

MATHEMATICIANS AT WAR
POWER STRUGGLES IN NAZI GERMANY'S
MATHEMATICAL COMMUNITY:
GUSTAV DOETSCH AND WILHELM SÜSS

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It is generally difficult to deny having committed a given act, or that such an act was committed; it is, on the contrary, very easy to alter the motivations which led us to an act and the passions within us which accompanied the act itself.

Primo Levi

ABSTRACT. — The article discusses several examples of power struggles in Nazi Germany's mathematical community. Among them are the fate of German participation in J.E.L. Brouwer's journal *Compositio mathematica* in 1934/35. Ludwig Bieberbach put an end to this participation for political reasons. Special attention is paid to developments in the *Deutsche Mathematiker-Vereinigung (DMV)*, above all to the presidency of Wilhelm Süss in the years 1937 to 1945. The pre-war years of his presidency were overshadowed by Bieberbach's opposition to the *DMV*. One of the most important events is the expulsion of non-Aryan *DMV*-members in 1938/39 (*Judenfrage*), which was central to the *DMV*'s success in dealing with Nazi government officials. In World War II the *DMV*'s successful professional policies, though they were threatened by Süss' Freiburg colleague Gustav Doetsch, were carried on by Süss in close collaboration with Nazi government officials. His efforts were crowned by the foundation of a central institute for mathematics in the Black Forest (Oberwolfach).

RÉSUMÉ. — MATHÉMATIENS EN GUERRE. LUTTES DE POUVOIR DANS LA COMMUNAUTÉ MATHÉMATIQUE DE L'ALLEMAGNE NAZIE: GUSTAV DOETSCH ET WILHELM SÜSS. — L'article analyse plusieurs luttes de pouvoir dans la communauté mathématique de l'Allemagne nazie, dont celle concernant la participation allemande à la revue de J.E.L. Brouwer *Compositio mathematica* dans les années 1934/35. Ludwig Bieberbach a mis fin à cette participation pour des raisons politiques. Une attention particulière est par ailleurs portée à la *Deutsche Mathematiker-Vereinigung (DMV)* et à Wilhelm Süss, son président, de 1937 à 1945. Les années de

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sa présidence situées avant guerre ont été marquées par l’opposition de Bieberbach à la *DMV*. Un des évènements les plus importants a été l’expulsion des membres non-aryens de la *DMV* en 1938/39 (*Judenfrage*). Il a été déterminant pour les relations fécondes de la *DMV* avec les officiels du gouvernement nazi. C’est en collaboration étroite avec le gouvernement que Süß a poursuivi, durant la seconde guerre mondiale, les politiques professionnelles de la *DMV*, même si elles ont été menacées par son collègue de Fribourg, Gustav Doetsch. Les efforts de Süß ont été couronnés par la fondation d’un institut central de mathématiques dans la Forêt Noire (Oberwolfach).

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1. INTRODUCTION

Anybody plunging into the deep sea of historical research on science in the Third Reich will be confronted with some major theses and problems which have been the subject of much discussion during the last decade¹. Some of these are directly rooted in German scientists’ legitimising and vindictory discourses of the post-war era. Such is the thesis of “subversion from within”, which Werner Heisenberg and the physical scientists working on the atomic bomb took recourse to after the war. According to them they had deliberately slowed down the progress of the bomb project. This myth has been convincingly demolished by Mark Walker [Walker 1989]. Closely related is the construction of “apolitical” scientists who did not perceive their own research agenda and professional contexts as part of a nazified world or an active process of

¹ For surveys of recent literature on science in Nazi Germany see [Beyerchen 1992], [Hopper 1996], [Harwood 1997]. For general orientation *cf.* [Ludwig 1974], [Walker 1989], [Macrakis 1993], [Olf-Nathan 1993], [Renneberg/Walker 1994], [Hentschel 1996, xix–xcix]. For the case of mathematics *cf.* [Siegmond-Schultze 1993], [Mehrtens 1996]. The research for this paper was kindly supported by the *Volkswagen Stiftung*. Thanks for their help and comments go to Moritz Epple, Nina Gleichmann, Ben Kern, David E. Rowe, Dieter Speck and the *Revue’s* referees.

nazification [Hopper 1996, pp. 168-171]. “Apolitical” scientists still linger about in recent publications, notably Wilhelm Süss has been described as such [Hammerstein 1999, pp. 464 and 469]. “Apolitical” scientists were often portrayed as ideal brokers who could acquire maximal professional autonomy for their particular discipline, while at the same time keeping their distance, their innocence and their purity. Herbert Mehrtens has given a stimulating discussion of this, calling it “*irresponsible purity*” [Mehrtens 1994].

These questions are deeply entangled with moral standards and judgments, and naturally so, as they are rooted in the discourse of justification in post-war Germany, where questions of right or wrong, good or bad, Nazi or not, quickly became part of everybody’s everyday business. Recent historiography of Nazi science has cautiously come to “*encourage a shift of emphasis away from judgements of guilt and innocence toward a historiography more concerned with understanding and explanation*” [Harwood 1997, p. 145]. This does not imply that moral concerns should be superseded by explanatory ones, but rather that the assignment of personal guilt to individuals will not help in the investigation of the nature and scope of collaboration between scientists and the Nazi regime. Investigating the entanglement of mathematicians’ professional policies with issues that were at the very core of the Nazi state, such as its anti-Semitism, is a starting point to get to grips with the relations of scientists and the Nazi regime. Apart from this general problem there are two other topics on the agenda of this paper, which might invite further study. Firstly there is the nature of scientific relations between Nazi Germany and the international scientific community which is illustrated here by the affair involving the international journal *Compositio mathematica* in 1934/35 (Section 3)². The other topic is that of denazification and the continuity of professional élites after 1945, some aspects of which are discussed in Section 7.

The National Socialists’ seizure of power in 1933 soon triggered a process of redistribution of power within the German mathematical community, and the two professors at the Freiburg Institute of Mathematics, Gustav Doetsch and Wilhelm Süss, were from 1934 to 1945 to be

² Research on the Third Reich’s international scientific relations is still young: [Richards 1990a, 1990b], [Walker 1992], also [Knoche 1991], [Siegmond-Schultze 1993, pp. 177–192].

found in the midst of the pursuit of and desire for this power. Strange as it may seem to choose such a seemingly localized focus in dealing with this process, such a perspective does not merely stem from a love for micro-historical detail, as will become apparent. For the discussion of these men's respective roles and activities in these power struggles, I heavily draw on two corpora of papers, namely those of Wilhelm Süß and the papers of the *Deutsche Mathematiker-Vereinigung (DMV)*, which are now both accessible at the University Archives of Freiburg³. These provide an extensive basis for the future investigation of many hitherto scarcely documented aspects of the history of mathematics in Nazi and post-war Germany. Furthermore, the papers of Gustav Doetsch from the war years, only fragments of which survive⁴, shed light on the early history of L.E.J. Brouwer's journal *Compositio mathematica*, especially its fate in Germany in 1934/35.

Neither Doetsch nor Süß had played an influential role in the German mathematical community before 1933. But in 1934 both tried to benefit from the changing circumstances and took keen interest in the reorganization of the *DMV* along the lines desired by Ludwig Bieberbach. They supported Bieberbach's futile efforts to nazify the *DMV*, but at the same time they disagreed with his opposition to Germans being members of the editorial board of Brouwer's newly founded journal *Compositio mathematica*, which included many Jewish mathematicians. Bieberbach's stance concerning the *Compositio* proved successful, but he fell from power in the *DMV*, and Doetsch and Süß were left in an ambiguous position *vis-à-vis* the hierarchy of influence and the process of redistribution of power within the German mathematical community (Section 3).

The ambiguity was resolved in 1937 when Süß was chosen president of the *DMV*. Süß soon established himself in the role of a very effective representative of mathematics in Germany. The acid test for him was the handling of the non-Aryan *DMV* members in 1938/39, the so-called *Judenfrage* (Section 4). With the outbreak of the war Doetsch entered the scene of professional policies in mathematics as representative of the

³ For a guide to the archival material see [Remmert 1999a] for the papers of the *DMV* and [Remmert 2000b] for the papers of Süß.

⁴ In author's possession, the Doetsch papers will be transferred to the University Archives of Freiburg (UAF).

powerful *Aviation Ministry*. In the meantime Süss and Doetsch had totally fallen out with each other and a fierce power struggle was fought between them during the war. A particularly high controversy between them was the question of a central institute for mathematics (*Reichsinstitut für Mathematik*), which Süss got to establish in Oberwolfach in 1944. Eventually Süss prevailed over Doetsch and considerably extended his own power to organise mathematical research important to the war (Section 5 and 6). In the post-war years Süss managed to safeguard his influence, but Doetsch became more and more isolated and ran into trouble with the committee of denazification at Freiburg University (Section 7).

As Doetsch and Süss are at the centre of this narrative, it is appropriate at this point to describe something of their professional biographies.

2. GUSTAV DOETSCH (1892–1977)⁴

Gustav Doetsch was born in Cologne into a strict catholic family. From 1911 to the outbreak of World War I he studied mathematics at Göttingen, Berlin and Munich. He joined the army in October 1914. After two years in the infantry Doetsch was moved to the Air Force in summer 1916 and was trained as an aerial observer. He was demobilised a highly decorated second-lieutenant in December 1918. He returned to Göttingen and finished his thesis in 1920 under Edmund Landau. Doetsch had worked together with Felix Bernstein before the war and they had published a joint paper in 1915 [Bernstein/Doetsch 1915]. Although Bernstein could not offer Doetsch a position in Göttingen they published five more joint papers between 1922 and 1927. Doetsch took his Habilitation in Hannover in 1921. In the curriculum vitae, which he submitted with his Habilitation thesis he explicitly acknowledged the influence the publications of G.H. Hardy and J.E. Littlewood had had on him⁶. In 1922 he went to Halle as lecturer in applied mathematics. He became full professor in Stuttgart in 1924. He declined calls to Greifswald in 1927 and to Giessen in 1930, but went to Freiburg in 1931.

