoke with him for more than thirty seconds on the subject. . . .

One wonders whether the war had changed Birkhoff's naive views about the importance of race and the essential glory of Nordics, which he held very strongly at least till 1934. Did he realize that "pure Anglo-Saxon" was even more meaningless than "American scholar" had been before him, and that "American" was not a race but a mentality? It shows the fundamental nobility of his character that he never allowed such views to interfere with his scientific judgment, nor to prejudice him in the slightest in the matter of adjudicating research fellowships and prizes. He had no hesitation in recommending for important posts people with whom he was not and did not want to be on visiting terms.

Birkhoff's actions may have seemed ambiguous—his views certainly were not. On the occasion of the semicentennial celebration of the American Mathematical Society in 1938 he gave a well-known speech, "Fifty Years of American Mathematics," containing the following passage, which must be read in the light of his publicly well-known views.¹²⁷

The second special group to which I wish to refer is made up of mathematicians who have come here from Europe in the last twenty years, largely on account of various adverse conditions. This influx has recently been large and we have gained very much by it. Nearly all of the newcomers have been men of high ability, and some of them would have been justly reckoned as among the greatest mathematicians of Europe. A partial list of such men is indeed impressive: Emil Artin, Solomon [sic] Bochner, Richard Courant, T. H. Gronwall, Einar Hille, E. R. van Kampen, Solomon Lefschetz, Hans Levy [sic], Karl Menger, John von Neumann, Oystein Øre, H. A. Rademacher, Tibor Radó, J. A. Shohat, D. J. Struik, Otto Szasz, Gabor Szegő, J. D. Tamarkin, J. V. Uspensky, Hermann Weyl, A. N. Whitehead, Aurel Wintner, Oscar Zariski.

With this eminent group among us, there inevitably arises a sense of increased duty toward our own promising younger American mathematicians. In fact most of the newcomers hold research positions, sometimes with modest stipend, but nevertheless with ample opportunity for their own investigations, and not burdened with the usual heavy round of teaching duties. In this way the number of similar positions available for young American mathematicians is certain to be lessened, with the attendant probability that some of them will be forced to become "hewers of wood and drawers of water." I believe we have reached a point of saturation, where we must definitely avoid this danger.

A large number of the people in Birkhoff's list were not Jewish. They were certainly all distinguished mathematicians, and it is not clear how Birkhoff drew up his list. However, the inclusion of Lefschetz (who was in the chair for Birkhoff's address) must be counted a calculated insult, as Lefschetz came to the United States in 1905, lost both hands in an industrial accident in 1907, after which he earned an American Ph.D. in mathematics (at Clark University), and

¹²⁷ G. D. Birkhoff, "Fifty Years of American Mathematics," in *American Mathematical Society, Semicentennial Publications*, vol. 2 (addresses) (1938), 276–277.

had been a U.S. citizen since 1912.¹²⁸ Similarly, Birkhoff's use of the well-known Biblical phrase "hewers of wood and drawers of water" is an allusion, which his audience would not have missed in the context, to the enslavement of the Hittites by the Hebrews.¹²⁹

Further down the Charles River, on May 13, 1935, the distinguished statistician Karl Compton, then president of M.I.T., prepared the following confidential memorandum for Vannevar Bush, Norbert Wiener, and Henry Bayard Phillips.¹³⁰

Professor Wiener raised the question as to the possibility of a future appointment at M.I.T. for Mr. Levinson who is rated as the outstanding mathematical product of M.I.T. according to present indications. Professor Wiener reported some inertia or undefined opposition to Levinson's appointment and asked whether there was a basis for this.

I replied that there was general recognition of Levinson's ability but that in certain quarters there was a question as to whether Levinson is as outstanding a young man as Professor Wiener believes him to be. Professor Wiener believes, however, that this question will be settled one way or another by Levinson's further performance in the near future.

I also pointed out the tactical danger of having too large a proportion of the mathematical staff from the Jewish race, emphasizing that this arises not from our own prejudice in the matter, but because of a recognized general situation which might react unfavorably against the staff and the Department unless properly handled. I also emphasized the fact that this attitude was in no sense prompted by any criticism of present members of our staff or of the present situation, but was prompted only by a desire to safeguard against a situation which might lead to criticism and unfortunate results.

After discussing various aspects of the situation and Professor Wiener's own relation to it, we agreed that we could accept the following principles.