Doetsch held a high international reputation due to his work on the Laplace Transform [Fantappiè 1933, p. 9], which had been stimulated by

⁵ On Doetsch cf. [Wagner 1952], [Sartorius 1963], [Deakin 1992], [Remmert 1999a, 2000a].

⁶ Niedersächsisches Hauptstaatsarchiv Hannover, Personalakte Gustav Doetsch.

his early collaboration with Bernstein. His monograph on the theory and application of the Laplace Transform was very well received [Doetsch 1937, American pirate translations in 1939 and 1943], [Tricomi 1939]. Doetsch devoted his whole scientific activity to the exploration and codification of the Laplace Transform and incessantly propagated its use to physical science and engineering. His books became standard texts and were translated in many languages [Deakin 1992], [Remmert 2000a].

When the Nazis came to power Doetsch was eager to conform at least rhetorically to the new ideas. He had ample reason to do so because he had a history of pacifism and realised that this would work against him in the new political climate. He had been active in the German peace movement as a member of the *Peace Association of German Catholics (Friedensbund Deutscher Katholiken)* from 1926 to 1928 and of the *German Peace Society (Deutsche Friedensgesellschaft)* from 1926 to 1930. He published several letters against rearmament and militarism in the late 1920s. In addition to this he had signed a petition for Emil Julius Gumbel in 1931. Gumbel, who taught statistics at Heidelberg University, had come under heavy pressure from nationalistic and National Socialist students for his pacifist and left-wing stance [Benz 1983], [Kneser/Schappacher 1990, pp. 44f], [Heiber 1991]. The petition for Gumbel was among others signed by Albert Einstein, Max Horkheimer, Theodor Lessing, Theodor Wiesengrund (Adorno) and the mathematicians Max Dehn, Rudolf Mehmke and Emmy Noether. It was unfortunate for Doetsch, that Gumbel appeared on the first expatriation list of the Nazis along with Einstein in 1933. His signing for Gumbel and his pacifist activities have been objects of several political denunciations from 1933 on. Possibly his efforts to adapt himself to the new regime in 1933 stem from his fear to be expelled from his professorship. After 1937 he seems to have been less fervent in his support for the Nazis. He did not join the National Socialist German Workers Party (*Nationalsozialistische Deutsche Arbeiterpartei* or *NSDAP*).

With the outbreak of World War II he was again drafted to the Air Force in the rank of a captain and from 1940 he worked in the *Aviation Ministry*. He was known to be a complicated character and not easy to get along with, cultivating the art of making enemies.

3. WILHELM SÜSS (1895–1958)⁶

Born and raised in Frankfurt (Main) Süß studied mathematics in Freiburg, Göttingen and Frankfurt from 1913 to 1915. He returned to Frankfurt after his military service and wrote his thesis with Ludwig Bieberbach in 1920. As it was extremely difficult to find a permanent position at a German university Süß spent the years from 1923 to 1928 as lecturer of German at the University of Kagoshima in Japan. In 1928 he went to Greifswald where he took his Habilitation with Hellmuth Kneser, who became a close lifelong friend. After having lectured in Greifswald for six years he obtained a full professorship at Freiburg University in 1934, succeeding Alfred Loewy, who had been fired by the Nazis in 1933. In calling Süß, the University followed Doetsch's recommendation. Doetsch had already proposed Süß as his own successor in Stuttgart in 1931.

Süß's mathematical work in the 1920s had been influenced by Hilbert's *Grundlagen der Geometrie*. He was particularly interested in giving a group theoretic foundation of geometry. In Greifswald and later in Freiburg he concentrated on the theory of convex bodies and relative differential geometry. Although he had published some 50 papers by the early 1930s he had never been taken in serious consideration for a professorship before his appointment at Freiburg [Gericke 1968].

In the first years of the Third Reich Süß was careful not to commit himself politically, though in 1936 he was reported to “*be based wholehearted on National Socialism*”, when he was discussed for a professorship in Tübingen⁸. In 1937 he joined the *NSDAP* and in 1938 he became a member of the *National Socialist Lecturers' League (NS-Dozentenbund)*⁹. Also in 1937 he became president of the *DMV* staying in office to 1945.

⁷ On Süß cf. [Behnke/Gericke 1958], [Ostrowski 1958], [Gericke 1968], [Mehrtens 1996], [Remmert 1999a].

⁸ As reported to the Rector of Tübingen University by the *National Socialist Lecturers' League*, September 4, 1936, University Archives Tübingen, 205/106: “*Von Herrn Süß erfahren wir, dass er mit ganzem Herzen auf dem Boden des Nationalsozialismus steht und politisch unbedingt zuverlässig ist.*”

⁹ Süß joined the party on June 22, 1937 (Bundesarchiv Berlin, former Berlin Document Center, Wilhelm Süß). On his membership in the *Lecturers' League* cf. University Archives Freiburg, B 133/222, membership lists of August 1938 and January 1939. According to [Benz/Graml/Weiß 1997, p. 608] approximately 25% of German university teachers joined the *Lecturers' League*.

His Freiburg colleagues held his diplomatic talents in high esteem. Accordingly from 1938 to 1940 Süss was Dean of the Faculty of Natural Sciences and Mathematics in Freiburg and from 1940 to 1945 he was Rector of Freiburg University. Within the polycratic organization of science in the Third Reich Süss fashioned a position of considerable influence and power from the combination of his *DMV* presidency and his Rectorship.

Up to 1937 Doetsch and Süss were on friendly terms. But their relationship worsened in the late 1930s and they had totally fallen apart by 1940. Nevertheless their early cooperation directly involved them in power struggles in the German mathematical community.

4. COMPOSITIO MATHEMATICA AND DMV: DOETSCH AND SÜSS TOGETHER

In the mid-20s the Göttingen Institute of Mathematics was the uncontested focus of the German mathematical community. Whereas the seriously ill David Hilbert stood as a highly visible symbol for the Göttingen Institute's excellence, Richard Courant with his abilities as an organizer and his close cooperation with the Springer publishing house, wielded much of Göttingen's power. Göttingen's preeminence as a mathematical center was repeatedly challenged by mathematicians in Berlin, but in vain. In the mid-1920s Hilbert and Göttingen were the focus of several conflicts within the mathematical community. The Dutch mathematician L.E.J. Brouwer (1881–1966) was Hilbert's main antagonist in these conflicts. Brouwer and Hilbert had still been on friendly terms in 1919 when Hilbert had offered Brouwer a chair in Göttingen, but their relationship cooled down when Brouwer began to propagate his intuitionistic views, finding a valuable ally in Hermann Weyl. This led to a sharp controversy with Hilbert about the foundations of mathematics, the so-called *Grundlagenstreit*. Moreover, Brouwer and Hilbert had diverging attitudes as to German participation in the *International Congress of Mathematicians* at Bologna in 1928. Brouwer, on the one hand, urged German mathematicians to boycott the Congress and was supported by some of the Berlin mathematicians, including Ludwig Bieberbach, who had already been among Brouwer's supporters in the *Grundlagenstreit*, Richard von Mises and Erhard Schmidt. Hilbert, on the other hand, strongly recommended German participation and actually led a large German delegation

to the Congress. The *Grundlagenstreit* and the Bologna affair eventually resulted in Brouwer's and Bieberbach's expulsion from the editorial board of the leading journal *Mathematische Annalen* in 1928 [Mehrtens 1987, pp. 211ff], [Kneser/Schappacher 1990, pp. 54–57], [van Dalen 1990, pp. 23–25], [Hesseling 1999, pp. 72–79].

In 1930 Brouwer seriously began to plan his own mathematical journal *Compositio mathematica* to compete with the *Mathematische Annalen*, Hilbert and the Göttingen influence. Brouwer and Bieberbach held similar views with regard to both mathematics and politics and they collaborated closely in the foundation of *Compositio*, the first copy of which appeared in 1934. At that time Brouwer was held in sufficient scientific and political esteem in the newly nazified Göttingen Institute of Mathematics to be offered Felix Bernstein's chair — an offer he declined [Schappacher 1987, pp. 356f].

As for Bieberbach, who had held the influential office of secretary of the *DMV* from 1921, he converted to the National Socialist ideology in early 1933. He professed his new convictions so fervently that he ran into conflict with his colleagues in the *DMV* board and finally laid down his offices in January 1935 [Mehrtens 1987, pp. 221ff], [Kneser/Schappacher 1990, pp. 55–69].

Ten mathematicians in Germany had been invited to join the large editorial board of *Compositio* in 1930: Reinhold Baer, Ludwig Bieberbach, Gustav Doetsch, Georg Feigl, Heinz Hopf (who went to Zurich in 1930), Alfred Loewy, Richard von Mises, John von Neumann, Wilhelm Süss and Gabor Szegö¹⁰. Following the Nazis' rise to power in January 1933 and the rapidly enacted anti-Jewish legislation in April 1933 Reinhold Baer emigrated in 1933, Alfred Loewy was dismissed but stayed in Germany, Richard von Mises left for Istanbul in 1934, John von Neumann decided to go to Princeton for good in 1933 and Gabor Szegö also went to the United States¹¹. Which left Bieberbach, Doetsch, Feigl, Loewy and Süss as the contingent from Germany on the board when the first issue of *Compositio* was published in 1934. Bieberbach acted as one of *Compositio*'s five

¹⁰ Brouwer to Veblen, October 11, 1930, Oswald Veblen Papers, Library of Congress, Washington D.C.; Veblen was also among the 49 mathematicians invited to participate in the editorial board.

¹¹ On the emigration of mathematicians from Germany see [Siegmond-Schultze 1998].

managing editors¹². But by 1935 when the second volume was published, Bieberbach had resigned and Loewy had died. Doetsch, Feigl, Süss and newly appointed Emil Artin, were named as editors in Germany¹³. By March 1936 Doetsch, Feigl and Süss had also left the board¹⁴. Artin was the only mathematician living in Germany named on the cover of the third volume in 1936. And Artin was to emigrate in 1937.

However undecided in itself National Socialist politics changed the lives of Jewish mathematicians and entered mathematics as racial categories. Not only that, but National Socialist politics imposed themselves on the professional autonomy of the involved German mathematicians. In the course of this kind of intervention in *Compositio* matters Bieberbach and Doetsch were the main antagonists.