1. No man should ever fail to have fair consideration for a position on our staff because of his race or analogous characteristics.
2. Other things being approximately equal, it is legitimate to consider the matter of race in case the appointment of an additional member of the Jewish race would increase the proportion of such men in the Department far beyond the proportion of population.
3. The way is not barred to consideration of Mr. Levinson when the time of his possible appointment approaches and he should then be considered on his merits in light of the above principles.

Note that Compton adopts the notion of a "Jewish race" rather than just a religion.

In terms of general attitudes, one should also remember that Harvard began

¹²⁸ *American Mathematical Society Semicentennial Publications*, vol. 1 (New York, 1938), 236-240. That Lefschetz was in the chair appears in *Bulletin of the American Mathematical Society* 45 (1939): 5.

¹²⁹ Joshua 9:19-21, 25-27.

¹³⁰ Wiener Papers at M.I.T., under Levinson. See also Wiener 1964: 211-212.

to restrict Jewish admissions in 1926, and "Jewish quotas" at Harvard, Yale, and Princeton persisted until well after World War II.¹³¹ Nor was the U.S. situation (any more than the German one) merely one of academic snobbery. In 1948, the *Atlantic Monthly* carried a debate about whether a Jew should change his name in order to obtain a job and live "more comfortably" (later condensed in *Reader's Digest*),¹³² and the publication date of *Gentleman's Agreement* is 1947.¹³³

The fact that snobbish anti-Semitism was commonplace in the mathematical (and academic) world of the United States, as well as in Germany, in the 1920s does not diminish the fact that in the German situation, it meant less concern for dismissed colleagues. It does, however, indicate that academic anti-Semitism among mathematicians, as well as others, was not a peculiarly German phenomenon. A similar point could be made about England. Nevertheless, in Germany, it seems to have substantially weakened whatever academic opposition there initially might have been to Hitler. Finally, the dismissal of Jews meant more posts available for those not so tainted, especially at a time of a considerable "academic proletariat."

The elitist attitude of German academics, however, did provide one small, though easily overcome, barrier to the ready acceptance of the Nazi regime by a large number of the professoriat. Hitler was simply too much of a plebeian demagogue (as Hermann Ahlwardt was for the anti-Semites of the 1890s). However, Hitler's first cabinet included people like Alfred Hugenberg, Konstantin von Neurath, and Franz von Papen, sturdy conservatives who, it was widely felt, would keep the "wild man" Hitler under control. Indeed, a Munich professor apparently wrote a horrified letter to Hindenburg's son about the formation of the Hitler government and received the reply "What do you want? After all we have the cabinet majority."¹³⁴ Within months, even formally, this "cabinet majority" was meaningless. As Helmut Kuhn has remarked, concerning the politics of the Harzburger Front (October 11, 1931),¹³⁵

The juxtaposition of the conservative honorable-bourgeois nationalism and the heightened nationalism of the brown stormtroopers led to bourgeois refusal to recognize the qualitative difference between them. . . .

The classic or conservative nationalism of the educated bourgeois class, which included the professoriat, had itself, unnoticed, acquired a character (*Zug*) of resentful radicalism, which, while it indeed did not remove its distance from the manic-revolutionary nationalism of the Hitler movement, did, however, lessen it.

¹³¹ Marcia Synnott, *The Half-Opened Door: Discrimination and Admissions at Harvard, Yale and Princeton, 1900-1970* (1979).

¹³² *Atlantic Monthly* 181 (Feb. 1948): 72-74 and (Apr. 1948): 42-44. *Reader's Digest* 52 (June 1948): 13-18.

¹³³ Laura Hobson, *Gentleman's Agreement*, a novel (1947).

¹³⁴ Joseph Pascher, "Das Dritte Reich erlebt an drei deutschen Universitäten," in *Die Deutsche Universität im Dritten Reich* (1966), 49.

¹³⁵ Helmut Kuhn, "Die Universität vor der Machtergreifung," in *Die Deutsche Universität im Dritten Reich* (1966), 25, 26.