In June 1934 Bieberbach wrote to Brouwer trying to induce him to remove the Jewish mathematicians from the board of *Compositio*¹⁵. He stressed the close political ties between Brouwer and himself since their expulsion from the board of *Annalen* in 1928. Bieberbach explained that he had only suffered the inclusion of Jewish mathematicians among the editors in 1933 to prove his readiness for international cooperation, hoping that the German “*fight against international Jewry*” (*Kampf mit dem internationalen Judentum*) would be an example to other peoples who would come to realise the necessity of opposing the “*overgrowth of the Jewish spirit and mentality*” (*Überwuchern des jüdischen Geistes*). He deplored that he had been falsely attacked for his stance from various factions — referring, without actually mentioning it, to critique from Nazi quarters of his collaboration with Jewish mathematicians in *Compositio* and Harald Bohr’s critique of his “double game” of pretending international cooperation in *Compositio* while propagating anti-internationalist

¹² [Mehrtens 1987, pp. 234f] is mistaken in assuming that Bieberbach had already left the editorial board when the first issue appeared. Bieberbach was named as editor on the first copy along with Brouwer, Gaston Julia, B.M. Wilson and Théophile de Donder (Volumen 1, Fasciculus 1, 1934) and was only omitted later when the title-page of the first volume was distributed.

¹³ Artin had not been mentioned on the first number of *Compositio*. He is listed as a member of the editorial board in November 1934 along with Bieberbach, Doetsch, Feigl, Loewy, Süss (from the Doetsch papers).

¹⁴ Brouwer to Hopf, March 20, 1936, ETH Zürich, Wissenschaftshistorische Sammlungen, Hopf papers, Hs 621, 335.

¹⁵ Bieberbach to Brouwer, June 21, 1934, copy from Doetsch papers.

and anti-Semitic views in Germany¹⁶. Bieberbach had already expressed some of his attitudes in a public lecture on his own race-typology for mathematics given in April of 1934 [Bieberbach 1934a, 1934b]. In this lecture he explained that there were two types of mathematical thinking which he identified, roughly speaking, as Jewish and Aryan. Bohr had heavily criticised Bieberbach's race-typology in a Danish newspaper article. Bieberbach responded with an "Open Letter to Harald Bohr" in May 1934 [Bieberbach 1934c]. In his "Open Letter" Bieberbach ingeniously enough tried to counter Bohr's critique by remarking that the very statutes of *Compositio* stressed the different national fields and methods of mathematical research and thereby supported his own theory that different styles resulted from differences between peoples. According to Bieberbach Bohr did not accept the necessity of national identity and national styles and therefore was a "*pest to all international cooperation*" (*Schädling aller internationalen Zusammenarbeit*). Bieberbach's "Open Letter" was published in the *Jahresbericht* against the wishes of his co-editors, who had been afraid that its publication in the official *DMV* journal by the *DMV* secretary would give the impression that his views represented those of the *DMV*. This was the beginning of Bieberbach's conflict with the *DMV* [Mehrtens 1986, pp. 221f], [Kneser/Schappacher 1990, pp. 58ff].

As a matter of fact Bieberbach's "double game" reflected the incoherent and inconsistent management of science policies in the *Ministry of Education and Research* (*Reichsministerium für Wissenschaft, Erziehung und Volksbildung*). This incoherence and inconsistency resulted mainly from the lack of reconciliation of anti-internationalist and anti-Semitic activities which were at the core of Nazi-policies in Germany with the necessity of cooperating in an international political environment that still looked at Germany with suspicious eyes as an element of uncertainty and a possible threat. Bieberbach only saw two possibilities to escape his dilemma and gave Brouwer an ultimatum: either the Jewish mathematicians would have to be removed from the board and from the title-page of *Compositio* or Bieberbach himself would have to draw back from it. To put pressure on Brouwer he concluded with the admonition that the distribution of *Compositio* might meet with severe difficulties in Germany, if the Jewish mathematicians were not removed from the editorial board.

¹⁶ On Bieberbach's dilemma cf. [Kneser/Schappacher 1990, pp. 59f].

In July 1934 Bieberbach wrote to Doetsch, pressing him to take the same position against Brouwer. Bieberbach explicitly pointed to the fact that he himself acted in complete accordance with the views of the mathematician Theodor Vahlen (1869–1945) a long-standing Nazi who in 1934 had become an influential government official in the *Ministry of Education and Research*, heading the *Office for Scientific Affairs* (*Amt für Wissenschaft*)¹⁷. Doetsch, however, did not give way to Bieberbach but took a wait-and-see attitude instead. He wrote to Feigl a few days later, saying that although he felt inclined to join Bieberbach, it would be better if the three of them, *i.e.* Doetsch, Feigl and Süß, acted unanimously in the case that Bieberbach did resign¹⁸. By September, Feigl and Doetsch, who had had ample time to discuss the matter during Feigl's vacation in Freiburg, had decided not to follow Bieberbach's lead. One of the reasons Doetsch gave in a postcard to Süß was his own vexation with Bieberbach's strategies for the forthcoming *DMV* meeting in Pymont in September 1934 (discussed below). But he did concede the necessity to demand an “*appropriate and purely Aryan representation of Germans*” on the board of *Compositio*¹⁹.

Brouwer, for his part, had no intention of fulfilling Bieberbach's wishes. The list of editors, distributed in November 1934, included all the names Bieberbach wanted to see erased. Moreover on New Year's day 1935 the secretariat of *Compositio* sent a circular to all members of the board declaring “*incompatible with the journal's international character, any editor's public participation in manifestations which could do harm to the mutual estimation of peoples and nations*”²⁰. A week later Bieberbach conceded the good intentions of this declaration in a letter to Brouwer, but

¹⁷ Bieberbach to Doetsch, July 12, 1934, Doetsch papers; on Vahlen *cf.* [Siegmond-Schultze 1984], [Walker 1995, *passim*], [Hentschel 1996, Appendix F], [Hammerstein 1999, *passim*].

¹⁸ Doetsch to Feigl, July 16, 1934; I am grateful to Dirk van Dalen for a copy of this postcard. Naturally neither Loewy, who was Jewish, nor Szegő, whom Doetsch thought either to be Jewish or married to a Jewess, played a role in his considerations.

¹⁹ Doetsch to Süß, September 9, 1934, UAF, C89/34: “*In der Compositio-Frage werden Feigl und ich uns Bieb. nicht anschließen, dagegen wird man wohl Forderungen nach einer zahlenmäßig angemessenen und reinarischen Vertretung der Deutschen stellen müssen.*”

²⁰ The whole letter reads as follows: “*En raison du caractère délicat que présentent dans plusieurs domaines par le temps qui court les rapports internationaux, la Science semble plus que jamais être appelée à constituer pour l'humanité un refuge sûr*

it was clearly an overt admonition to Bieberbach, who as a consequence resigned from *Compositio* with these harsh words: “*My national sentiment forbids me from belonging to an editorial board, which includes so many representatives of international Jewry and emigrants in particular*”²¹.

Again he wrote to Doetsch, as well as to Feigl and Süß. He explained that he had discussed the matter with Vahlen and demanded that they follow his example, suggesting that this would be greatly appreciated by Vahlen. Moreover, their resignation would prove them to be in complete accord with “*fundamental considerations of the leadership of the state*”²². Neither Doetsch nor Feigl nor Süß followed Bieberbach’s advice, but naturally they became nervous by the implicit threat concerning Vahlen and the *Ministry of Education and Research*. Bieberbach renewed his demand in February 1935²³. This time Feigl and Süß considered it more than a request; they took it to be an official ministerial order, and thus they were prepared to resign from *Compositio*²⁴. But Doetsch had no intention to be bullied into resignation by Bieberbach, who had in the meantime lost his former position as *DMV* secretary. In March, Doetsch wrote to Bieberbach that his arguments in the letter of resignation to Brouwer were unintelligible, and that he himself would not leave *Compositio*. Doetsch also noted that Bieberbach’s tactics had been very poor in similar cases, such as in 1928, when he had opposed Hilbert

d’entendement mutuel. En conséquence le Secrétariat de la Rédaction de Compositio Mathematica croit devoir recommander aux rédacteurs de ce périodique foncièrement international, de considérer comme incompatible avec leur fonction, la participation publique à des manifestations pouvant nuire à l’estime mutuelle des peuples et des nations” (Doetsch papers).

²¹ Bieberbach to Brouwer, January 8, 1935, copy from Doetsch papers: “*Mein Nationalgefühl verbietet es mir, einem Redaktionsausschuss anzugehören, in dem so zahlreiche Vertreter des internationalen Judentums und insbesondere auch Emigranten sich befinden.*”

²² Bieberbach to Doetsch, January 19, 1935, Doetsch papers: “*Ebenfalls im Einvernehmen mit Herrn Ministerialdirektor Vahlen richte ich die Bitte an Sie, sich meinem Schritt anzuschließen. Sie würden sich dabei im Einklang befinden mit grundsätzlichen Erwägungen der Staatsführung.*”

²³ Bieberbach to Doetsch, February 12, 1935, Doetsch papers.

²⁴ Feigl to Süß, February 20, 1935, UAF, C89/51: “*In der Compositio-Angelegenheit bin ich ganz Ihrer Meinung. Ich fasse den an uns gerichteten Begleitbrief Bies [i.e. Bieberbach’s letter of January 19, 1935] als dienstlichen Befehl der vorgesetzten Behörde auf und glaube daher, ihn befolgen zu müssen, auch wenn mir die Ausführung äusserst schwer fällt.*”

in the question of German participation at the Bologna congress, and in September 1934 at the *DMV* meeting at Pymont. On top of this he boldly questioned Bieberbach's assertion that Vahlen's opinion on the *Compositio* affair represented the official position of the *Ministry of Education and Research* or the government²⁵. To these reproaches Bieberbach replied that he followed the same tactics as Adolf Hitler: "All power or none" (*Alle Macht oder keine*). He suggested that Doetsch should apply for an official statement of the *Ministry of Education and Research* if he did not feel bound by Vahlen's instructions and pressed him once more to resign from the board of *Compositio*²⁶.

Things became even more complicated when, some days later, Brouwer invited his "dear friend Doetsch" to succeed Bieberbach, who had in Brouwer's words resigned "due to his extreme position", as managing editor representing Germany²⁷.

In April 1935 the *Ministry of Education and Research* decreed that the participation of German scientists in foreign scientific organisations, which in itself was desirable, was nevertheless subject to ministerial approval²⁸. Doetsch only applied for this approval in July when he sought to determine whether he could accept Brouwer's proposal²⁹. The official response which finally arrived in September was negative: participation in an editorial board, which included Jews, was "not desirable"³⁰. Doetsch was not happy about this, as he now was compelled to decline Brouwer's offer, though he would have liked to accept it. He asked for permission to send Brouwer

²⁵ Doetsch to Bieberbach, March 1, 1935, Doetsch papers.

²⁶ Bieberbach to Doetsch, March 11, 1935, Doetsch papers.

²⁷ Brouwer to Doetsch, March 20, 1935, Doetsch papers: "*Lieber Freund Doetsch, Sie wissen, dass Bieberbach kraft seines extremen Standpunktes aus dem Verwaltungsrat und aus der Redaktion der Compositio Mathematica ausgetreten ist. Ich würde mich aufs höchste freuen, wenn unter diesen Umständen Sie bereit wären als Vertreter Deutschlands die bisher von Bieberbach eingenommene Stelle zu übernehmen. Mit herzlichem Gruss Ihr Brouwer.*"

²⁸ Circular to the Rectors of the German universities, April 11, 1935, copy from Doetsch papers.

²⁹ Doetsch to *Ministry of Education and Research (REM)*, July 7, 1935, UAF, B 24/588.

³⁰ *REM* to *Badisches Kultusministerium*, September 5, 1935, Doetsch papers: "*Gegen die Mitarbeit deutscher Fachvertreter an der internationalen Mathematischen Zeitschrift Compositio Mathematica bestehen keine Bedenken. Dagegen ist die Mitwirkung im Redaktionsstab, in dem sich Juden befinden, unerwünscht.*"

the exact wording of the ministry's decision, but naturally this was not granted³¹. The Rector of Freiburg University informed both Doetsch and Süss of this last detail. Consequently by mid-November 1935 Doetsch, Feigl and Süss had sent their own letters of resignation to Brouwer³².

But before this, in early October, Brouwer wrote to Doetsch suggesting that he himself might appeal to Vahlen should there be any problems with the *Ministry of Education and Research*³³. By then it was too late: Bieberbach had, in close collaboration with Vahlen and the *Ministry of Education and Research*, put enough political pressure on Doetsch, Feigl and Süss to force them to resign from the board of *Compositio*.

Bieberbach's apparent victory had a high price: the collaboration between Bieberbach, on the one hand, and Doetsch, Feigl and Süss, on the other, came to an early end. All three would have liked to continue in the *Compositio*: Feigl was a friend of Hans Freudenthal to whom Brouwer had delegated most of the *Compositio* work, for Süss it would have been a good opportunity to enhance his professional status and for Doetsch the position as a managing editor was tempting. He had already considered the membership in the board of *Compositio* prestigious enough to have it mentioned in his entry in the German *Who's who?* of 1935. In both Doetsch's and Süss' professional self-fashioning, *Compositio* would have been a welcome tool. Consequently they did not voluntarily cooperate with Bieberbach and Vahlen in the *Compositio* affair, and it needed considerable pressure to put them in line. Neither of them had anything to gain by joining Bieberbach in his resignation from *Compositio* especially after Bieberbach's fall from power in the *DMV* in January 1935.

From mid-1934 to mid-January 1935 Bieberbach, Doetsch and Süss had still been tied by a *DMV* string. When Bieberbach published his "Open Letter to Harald Bohr" in May 1934 and confronted the *DMV* with his plan to install the *Führer* principle (*Führerprinzip*) with Erhard Tornier (1894–1982) as *Führer* at the *DMV* meeting at Pymont in September

³¹ Doetsch to Rector of Freiburg University, September 30, 1935, UAF, B 24/588.

³² Feigl to Süss, October 31, 1935, UAF, C89/36; Süss to Kneser, November 13, 1935, Kneser papers; I am grateful to Martin Kneser for copies from the Süss-Kneser correspondence.

³³ Brouwer to Doetsch, October 7, 1935, Doetsch papers.

1934, Doetsch and Süss supported him³⁴. Doetsch had written to Süss in July and August 1934 that the best thing for the *DMV* meeting in Pymont would be to have Bieberbach as permanent president³⁵. Seemingly Doetsch referred to a proposal of Bieberbach himself. Doetsch doubted that Bieberbach's plans would go through without intervention from Vahlen and the *Ministry of Education and Research*, and in order to give extra support he decided to go to Pymont himself. However he became vexed when Bieberbach told him in late August that he wanted the ardent Nazi Tornier to be chosen as *Führer* at the meeting and consequently cancelled his journey to Pymont as he foresaw that Bieberbach's strategy would fail³⁶. As a matter of fact Bieberbach's plan to change the statutes and make Tornier *Führer* of the *DMV* did not go through. Rather the meeting decided on a modified *Führerprinzip* with Wilhelm Blaschke as president for two years. The president was also to appoint the members of the board. These changes of statutes led to the so-called "*crisis of statutes*" (*Satzungskrise*) in the *DMV* as its secretary, Bieberbach, hesitated to carry them into effect because they were not legally sound. This led to another conflict with the *DMV* board, *i.e.* Helmut Hasse, Konrad Knopp and president Wilhelm Blaschke. In addition, the Bohr affair had not really been resolved. The meeting had to some extent supported Bieberbach in this by "condemning" Bohr's public attack on Bieberbach and only "regretting" Bieberbach's "Open Letter". This shy resolution and the full record of the September meeting were published in December in the *Jahresbericht*³⁷. After this

³⁴ On the *DMV* meeting at Pymont see [Mehrtens 1987, pp. 221f], [Kneser/Schappacher 1990, pp. 58ff]. Tornier had been called to a chair in Göttingen in January 1934 in order to guarantee that Helmut Hasse's policies were conform to the Nazis' ideas [Hochkirchen 1998, p. 35].

³⁵ Doetsch to Süss, July 6 and August 1, 1934, UAF, C89/5.

³⁶ Bieberbach to Doetsch, August 23, 1934, Doetsch papers. Doetsch to Süss, September 9, 1934, UAF, C89/5: "*Er [i.e. Bieberbach] wird die ganze Sache, die man leicht erfolgreich hätte gestalten können, so vermässeln, wie man das ja nachgerade von ihm gewöhnt ist. Er wird die Gruppe der Entschiedenen durch seine Strategie völlig lahmlegen.*"

³⁷ "*Die Mitgliederversammlung verurteilt aufs schärfste den Angriff des Herrn Bohr auf Herrn Bieberbach, soweit darin ein Angriff auf den neuen Deutschen Staat und auf den Nationalsozialismus zu sehen ist. Sie bedauert die Form des offenen Briefes des Herrn Bieberbach und sein Vorgehen bei dessen Veröffentlichung, die erfolgt ist gegen den Willen der beiden Mitherausgeber und ohne Wissen des Vorsitzenden*"

many prominent *DMV* members sent in their resignation (Harald Bohr, Hermann Weyl, John von Neumann, Richard Courant) and the feeling was wide-spread that the reputation of the *DMV* had been badly damaged [Kneser/Schappacher 1990, pp. 63–69].

Süss apparently sympathised with the original Bieberbach-Doetsch plan for the meeting at Pymont³⁸. When it was clear by the end of 1934 that the conflict between Bieberbach and Hasse, Knopp and Blaschke was by no means resolved, Doetsch and Süss were prepared to take action in order to avoid that the reputation of the *DMV* would suffer further damage. Süss gave an outline of their plan in a letter to Hellmuth Kneser in early January 1935³⁹. Süss was not willing to leave the *DMV* affairs to Blaschke, Hasse and Knopp, who in his opinion had unjustly profited from the failure of Bieberbach's strategies. He suggested that a group of *DMV* members who had until then not taken part in the conflict should demand the resignation of Blaschke and install a new president. In this enterprise the support of Vahlen would be vital. Süss suggested that Kneser should try to secure Vahlen's support and that Kneser himself would be the best choice as Blaschke's successor. Some days later Süss sent Kneser and Vahlen the draft of a circular which he had written jointly with Doetsch. They called for the *Ministry of Education and Research*, *i.e.* Vahlen, to intervene and demanded the resignation of Blaschke, Hasse and Knopp, but not Bieberbach from all offices in the *DMV*. The *Ministry of Education and Research* was to appoint a temporary board and president. Doetsch and Süss explicitly drew attention to the political origin of the conflict in the *DMV* and their support for Bieberbach left no doubts as to their own political leanings in January 1935⁴⁰.

Kneser was not willing to support their motion as he neither liked the

(*Jahresbericht DMV*, 44 (1934), 2. Abt., p. 87, also quoted by [Schappacher/Kneser 1990, p. 63]).

³⁸ Süss to Hellmuth Kneser, October 4, 1934, Kneser papers. Unfortunately Süss didn't report on the plan the details of which are not clear from the Doetsch papers. Apparently Bieberbach did not know what tactics Doetsch had recommended for Pymont (Bieberbach to Doetsch, March 13, 1935, Doetsch papers); later in 1935 he wrote to Süss that he had never been close to Doetsch at all (December 4, 1935, UAF C89/44).

³⁹ Süss to Hellmuth Kneser, January 8, 1935, Kneser papers.

⁴⁰ Circular from Mid-January, Kneser and Doetsch papers, facsimile in [Remmert 1999c, p. 16].

idea of Vahlen's intervention nor of a joint action with Doetsch⁴¹. But as it turned out, the *Ministry of Education and Research* did interfere and by January 1935 both Bieberbach and Blaschke resigned from their offices. Doetsch and Süß had been too late and had bet on the wrong horse in Bieberbach, whose influence in the German mathematical community considerably diminished after he had lost the struggle for power in the *DMV*. This helps to explain Doetsch's opposition against Bieberbach in the *Compositio* affair: he did not just feel honoured and tempted by Brouwer's invitation to become one of the managing editors, but probably he also saw a possibility to dissociate from the falling Bieberbach. The original reasons for Doetsch's and Süß' support of Bieberbach's *DMV* plans are not clear: at that time Doetsch probably considered Bieberbach a politically close and powerful ally. Süß, too, may have seen his chance to gain access to the corridors of power and influence within the mathematical community.