The Nazis understood this and, especially after Hitler's famous speech of January 27, 1932, to the Düsseldorf industrialists,¹³⁶ acquired a general respectability, even among the wealthy. Of course, this aim of the Nazi party to acquire "respectability" had been going on for some time—publicly, at least since Hitler's "oath of legality" at the "Reichswehr trial" in 1930, which was a sensation following closely after the stunning relative success of the NSDAP in the September 1930 elections. This "oath of legality," as well as the suppression of Nazi advocates of direct violence—the so-called *Stennesputsch* in 1931—added to this respectability. For many of the educated, including the professoriat, nationalism of any stripe became preferable to the greater sin of not being nationalist at all. After September 14, 1930, the Nazi party was the second largest in the Reichstag, and the one that seemed best able to fulfill nationalist aspirations. The stunning September success (previously the Nazis had had only twelve seats out of 475 in the Reichstag, now they had 107 out of 577¹³⁷) showed it to be a dynamic party, as contrasted with the somewhat stodgy conservatives (DNVP) with their aristocratic and landed gentry connections. Hitler's message was a religious one; he came as a savior and messiah,¹³⁸ he moved the plebs and held out to the patricians the extermination of the parliamentarism they detested—for nationalist-minded conservative academics, he represented that mystical, impossible union of *Geist* and *Macht*, "spirit" and "power." He was truly a charismatic figure. The intrigues of von Schleicher, von Papen, and others may have helped bring Hitler to power, and Hitler was astute at the backroom politics that characterized the last months of Weimar;¹³⁹ nevertheless, he always projected the image of leading a movement for national renewal that was ultimately beyond politics. The mathematician Gerhard Kowalewski was not the only academic who felt about Hitler: "He has been sent to us by Providence."¹⁴⁰

A final factor to be considered in the German academic crisis was the state of the universities. These were no longer placid places of learning, where acolytes received instruction from professors. The case of student disturbances provoked

¹³⁶ For a complete English translation of this speech, see Norman Baynes, *The Speeches of Adolf Hitler, April 1922–August 1939* (1942), 1:777–829. For an analysis of its importance, see Alan Bullock, *Hitler, A Study in Tyranny* (1962), 196–199.

¹³⁷ Their previous high point had been thirty-two out of 472 in May 1924.

¹³⁸ This has been frequently commented. One excellent book that explores this theme is J. P. Stern, *Hitler: The Führer and the People* (1975). The Nazis themselves were well aware of the religious quality of Hitler's message. For example, Joseph Goebbels noted in his diary in 1926: "Hitler speaks. About politics, idea, and organization. Deep and mystical. Almost like a gospel (*Evangelium*). Shuddering, with him one passes by the abyss of being" (as cited in Deuerlein 1974: 262), and Gregor Strasser in his letter of 1932 resigning all Nazi party offices says: "In my opinion the NSDAP is not only an ideological movement (*Weltanschauungsbewegung*) becoming a religion . . ." (original, and a translation were first published in an appendix to Peter D. Stachura "Der Fall Strasser: Gregor Strasser, Hitler and National Socialism, 1930–1932," in Peter D. Stachura, ed., *The Shaping of the Nazi State* (1978), 88–130.

¹³⁹ E.g., among many other discussions, Eberhard Jäckel, "Der Machtantritt Hitlers—Versuch einer geschichtliche Erklärung," in 1933, *Wie die Republik der Diktatur Erlag* (1983), 123–139.

¹⁴⁰ Victor Klemperer, *LTI, Rotbuch Taschenbuch no. 35* (1987), 122.

by Emil Gumbel has already been mentioned; these occurred from 1924 to 1932. But while Gumbel's case was an academic *cause célèbre*, it was far from the only occasion for nationalist student disturbances during Weimar. According to Jewish student publications, as early as December 1919, "Hatred of Jews rules in academic life," and by the end of 1920, there had been violent confrontations between Jews and anti-Semites at all but nine (out of twenty-three) German universities.¹⁴¹

Walter Landauer, who had been an Assistent in Heidelberg in 1924, and then was employed in the United States at the Storrs Agricultural Experiment Station (Connecticut), took an ongoing interest in Gumbel's case. A letter to him on March 11, 1931, from Otto Pfeffer, editor of the *Heidelberger Tageblatt*, remarked:¹⁴²

We also hold the view that the sharp intrusion of party-political forces seems to have begun a very doubtful development of German university politics. However, it is unfortunately also the fact that a very noticeable national wave, often in nationalistic [NSDAP?] excess, flows through all of Germany. Only by looking from the direction of this movement is it possible, or so we believe, to find the correct basis for judgment. Germany is at this time like an overheated steam kettle.