It was unfortunate for Doetsch and Süß that Bieberbach was not as successful in his strategy "All power or none" as Hitler had been. Nevertheless his statement helps to understand his motives when he tried to put Doetsch, Feigl and Süß in line in the *Compositio* affair and simultaneously sought to dominate the *DMV*. Bieberbach's attempt to control mathematics in Germany on the basis of the new political ideas is not just part of a power struggle in Nazi-Germany's mathematical community, but also typical for the political situation in 1934. This situation was characterised by the wide-spread attitude of working to meet Adolf Hitler's intentions (*dem Führer entgegenarbeiten*), who was believed not to be able to personally attend to all the details of Nazi policies [Kershaw 1998, Chapter 13]. Consequently the necessity was often seen to take the initiative in correspondence with what Hitler would want, if he himself looked into the respective affair.

5. SÜSS AS PRESIDENT OF THE *DMV* IN THE PRE-WAR YEARS

It was partly because of his close ties to Bieberbach that Süß was chosen president of the *DMV* in October 1937. When the members of the *DMV* board, Helmut Hasse, Conrad Müller and Emanuel Sperner, were

⁴¹ Kneser to Süß, January 19, 1935, Kneser papers.

looking for a suitable new president in August 1937, they found very strong arguments for Süß: (1) Süß was known to take interest in the *DMV* affairs and his opinions were believed to conform with the current *DMV* policies, *i.e.* with those of Hasse, Müller and Sperner themselves⁴². (2) Süß was supposed to be either able to reconcile his teacher Bieberbach with the *DMV*, or was at least expected to be a safeguard against political attacks from Bieberbach's faction threatening the *DMV* and its policies⁴³. In fact Süß was quite friendly with Bieberbach and even was on the editorial board of the journal *Deutsche Mathematik* from 1936 to 1940⁴⁴, which Bieberbach had co-founded with Theodor Vahlen as propagandistic mouthpiece of National Socialist mathematicians. Bieberbach had not only joined forces with Vahlen, but also with Erhard Tornier, Oswald Teichmüller (1913–1943) and Fritz Kubach (1912–1945), a leading official of the Nazi student organisation (*Reichsstudentenführung*). Together they had constantly caused annoyance to the *DMV* in the mid 1930s⁴⁵. (3) Moreover Süß was a member of the *NSDAP* and was thought to have good relations to the *Ministry of Education and Research*, which accordingly assented to Süß' election in October 1937⁴⁶. Süß was well aware that he was expected to reconcile Bieberbach with the *DMV*. He explicitly referred to this mission when he wrote to Bieberbach in December 1937 proposing that he and the *DMV* should bury the hatchet⁴⁷. Bieberbach had warmly welcomed Süß' presidency. Although he emphasised that the *DMV* might be put to good use, provided it collaborated closely with the government and especially the party, he left no doubt that he would only support the *DMV* if Hasse resigned

⁴² Sperner to Müller, August 26, 1937, UAF, E4/43: "Ich glaube von ihm [*i.e.* Süß] zu wissen, daß er in allen Fragen, die etwa für die *DMV* akut werden könnten, sehr vernünftige, die Bestrebungen der *DMV* stützende Ansichten hat."

⁴³ Sperner to Müller, August 26, 1937, UAF, E4/43: "Als Schüler von Bieberbach dürfte er [*i.e.* Süß] überdies Angriffen von dieser Seite nicht ausgesetzt sein."

⁴⁴ According to the title pages of the first five volumes (1936 to 1940).

⁴⁵ Cf. the correspondence of Helmut Hasse especially with Erhard Schmidt, Emanuel Sperner and Konrad Knopp in January and February 1936 (UAF, E4/73). On their respective biographies see [Hochkirchen 1998] on Tornier, [Schappacher/Scholz 1992] on Teichmüller, [Grüttner 1995, p. 509] and [Siegmond-Schultze 1993, p. 117] on Kubach.

⁴⁶ *Ministry of Education and Research* to Müller, October 2, 1937, UAF, E4/54.

⁴⁷ Süß to Bieberbach, December 12, 1937, UAF, C89/44.

from his office⁴⁸. This was out of the question, but apparently it caused some friction between Süß and Hasse. However in a letter to Müller Süß made it clear that he was strictly against any participation of Bieberbach's faction in the *DMV* affairs⁴⁹. The friction between them was soon forgotten, and Süß, Hasse, Müller and Sperner worked closely together to strengthen the position of the *DMV* as an instrument of professional lobbying in the government offices and particularly in the *Office for Scientific Affairs*. Meanwhile Bieberbach's ally Vahlen, who had been in charge of this office from 1934 to 1936, was succeeded in 1937 by Otto Wacker (1899–1940), a fervent Nazi who headed the *Ministry of Culture and Education* of Baden in Karlsruhe. This change put an end to Bieberbach's considerable influence in the *Office for Scientific Affairs* and opened up new possibilities for the *DMV*, especially as Süß already knew Wacker through his professorship at Freiburg University.

The point of departure for Süß' success as an official representative of the *DMV* was the lead he took in the management of the question of its Jewish members (*Judenfrage in der DMV*). In early March 1938 Süß, as president of the *DMV*, went to Berlin to meet Dr. Dames, who was responsible for mathematics in the *Office for Scientific Affairs*. Süß reported on this meeting in a circular to Hasse, Müller and Sperner⁵⁰. At first Süß and Dames had discussed the organisation of the annual conference of the *DMV* to be held in September 1938 in Baden-Baden. Then they talked about the more politically relevant question of how to handle Jewish and émigré *DMV* members and how to restrict the influence of Jewish mathematicians in mathematical publishing. It is not at all obvious that the *Ministry of Education and Research* dictated this agenda and its details, especially with regard to Jewish participation in scientific publishing [Knoche 1991, p. 424]. Rather it was Süß, supported by the *DMV* board, who

⁴⁸ Bieberbach to Süß, December 27, 1937, UAF, C89/44: “Gegen die Vereinigung als solche hege ich überhaupt keine Misstimmung, da ich meine, dass sie bei richtigem Aufbau und richtiger Leitung nach innen und nach aussen eine erspriessliche Wirkung entfalten kann. Dazu ist aber nicht allein die Föhlung mit den Regierungsstellen, sondern auch die Föhlung mit den Parteistellen notwendig.”

⁴⁹ Süß to Müller, May 22, 1938, UAF E4/46; he also alludes to these irritations in a later letter to Müller, September 5, 1938, UAF, E4/45.

⁵⁰ March 9, 1938, UAF, E4/46.

took the lead in shaping the *DMV* policies in the *Judenfrage*⁵¹. Amongst his motives was the fear that the position of the *DMV* as an instrument of professional lobbying would lose ground against Ludwig Bieberbach, particularly as Bieberbach and his faction had planned a *National Socialist Mathematicians' League* (*NS-Mathematikerbund*) within the *National Socialist Teachers' League* (*NS-Lehrerbund*) and Bieberbach had explicitly pointed to the problem of Jewish and émigré *DMV* members to legitimize a possible schism⁵².

After his meeting with Dames, Süß proposed new guidelines concerning Jewish and émigré *DMV* members. Dames promised ministerial help if the *DMV* was not sure whether the membership of particular émigrés was still acceptable. If they were to be expelled this should be made public “*only carefully or not at all*”. Süß recommended that changes of address of Jews and émigrés should not be published any more in the *DMV*'s journal, the *Jahresbericht*, and reiterated that “*neither their membership nor their expulsion should stir up any attention*”. Finally he stated what he thought represented his, Hasse's, Müller's and Sperner's unanimous opinion, that “*suitable opportunities should be seized to get rid of Jewish members and unpleasant émigrés as soon as possible*”⁵³.

Süß also called Dames' attention to the influence of Jewish mathematicians in mathematical publishing. He explained to his colleagues that if the *DMV* wanted to attend to all mathematical interests in Germany,

⁵¹ [Kneser/Schappacher 1990, pp. 70f] give a rather apologetic picture of a *DMV* presidency only following the orders of the *Ministry of Education and Research*. They did, however, not have unrestricted access to the *DMV* papers now at the archives of Freiburg University, which throw a more ambiguous light on the *DMV* officials.

⁵² For this and the following cf. Süß to Hasse, Müller and Sperner, March 9, 1938, UAF E4/46.

⁵³ “*Wenn wir uns über zweifelhafte Emigranten Klarheit verschaffen wollen, ist das Ministerium bereit, auf Anfrage dem jeweiligen Vorsitzenden vertraulich Auskunft zu geben, aus der zu ersehen ist, ob der Emigrant als Mitglied tragbar ist oder nicht. [...] Das Ausscheiden der Emigranten dieser Art muss vorsichtig oder garnicht bekannt gegeben werden. Wie man es ihnen selbst mitteilt, wäre zu überlegen. Mitteilungen über den Verbleib von Juden und Emigranten, z. B. auch Adressänderungen, möchte ich raten, nicht mehr im Jahresbericht bekannt zu geben. Weder ihr Mitgliedsein noch ihr Ausscheiden soll irgendwie Aufsehen erregen, – dies möchte ich anraten als Richtschnur unsres Handelns. Dass wir passende Gelegenheiten wahrnehmen, um unsre jüdischen und von den Emigranten die unliebsamen Mitglieder möglichst bald los zu werden, darin sind wir wohl alle einig*”.

it should exert a certain influence on the conditions of mathematical journals. He stated that in his meeting with Dames he only gave his personal opinion when he described the situation on the editorial boards of the *Mathematische Annalen* and the *Mathematische Zeitschrift (MZ)*. He made clear that German journals such as these must not be represented by Jews any more, although Jews should still be allowed to publish. He hoped that his own personal stance in this question was understood by Dames. Dames, on his part, promised to press the Springer Verlag, in order that authors should no longer be compelled to negotiate with Jewish editors⁵⁴.