He went on to speak of problems such as war guilt accusations and reparations and asks for an "understanding of the realities, under whose hard impress, the German people and not least the academic youth who are constricted to the point of tragedy in their ability to get ahead, live." As one sociologist later put it:¹⁴³

The general joblessness among the academically trained, especially the youthful academically trained [prior to 1933], favored a [political] radicalization. Precisely the bad economic situation during the crisis [of 1929] had caused many young people from petit bourgeois strata in Germany to study in order to beneficially use the time when they would otherwise be jobless. After completion of their studies, they often had to wait years to find a position suitable to their education. . . . The fact that in the professions toward which this academically trained youth strove, numerous Jews were in office, created in them resentment and the envy of competition. However, all the cited motives that could create an anti-Semitic mentality were no longer new. They have the same roots and same structure as the anti-Semitism of the nineteenth century already had.

¹⁴¹ Hans Peter Beuel and Ernst Klinnert, *Deutsche Studenten auf dem Weg ins Dritte Reich* (Gütersloh: Siebert Mohn, 1967), 13. Twenty-three is the author's count; Beuel and Klinnert do not say. If Beuel and Klinnert intend to include technical universities (like Hannover) in their count, then (by my count) this is all but nine out of thirty-four. In any case, the number is substantial. See also George Mosse, "Die Deutsche Rechte und die Juden," in *Entscheidungsjahr, 1932* (1966).

¹⁴² Universitätsarchiv Heidelberg B-3075/13 (Gumbel file).

¹⁴³ Hans Paul Bahrtdt, "Soziologische Reflexionen über die gesellschaftlichen Voraussetzungen des Antisemitismus in Deutschland," in *Entscheidungsjahr 1932* (1966), 153.

In any case, these students, "constricted to the point of tragedy," whose "national movement" was "genuine at the core, only undisciplined in its form,"¹⁴⁴ managed to vociferously complain about and disturb the lectures of faculty, whose sins included writing a satiric article that skewered the Nazi party (Gerhard Kessler, University of Leipzig, 1932); criticizing the ultra-nationalist stance of many university students and faculty in an article in a Swiss socialist newspaper (Bertold Maurenbrecher, University of Munich, 1931-32); believing only defensive wars were justified and opposing war memorials in churches (Gunter Dehn, University of Heidelberg and University of Halle, 1919-32); being suspected of being a leftist sympathetic to Leon Trotsky (Ernst Cohn, University of Breslau, 1932-33); comparing the Treaty of Versailles to those of Brest-Litovsk and Bucharest (Hans Nawiasky, University of Munich, 1931); and trying to mediate fairly between a Bulgarian student and some German ones—the Bulgarian, among other things, called a certain Nazi student a "swinish German blockhead (*Sauboche*)" (Karl Mühlenpfordt, T. H. Braunschweig, 1931-33).¹⁴⁵ Nor were all such disturbances only focused on "Jewish" or "liberal" professors; Mühlenpfordt, for example, was a thoroughgoing German nationalist. The general stance of a large number of the faculty in such instances seems to have been to reprove the students but distance themselves from their colleague (Mühlenpfordt is an exception here).¹⁴⁶

One cannot leave this topic without at least a brief mention of one of the most famous as well as the earliest of these disturbances. On April 16, 1925, Theodore Lessing, a rather colorful philosophy instructor (*Privatdozent*) at the technical university in Hannover, wrote an article in a German-language Prague newspaper sharply attacking Field Marshal von Hindenburg, then a candidate for the Weimar presidency, saying, among other things, that were the war hero Hindenburg elected, "he would be only a representative symbol, a question mark, a zero. One can say: better a zero than a Nero. Unfortunately, history shows that behind a zero, there is always a future Nero hidden." The Hannoverian students were enraged. Lessing's lectures were disturbed, some rioting students were disciplined by the university, the public prosecutor initiated a preliminary investigation, and the students found no support at the education ministry, whereupon, spectacularly, 1,200 of the 1,500-strong student body abandoned Hannover and transferred to the technical university at Braunschweig (though apparently many soon returned). As to the faculty, of course, they

¹⁴⁴ Above, note 24.

¹⁴⁵ Faust 1973, 2:51-56. *Sauboche* is difficult to translate literally, being one of those slang slanders that carries much more connotatively than denotatively. *Sau* is "pig" or, more accurately, "sow," with connotations of filth, disgust, and sluttishness. *Boche* was French (and then adopted into English) slang for Germans in World War I and derives from a shortening of *caboché*, which meant (and means) "the back of the head," and so slang for "blockhead," but which also entered English as "cabbage." Thus *Sauboche* literally means a "cabbage-headed [German] pig," or perhaps, as translated, a "swinish [German] blockhead," and derives from vulgar French slang mixed with German. Comparable English slang for a German (though of different provenance and connotation) is "Kraut." In any case, it is clear why the Nazi student might be upset at the pejorative name.

¹⁴⁶ As analyzed by Anselm Faust (1973).

wished the unruly students to be disciplined, but they distanced themselves from Lessing, whose "unacademic behavior" made him "unworthy to be a member of the faculty." Most to the point, almost every other university student group in Germany issued declarations of solidarity with the Hannoverians. For example, in Munich, the students at the university and the technical university issued a joint declaration in which they "recognize (*bekannt*) unanimously the national character of the German university," and knew they were "one with all German students in emphasizing the necessity of taking a position against an un-German spirit and damaging influences on the national quality of the university under the cover of a wrongly understood academic freedom."¹⁴⁷

As Michael Steinberg remarks in his study of the National Socialist student movement:¹⁴⁸

The Nazi students flourished in an environment that was critical of their style, not their message. They were accepted as part of the larger nationalist movement at the university. This situation not only encouraged the support of wavering students but reinforced the Nazi students' own sense of rectitude and association with the nationalist tradition.

From before the time Heidelberg students dipped their handkerchiefs in Karl Sand's blood¹⁴⁹ to the present day, there has been a radical nationalist *völkisch* segment of the German student body that has found all actions, including murder, appropriate to its cause of a greater German, but strictly *German*, national unity. Attempts at brutal suppression, as for example in 1819, only drove it temporarily underground, and in 1931, in the guise of National Socialist students who distinguished between "national politics" and the despised "partisan politics," it triumphed.¹⁵⁰ Even in 1820, it was more than tinged with anti-Semitism.¹⁵¹ Hitler was surely accurate when he said in 1930, "Nothing gives more credence to the correctness of our idea than the triumph of National Socialism at the university."¹⁵²

¹⁴⁷ A summary of the "scandal" can be found in Faust 1973, 1:50–52. Lessing was assassinated in 1933 in Marienbad. Among his other works were *Jewish Self-Hate*, which he applied to himself. The first edition was issued by Jüdischer Verlag, Berlin, in 1930, reissued by Matthes and Seitz, Munich, in 1984. For a run-in Lessing had with Sigmund Freud, see Kurt Hiller, *Köpfe und Tröpfe* (Hamburg: Rowohlt, 1950), 307–8.

¹⁴⁸ Steinberg 1977: 116.

¹⁴⁹ Karl Sand, a radical student activist, in 1819 assassinated the writer August Kotzebue as a traitor to the people (*Volk*), and was publicly beheaded in 1820. The book *Scheiterhaufen* by Christian Graf von Krockow (n.d., c. 1988), taking the book-burning of May 10, 1933 as its initial focus, attempts to trace the intellectual ideas among students and academics leading thereto, as well as the duration and consequences of these ideas beyond the Third Reich. Karl Sand and his execution are discussed there on pp. 31–33.

¹⁵⁰ The most complete description is in Faust 1973, 2: chap. 6.

¹⁵¹ See Krockow n.d.: 33. Anti-Semitism came and went among various student groups until the 1880s, when a steady increase seemed to begin (see, for example, Pulzer 1964; Mosse 1964: chap. 10; and Steinberg 1977).

¹⁵² "Adolf Hitler to German Students," *Die Bewegung* for July 8, 1930, as cited by Anselm Faust 1973, 1:9.