Although this was what he said in the circular to Hasse, Müller and Sperner, Süss had evidently been more explicit in his conversation with Dames. When he wrote to Dames a few days later, he came back to the problems, as he saw them, of the editorial organisation in the Springer Verlag. He described the situation of the “yellow series” *Grundlehren der mathematischen Wissenschaften in Einzeldarstellungen*, which had Friedrich Karl Schmidt (1901–1977) as general editor and the Jewish émigré Richard Courant as editor for the “Anglo-Saxon domain”. He saw similar arrangements being developed for the *Mathematische Annalen*, whose managing editor, Otto Blumenthal, was Jewish. According to Süss, Springer was looking for its co-editor in England. Süss’ opinion was that in the interest of the “*German reputation*”, all means should be used to prevent foreigners having influence in this leading journal — founded by “*our champion Felix Klein*”⁵⁵. As an example of what was already happening, he pointed to the case of the *Zentralblatt für Mathematik und ihre Grenzgebiete* which was now being managed from Copenhagen by the émigré Otto Neugebauer. Concerning the *MZ*, which was also published by

⁵⁴ “Wenn die DMV alle deutschen mathematischen Interessen vertreten will, so könnte sie auch eine gewisse Einflussnahme auf ungünstige Verhältnisse bei Zeitschriften beanspruchen. Trotzdem habe ich als Privatmann nur erneut auf die Lage bei den Redaktionen der M.Z. und der M. Annalen hingewiesen. Das Ministerium hat zugesagt, auf den Verlag einen Druck dahin auszuüben, dass die Autoren nicht mehr in die Lage versetzt werden, mit jüdischen Redakteuren verhandeln zu müssen. Mir selbst schien der Gesichtspunkt wichtiger, dass deutsche Zeitschriften sich heute nicht durch Juden repräsentieren lassen dürfen. Ich hoffe, verstanden worden zu sein. (Die Veröffentlichung von Arbeiten jüdischer Verfasser bleibt von dieser Massnahme unberührt.)”

⁵⁵ Actually the *Annalen* had been founded by Alfred Clebsch and Carl Neumann in 1868; Klein only joined the editorial board in 1873.

Springer, according to Süß, things were better. But he reminded Dames that he had asked him and the ministry, “to oblige the publisher, to remove Professor Issai Schur from its editorial board”⁵⁶. He continued by adding that he himself would raise the matter with *MZ*’s managing editor, Konrad Knopp.

On March 1, 1938, two days before his meeting with Dames, Knopp had written to Süß, inviting him to join the *MZ* advisory board (*wissenschaftlicher Beirat*), which throws a somewhat ambivalent light on Süß’s strivings to Aryanise Springer’s editorial boards⁵⁷. There had been an earlier offer from Knopp, but Süß had declined because there were two Jewish members on the *MZ* board, Edmund Landau and the aforementioned Issai Schur (1875–1941), who had co-founded the *MZ* in 1918, along with Knopp, Leon Lichtenstein and Erhard Schmidt. Edmund Landau had died in February 1938, which changed the situation and, as Knopp explained to Süß, this induced him to renew the invitation. It is open to speculation whether Süß had already read Knopp’s second invitation by March 3 when he spoke to Dames demanding that Schur be removed from the *MZ* board, but he did not mention the question of Schur in his report to Hasse, Müller and Sperner at the *DMV*, nor in his subsequent reply to Knopp⁵⁸. In this reply, he gives an account of his conversation with Dames; but it is a different version to that given in his report to Hasse, Müller and Sperner, and to that in his earlier letter to Dames. To Knopp he implies that it was the *Ministry of Education and Research* who had taken the lead concerning the role of Jewish mathematicians in mathematical publishing and he says that he understood from the ministry that they would see to Schur’s expulsion from the *MZ* board. He did not, however, mention that it was he himself who had explicitly demanded this course of action. His main concern, as portrayed in the letter to Knopp, was the possible restriction of his freedom to implement *DMV* policies concerning Springer if he joined the *MZ* board. Knopp reassured him that this would not be the case⁵⁹.

⁵⁶ Süß to Dames, March 15, 1938, UAF, E4/75: “Für Sie wiederhole ich hier nur meine Bitte, den Verlag zu veranlassen, aus der Redaktion Prof. Issai Schur zu entfernen.”

⁵⁷ Knopp to Süß, March 1, 1938, UAF, C89/318.

⁵⁸ Süß to Knopp, March 11, 1938, UAF, C89/318.

⁵⁹ Knopp to Süß, March 16, 1938, UAF, C89/318.

In April the *Reichsschrifttumskammer*, a division of Goebbels' *Ministry of Propaganda*, whose function was to control writers and publishers in Germany, demanded to know from Springer, why there were still Jewish editors on the boards of the *Mathematische Annalen* and the *MZ*. The *Reichsschrifttumskammer* referred specifically to an inquiry made by the *Ministry of Education and Research*. By the end of April, it was clear that Schur would have to leave the *MZ* board. When Knopp reported this to Süß, the invitation to join the *MZ* board was finally accepted⁶⁰. Schur's name did not appear on the title-page of the *MZ* in 1939 and he emigrated in the same year. In late March 1938 Schur had also come under pressure by Bieberbach in the *Prussian Academy of Sciences*. Bieberbach had found "it surprising that Jews are still members of academic commissions", Vahlen had asked for a change, and Max Planck had promised to take care of the matter. Within a week Schur had resigned from the commissions [Siegmond-Schultze 1993, p. 122].

Two weeks after Süß' journey to Berlin, Müller proposed to Hasse and Sperner, that "considering the changed situation" the statutes of the *DMV* should be altered in order to re-elect Süß as president. Müller had already spoken about this with Süß who was prepared to stay in office⁶¹. Müller and his colleagues in the *DMV* board did not only hold Süß in high esteem as president, but in wanting to preserve its status — as in the case of the Jewish *DMV* members — they also felt the necessity to take preventive measures against the possible foundation of a *NS-Mathematikerbund* under the auspices of Bieberbach and his faction. In particular the re-election of the president would be a signal that the *DMV* had moved towards a steady leadership, although not a *Führerprinzip*. Müller and Hasse had already toyed with the idea of changing the statutes in July 1936, when they had wanted Erhard Schmidt to consent to his re-election as president. But Schmidt, whom they believed to be safe from attacks from Bieberbach, his Berlin colleague, had turned down the offer with explicit reference to the statutes⁶². Süß, however, approved of Müller's plan and accordingly the statutes were changed [Kneser/Schappacher

⁶⁰ Knopp to Süß, April 14, 1938; Süß to Knopp, April 23, 1938, UAF, C89/318.

⁶¹ Müller to Hasse and Sperner, March 15, 1938, UAF, E4/54.

⁶² Hasse to Müller, July 9, 1936, UAF, E4/56 and Müller to Hasse and Sperner, March 15, 1938, E4/54.

1990, p. 69], [Gericke 1980, p. 20]. Süß was re-elected in 1938 and also in the following years to 1945.

The discussions about Jewish and émigré members of the *DMV* had only been a prologue to further developments in the *Judenfrage*. Already in September 1938, when Süß met Dames at the annual conference of the *DMV* in Baden-Baden, Dames told him that the *Ministry of Education and Research* would soon ask all scientific societies to take Aryanising measures. Süß foresaw that the *DMV* would have to cope with this problem in the following winter⁶³. But things took a quick turn after the organised anti-Jewish pogroms of November 9/10.

Sperner wrote to Hasse, Müller and Süß on November 14 that the *Judenfrage* in the *DMV* would finally have to be tackled and proposed that Jewish members should be tacitly left out in the next membership directory (*stillschweigend weggelassen werden*)⁶⁴. The head of the *Office for Scientific Affairs*, Wacker, decreed on November 15 in the so-called *Akademie-Erlass*, that scientific academies were to change their statutes. Not only was the *Führerprinzip* to be strengthened, but the academies were expected to see to the expulsion of their non-Aryan members⁶⁵. The *Akademie-Erlass* pertained only to scientific academies and not to scientific societies like the *DMV*. Bieberbach made this clear in a letter to Süß just a day later. He deplored that he saw “no indication that the *DMV* had taken any steps to become a German society”. He drew the conclusion that “the *DMV* was waiting for the land of milk and honey, where it would be delivered from its Jewish members by an official decree”. He observed “that it would be better if the *DMV* still had enough juvenile power to solve this question on its own and did not wait for governmental intervention as the old academies had done”. Bieberbach explicitly made this a condition of his possible re-entry into the *DMV*, which Süß had again proposed⁶⁶.

⁶³ Süß to Müller, October 5, 1938, UAF, E4/45.

⁶⁴ Sperner to Hasse, Müller and Süß, November 14, 1938, UAF, E4/46.

⁶⁵ Copy of Wacker’s letter to the Göttingen Academy of Sciences in UAF, E4/46.

⁶⁶ Bieberbach to Süß, November 16, 1938, UAF, C89/44: “Aber ich habe nichts gehört, aus dem ich den Schluss ziehen könnte, dass die Deutsche Mathematikervereinigung irgend etwas unternommen hat um aus eigener Kraft sich zu einer Deutschen Vereinigung zu gestalten. [...] Ich kann aus dem was ich hörte nur schliessen, dass die *DMV* auf die gebratenen Tauben wartet, die sie z. B. kraft einer Verordnung von den jüdischen Mitgliedern befreit. Aber das wäre ja schliesslich nur die Vorbereitung. Aber

Whether or not Süss was impressed by the pogrom, by Sperner's suggestions, or by Bieberbach's admonitions, he started to take action on the *Judenfrage*. On November 18, probably before the *Akademie-Erlass* came to his knowledge⁶⁷, he discussed the problem with a local Nazi-official, the Freiburg Kreisleiter Willy Fritsch (1907-1987), who held a Ph. D. in mathematics. Fritsch was in no doubt that considering the general attempt to eliminate Jews from cultural life they should not be tolerated in scientific societies any longer. Süss in letters to Hasse, Müller and Sperner consented to Sperner's proposal that the *DMV* would have to quietly delete the Jewish members⁶⁸. In the following weeks the issue was extensively discussed by Hasse, Sperner and Süss. Though they felt the necessity to act according to the lines of the *Akademie-Erlass*, technical problems arose: how to expel the non-Aryan members (delete their membership or make them resign), how to handle the non-Aryan members outside Germany, how to change the statutes in order to expel the Jewish members and, above all, how to avoid publicity⁶⁹. In early December Süss discussed the *Judenfrage* with Wacker and explained that "*the DMV was preparing to remove the non-Aryan members, because prior agreements with the ministry seemed overcome by the new situation*". Süss also secured the help of Kreisleiter Fritsch and the Nazi-party in case the *DMV* could not find out whether a member was Jewish or not. He pointedly told his colleagues that they had to rush if they wanted

es wäre schon viel gewonnen, wenn die DMV noch so viel jugendliche Kraft besässe, hier selber einen Entschluss zu fassen. Dass die alten Akademien, in denen die Gerusia regiert, erst eines Anstosses von aussen bedurften, um die Juden los zu werden, brauchen Sie sich nicht als Muster zu nehmen."