The universities during Weimar themselves were fertile fields for the growth of extreme nationalistic sentiments. For all the examined reasons, professors could believe in the separation of university and state, yet, as private citizens, rail against the republic. During the Weimar Republic, those who saw it as a new, different beginning for Germany, and a significant break from the past, like Emil Gumbel, suffered the consequences, which were slower in being made definitive than with Leo Arons decades earlier, but were nonetheless punitive or final. Furthermore, the dignity of many professors as Wilhelminian state servants had been placed in the service of the national aspirations for success in World War I. Not only did German professors feel declassed under the republic but, along with many of their countrymen, they felt deep injury to their sense of national pride, a pride that had only very recently been established (within less than fifty years)—nor did the Treaty of Versailles help in this regard. Students, perhaps even more than their professors, perceived an unfair debasement of Germanhood in which the republic had acquiesced, and so practiced “national politics.” Furthermore, their professional outlook for employment was dim and growing dimmer. Thus both students and professors were filled with a narcissistic rage at unfulfilled expectations—expectations somehow “due,” but not achieved. Both yearned for a national government that stressed the dignity of being German, and spurned “Western parliamentarism” as a corrupt, un-German system. It was the parliamentary states that had frustrated their expectations, unmanned the German soldier and the German state, so to speak; furthermore, many believed this had been done by unfair and deceitful means, since only such means could achieve such an end. The military began the “stab-in-the-back” legend,¹⁵³ but it was widely believed and used to good effect by Hitler. Thus, it was natural that the parliamentary Weimar Republic should be viewed as a corrupt and deceitful intrusion into the naturally Germanic order of things. As a consequence, both students and professors played at restoration dreams—restoration of a state with employment, and with Germanic dignity, Germanic order, and Germanic unity. Finally, anti-Semitism was an essential ingredient of this academic culture. While nothing new in German or other academic circles, the increase in German anti-Semitism following World War I has often been remarked. The Jew as quintessential “outsider” religiously and, especially as represented by the *Ostjuden* (Jews from the East), culturally became the antithesis of true Germanhood. The assimilated Jew became for many Germans a “master of deceit,” hiding his true nature under artfully assumed disguises; for academics in particular, the Jew became an un-German intruder in the club, a pseudo-German who had had full civil rights (even in Prussia) for only about a century and who took needed posts away from true Germans, a disturbance in the desired German unity and dignity. Indeed, if one adopts the view of such tribal and “racial” nationalism,¹⁵⁴ then the assimilated Jew, viewed

¹⁵³ See above, note 36.

¹⁵⁴ For a discussion of anti-Semitism, totalitarianism, and tribal nationalism see Arendt 1980: esp. 227–243.

as attempting to disguise his "race," is inevitably a social poison. In sum, a large part of the academic community was prepared emotionally and socially to respond hopefully and positively to Hitler's message, provided that it was given a sufficiently respectable guise. Of course, in this they were not any different from other German elites, like jurists or doctors, who by and large supported the Nazi regime.

Why should the "unpolitical" academic elite initially find the Nazis so attractive, although later many had second thoughts? Beyond the usual reasons already suggested, such as the need of an "academic proletariat" for jobs and the inspiration of nationalistic fervor in hard and unfair times, there were perhaps other psychophilosophical reasons. Just as science may be a defensive barrier between human beings and nature, so the scientist's work provides a potential protection from continually having to deal with the "real world." This may be particularly true of mathematicians, whose work basically involves self-generated mental creations. The mathematician, alone among scientists, has complete control of the objects of his manipulation. There are no inconveniences of apparatus to get in the way of the elaboration of an idea, only the mathematician's own knowledge and ability. For that very reason, of course, the requirements of mathematics are much more stringent logically. A mathematical proof has no room for experimental error; within the standards of the day, it should be logically rigorous. In some ways vis-à-vis his work, the mathematician recalls W. S. Gilbert's Lord Chancellor in *Iolanthe* (Act I):

The Law's the very embodiment
Of everything that's excellent
It has no kind of fault nor flaw
And I, my Lords, embody the Law.

This manipulation of self-generated concepts is even true for the applied mathematician (though these latter sorts of results may later require laboratory confirmation). Under Nazi rule, the mathematician could, perhaps more easily than colleagues in, say, history, biology, or architecture, separate "work" from "life," and, having made that compartmentalization, could retreat into that famous "inner emigration," if so desired.

Mathematicians were not much different from the rest of their colleagues—there are no signposts in Weimar academic culture saying either "But mathematicians were an exception," or "But mathematicians were more extreme."¹⁵⁵ Furthermore, as later chapters will show, during the Nazi regime, mathematicians not only exhibited the same range of behaviors as their colleagues, but shared the same fundamental attitudes and reactions. In particular, there are examples of the phenomenon of initial enthusiasm for Nazism followed by se-

¹⁵⁵ David Rowe (1986: 426) would argue that the Göttingen mathematicians give the lie to extending the notion of a "mandarin" German professoriat to mathematicians and natural scientists. What seems more likely is that the mathematicians at Göttingen prior to 1933 truly were exceptional among university faculties. Even so, figures like Richard Courant, a nonreligious Jew, certainly had "mandarin attitudes."

rious second thoughts, when it was "too late," among mathematicians. More importantly, the crisis in mathematics became intertwined with more political issues in Nazi Germany, especially because of the emphasis of some on Jews as unfit by reason of their presumably different mathematical and pedagogical style; however, it did so in ways that were never clear-cut. It is undeniable that in addition to the effect of the regime on mathematics, there were some mathematicians who attempted to foster it out of conviction, and with respect to the discipline itself in both organization and content.