⁶⁷ Hasse had written to Müller, Sperner and Süss about the *Akademie-Erlass* only on November 24, 1938. In view of this and the fact, that it had only been decreed on November 15, it seems highly improbable, that it could have been the immediate cause of Süss' activities beginning on November 18, as proposed by [Kneser/Schappacher, p. 70]. On this point see [Remmert 1999c, p. 18].

⁶⁸ Süss to Sperner, November 18, 1938, UAF, E4/46: "*Der Zufall wollte es, daß ich mit dem hiesigen Kreisleiter, der selbst promovierter Mathematiker ist, heute auf wissenschaftspolitische Dinge zu sprechen kam. Er zeigte für unser bisheriges Verhalten vollstes Verständnis, meinte aber auch, daß man nach der Verfügung von Goebbels über die Ausschaltung der Juden aus unserem Kulturleben auch keine Juden mehr in wissenschaftlichen Gesellschaften dulden dürfe. Ich glaube also, daß wir in allernächster Zeit alle heutigen und ehemaligen deutschen Juden als Mitglieder streichen müssen*". Cf. Süss to Hasse and Müller, November 18, 1938, UAF, E4/46.

⁶⁹ Cf. letters in UAF, E4/46.

to anticipate ministerial action⁷⁰. In fact the *Ministry of Education and Research* decreed in January 1939, that non-Aryans living in Germany had generally to be excluded from membership in scientific societies. The more delicate question of the émigrés was to be handled by the *Foreign Ministry*⁷¹. The *DMV* and its president Süß did not just collaborate with the *Ministry of Education and Research* in the *Judenfrage*, but the decision to expel the Jewish members forestalled the formal ministerial demand. In this way, Süß and the *DMV* qualified themselves as reliable partners for the *Ministry of Education and Research*.

As to the publishing issue, Süß' report on the relations between Jewish mathematicians and the Springer Verlag and his denunciation of Issai Schur in March 1938 were not his only attempts to intervene in mathematical publishing and in particular to mount an attack against Springer. Springer had entered the scene of mathematical reviewing in Germany in 1931, and had begun to publish the *Zentralblatt* under the auspices of Otto Neugebauer and Richard Courant. From the beginning the *Zentralblatt* stood in direct competition with the *Jahrbuch über die Fortschritte der Mathematik* published by the Prussian Academy in Berlin and managed by Georg Feigl. By 1939 the *Jahrbuch* had to cope with the constant ideological interventions of Ludwig Bieberbach, who had fashioned himself the spokesman of the academy's *Jahrbuch*-commission. The *Zentralblatt*, too, had had problems with Nazi racial policies, especially because (1) non-Aryan members were on the editorial board, for example Tullio Levi-Civita, who had to be expelled in October 1938, (2) it had an émigré managing editor Otto Neugebauer, who resigned in November 1938 and (3) it was explicitly international in character. Considering the political circumstances cooperation between the two

⁷⁰ Süß to Hasse, Müller and Sperner, December 10, 1938, UAF, E4/46: "Ich sagte [zu Wacker], daß wir schon seit einiger Zeit die Ausschaltung aller deutschen Juden aus unserer Vereinigung vorbereiteteten, nachdem die früher mit dem Ministerium getroffenen Abmachungen über ein allmähliches Ausscheiden der jüdischen Mitglieder inzwischen durch die neu eingetretene Lage uns überholt schien. [...] Mit dem hiesigen Kreisleiter, Dr. Fritsch, habe ich verabredet, daß er die Prüfung der Frage, wer von den Mitgliedern im Inland, bei denen es uns zweifelhaft war, Jude sei, auf dem Parteibege vornehmen wolle. Eine Adressenliste der in Frage kommenden Mitglieder habe ich ihm ausgehändigt. [...] Wenn wir einer Aufforderung des Ministeriums zuvorkommen wollen, so müssen wir nun rasch handeln."

⁷¹ This is what Süß reported to Hasse, Müller and Sperner on January 31, 1939, UAF, E4/46.

might have been a reasonable idea, but the economic competition between the respective publishers de Gruyter and Springer made this difficult. Nevertheless from the late thirties a fusion or at least some kind of cooperation between the *Zentralblatt* and the *Jahrbuch* was discussed.

In late 1938 the news spread in the German mathematical community that a journal, the *Mathematical Reviews*, was about to be founded in the United States. Naturally this caused a stir among German mathematicians and publishers, Nazi or not. As a consequence in early 1939 the DMV, that is to say its president Süss, tried to put direct pressure on the two publishers de Gruyter and Springer in order to induce them to fuse⁷². But the Springer Verlag had its own plans, namely to discuss the situation with the Americans first and, if possible, to cooperate with the *Mathematical Reviews*. Ferdinand Springer wanted to send his main mathematical adviser, Friedrich Karl Schmidt, to the United States as a spokesman for his interests in mathematical reviewing. When Süss learned about this, he pressed Dames in the *Ministry of Education and Research* to refuse Schmidt permission to travel, so long as Springer left Süss in the dark about his motives⁷³. Süss suggested that Dames should inform both his superior *Ministerialrat* Rudolf Kummer and the *Reichsschrifttumskammer*. After the war, Schmidt described how when Springer's partner Tönjes Lange tried to get approval for the trip from the *Ministry of Education and Research*, *Ministerialrat* Kummer told him that Süss was strongly opposed to Schmidt's journey. Schmidt, he had said, still had close ties to Jewish emigrants, and he suggested that he, Süss himself, should go to the United States instead⁷⁴. Although Süss denied this in 1947, he had in fact written to Kummer on the 28th April 1939 pointing out Springer's close ties to Jewish emigrants, especially to Richard Courant⁷⁵. Süss explicitly characterised the *Zentralblatt* as

⁷² [Siegmond-Schultze 1993] gives a detailed study of the developments around the *Jahrbuch* and the *Zentralblatt*. The book is of general interest for the history of mathematics in Nazi Germany. On the foundation of the *Mathematical Reviews* see [Reingold 1981, pp. 327–333].

⁷³ Excerpt from a letter of Süss to Dames, March 24, 1939, UAF, C89/36.

⁷⁴ Schmidt to Freiburg Rector Allgeier, December 6, 1946, Springer Archives, C 1039. On the *Reichsschrifttumskammer* see [Barbian 1993, pp. 81–86]; on Kummer see [Barbian 1993, p. 391].

⁷⁵ Süss to Gerhard Ritter, January 20, 1947, UAF, B34/74; excerpt from a letter of

a foundation of “a group of Jewish mathematicians and their friends” and suggested that Schmidt’s travel permission should be revoked and immediately because Schmidt intended to leave for the States the following week.

Two days later, on April 29, Süß phoned Kummer in Berlin to inquire, how things stood. When Kummer informed him that Schmidt had already left, Süß told him that to his knowledge Schmidt was only on his way to Bremen to board the ship, which was due from America on May 1 or 2. Kummer did not take up the implication that Schmidt could still be stopped, but explained that his superior in the *Ministry of Education and Research* had definitely decided to let Schmidt go as he was not only to discuss *Zentralblatt*-matters, but also to evaluate the atmosphere among American mathematicians and, if possible, to change their minds. It seems that Süß lost his temper and told Kummer that this was an unsuitable job for Schmidt and that the ministry would have done better to get the opinion of somebody who knew what was going on. The decision to send Schmidt he said was asking for trouble⁷⁶.

Schmidt went on his mission to the United States, but nonetheless the *Mathematical Reviews* came into being in 1939. Meanwhile the *Zentralblatt* and the *Jahrbuch* were reorganized under a joint editorial office (*Generalredaktion*) in Berlin with the convinced Nazi Harald Geppert (1902–1945) as managing editor [Siegmond-Schultze 1993, Chapter 8 and Appendix 14].

A lot more could be said about Süß’ ideas on the systems of mathematical publishing and mathematical reviewing and the ideological background reflected in the respective policies. But in the context of power struggles it is important to see that the *DMV* not only sought silently to exert control over mathematical reviewing but also decided to actively fight for its share of power and influence. There was the struggle against Bieberbach and his circle in Berlin, who were patrons of the *Jahrbuch*, which was to be managed with care, in order not to fall prey to their ideological attacks, which

Süß to Kummer, April 27, 1939, UAF, C89/36.

⁷⁶ Süß to Hasse, May 1, 1939, UAF, C89/36: “[Kummer] sagte mir, daß F.K. Schmidt schon abgefahren sei. Ich erwiderte, soviel ich wisse, wolle er die Bremen nehmen und die käme erst am 1./2. in Bremen aus Amerika an (was ich zufällig genau wußte). Darauf sagte er, daß er seine Zustimmung erst nach Fühlungnahme mit seinen (seinem?) Vorgesetzten gegeben hätte.”

still posed a threat to the *DMV*'s influence and independence. There were also the attacks against the Springer Verlag which was in a rather awkward position because of its close ties to Jewish mathematicians and the international mathematical community and the fact that Ferdinand Springer himself had Jewish ancestors [Sarkowski 1992, Chapter 6]. The *DMV* and Süss were not only officially opposed to Springer's policies and his representative Schmidt, but even took recourse to methods the regime offered, as exemplified by Süss' description of Springer's editorial organization along with his denunciation of Schur 1938 and the insinuation that Schmidt might still be stopped, when he was already on his way to Bremen to board the ship.

At this point the power struggles had evidently left the field of academic competition as such, if ever there is such a restricted field. Süss as a spokesman for the *DMV* had willingly opened mathematical professional policies to the influence of nazification and overt anti-Semitism. Supported in his policies, methods and actions by the *DMV* board, Hasse, Müller and Sperner, Süss held a very strong position within the German mathematical community by late 1939. Müller, although he had backed Süss' re-election as president of the *DMV* and even proposed the necessary modification of the statutes, was the only member of the *DMV* board not to fervently discuss the *Judenfrage* in late 1938. He withdrew more and more from the political discussions within the *DMV* board and his office as *DMV* secretary was taken over by Süss in 1941. It seems from his correspondence in the *DMV* papers that in contrast to Hasse, Sperner and Süss he felt uneasy with the developments in the *DMV* policies in 1938 and 1939 and in particular was not happy to silently do away with non-Aryan *DMV* members. These developments and activities were considered strictly confidential by those involved. When in December 1939 Süss prepared the annual presidential report, he wrote to Müller, that though he had not been idle, he could scarcely make the whole of his activities public. They included the opinions he gave on the appointments of mathematicians in Vienna and Prague, the developments in the *Judenfrage* and the measures taken in mathematical reviewing⁷⁷. Naturally the matters at stake were too sensitive to be publicly announced in the *Jahresbericht*. Indeed the *DMV*'s professional policies had become closely entangled with issues at

⁷⁷ Süss to Müller, December 18, 1939, UAF, E4/45.

the very core of the Nazi state: its anti-Semitism, its anti-internationalism and its striving for autarky. The *Ministry of Education and Research* pursued the objective to transmit these issues to the sphere of the sciences. The collaboration of the *DMV* board and especially of Süss in this program, which was beyond their control, was the basis of their influence and their successful professional activities during the war.

6. MATHEMATICIANS AT WAR: DOETSCH AND SÜSS IN WORLD WAR II ⁷⁷

Süss' successful *DMV* policies were threatened when in 1940 his Freiburg rival Doetsch came to considerable influence in the *Forschungsführung* of the *Aviation Ministry* where he was responsible for the organisation of mathematical research important to the war. At the same time Doetsch was commissioned to be the main link between the ministry and the faculties of science and engineering at German universities. To make things more complicated Süss and Doetsch seriously quarrelled over the Habilitation of Süss' assistant Helmuth Gericke at Freiburg University in 1940 and they were scarcely on speaking terms any more in spring 1941.

Doetsch's official activities were mainly concentrated on applications of mathematics, particularly those important to war-time aviation research. He even published a paper on the training of aviation engineers [Doetsch/Seidel 1941]. This rather strong bent towards applications and aviation research and his complicated personality qualified him as a spokesman for only a minority of German mathematicians. Most mathematicians looked to the *DMV* and Wilhelm Süss to attend to their interests. Süss cultivated a much broader perspective than Doetsch, which included opportunities for pure mathematicians whose work seemed far away from applications. But he used the idea of the applicability of mathematics to legitimize the activities of the whole discipline.

Doetsch was quite successful until 1942. In early 1941 he declined a professorship at the University of Strasbourg where he had been offered the position of dean of the Faculty of Natural Science and Mathematics. As a link to the *Aviation Ministry* he had been intended to look after its interests at the University of Strasbourg.

⁷⁸ For the following cf. [Remmert 1999a].

In summer 1941 Doetsch showed keen interest in founding a central institute for mathematics — a *Reichsinstitut für Mathematik* — and went to Rome to visit the Italian National Institute for Mathematics — the *Istituto Nazionale per le Applicazioni del Calcolo*. His official mission was to prepare the foundation of an institute for research on the applications of mathematics in economic and military domains⁷⁹. At the same time Süß, too, began to speak about such an institute. But what he had in mind was rather an institute representing the whole of mathematics, pure and applied. As Doetsch and Süß stood for different approaches towards mathematics and, what may have been more important, were representatives of different power groups in the polycratic Nazi state — Doetsch representing the *Air Force Ministry* and Süß collaborating with the *Ministry of Education and Research* — their respective concepts were bound to collide. What their approaches had in common was the underlying attempt to construct and legitimize the utility of mathematics not only in the economic but also in the military domain. This “*explicit militaristic turn*” [Mehrtens 1996, p. 103] directly aimed at the enhancement of the prestige and social status of mathematics in government and party offices and thereby at the improvement or at least at the preservation of the financial situation of mathematics and mathematicians during and after the war. In the end Süß turned the tables on Doetsch and was able to found a *Reichsinstitut für Mathematik* in Oberwolfach in November 1944, well known today as *Mathematisches Forschungsinstitut Oberwolfach*. This story has been told elsewhere, though some new aspects of Süß’ successful strategy will be discussed below [Mehrtens 1996, pp. 116–118], [Remmert 1999a].

The foundation of a *Reichsinstitut* was not the only matter of conflict between Doetsch and Süß. In late 1941 the physicist Dr. Johannes Rasch sent two memoranda to the *Reich Research Council* (*Reichsforschungsrat*). Rasch, who worked as an engineer with the Siemens & Halske company, deplored the lack of mathematical reference-works for the use of physicists and engineers in industry. Rasch explicitly pointed to the better situation in other countries, especially in the United States⁸⁰.

⁷⁹ *Frankfurter Zeitung*, October 20, 1941. On the *Istituto Nazionale per le Applicazioni del Calcolo* cf. [Ghizzetti 1986] and the various reports on the Institute’s activities in its *Pubblicazioni*.

⁸⁰ Memoranda of October 3 and November 17, 1941, UAF, C89/11. For a discussion

By early 1942 Rasch's memoranda triggered a program by the *Reich Research Council* to procure important mathematical reference-works and literature to the parties interested. Most of these works were to be specially commissioned to mathematicians and the publication program was entrusted to Süss. In the preceding years Süss had repeatedly but always in vain tried to further the interest of the *Reich Research Council* in mathematics and in particular to found a special department for mathematics, which was represented in the *Reich Research Council* only via the department for physics. The initiative of Rasch had furnished a welcome opportunity to bring about a "*practical liaison of the Reich Research Council and the DMV*". Naturally Süss sought to profit from this sudden chance "*in the interest of the status of mathematics*"⁸¹. Heinrich Behnke put his view of the program very bluntly: "*Now the state puts mathematics to a test in the war. We cannot rightly call for state support if we let it down in this situation*"⁸².

But even though Süss had got an official commission by the *Reich Research Council*, he had not yet been able to receive sufficient funding. More problems arose, when Süss tried to interest the *Aviation Ministry* and its resources in the program. In the *Forschungsführung* of the *Aviation Ministry* Gustav Doetsch, who had been closer to the demands of engineering, especially as formulated by the aviation industry, had already started off with a similar publication program, albeit on a smaller scale. As it was next to impossible for Doetsch and Süss to cooperate, even on issues of clear importance, they did not meet to discuss their respective ideas until September⁸³. In this meeting Süss announced that he had in the meanwhile raised funds from the recently reorganized *Reich*

see [Mehrtens 1996, pp. 115f].

⁸¹ Süss to Behnke, Feigl, Hamel, Hasse and Sperner, February 25, 1942, UAF, C89/19: "*Zum ersten Mal kommt jetzt eine praktische Verbindung des Reichsforschungsrates mit der DMV anscheinend zustande, die ich natürlich gern im Interesse der Stellung der Mathematik ausnutzen möchte.*"

⁸² Behnke to Süss, March 1, 1942, UAF, C89/19: "*Denn hier handelt es sich um eine Erprobung der Mathematik seitens des Staates im Kriege. Wir können billigerweise gar nicht verlangen, dass der Staat für uns etwas tut, wenn wir ihn in dieser Situation im Stich lassen würden.*"

⁸³ Report on meetings of Doetsch, Feigl and Süss in Freiburg on September 15 and 18, 1942, UAF, C89/20.

Research Council and that he could therefore follow his own plans independently. Nevertheless it was agreed that Süß and Doetsch should coordinate their programs. The activities of Süß and Doetsch coexisted during the remaining war-years. Süß' program was clearly the more ambitious and, in terms of the number of projects and monographs printed or ready to print by the end of the war, also more successful [Mehrtens 1996, p. 115]. Doetsch concentrated his activities on the publication of formularies, tables of integrals and on reprints of fundamental works. Among the few books he wanted to publish was a monograph by Udo Wegner on conformal mapping, which never materialised in print, and his own monograph on Laplace and Fourier Transforms, which was published after the war [Doetsch 1947]⁸⁴.

The rivalry of Doetsch and Süß in mathematical publishing is reflected by their choice of publishers. Whereas Doetsch intended to collaborate closely with his own publisher Springer, Süß envisaged working with the *Akademische Verlagsgesellschaft* in Leipzig, following a suggestion of Behnke⁸⁵. Though Feigl had begged Süß also to negotiate with Springer, Süß had immediately concentrated on the *Akademische Verlagsgesellschaft*⁸⁶. The cooperation between Süß and the *Akademische Verlagsgesellschaft* had become so intensive in summer 1944, that Doetsch was annoyed, because most of the funds Süß received went to the *Akademische Verlagsgesellschaft*⁸⁷. Doetsch on the other hand, on the occasion of a visit to Springer in October 1942, had learned that some of Springer's projects would fit perfectly into his own program: a formulary by Wilhelm Magnus, books on elliptic functions by Wilhelm Magnus, on conformal mapping by Albert Betz, on developments by real functions by Georg Feigl and Erhard Schmidt and a table of integrals by Walther Meyer zur Capellen⁸⁸. Whereas Magnus' formulary actually appeared in 1943 [Magnus/Oberhettinger 1943], the books of Betz, Magnus and Meyer

⁸⁴ Cf. report on meeting of Doetsch, Gröbner, Kamke and Süß in the *Aviation Ministry* on October 27, 1942, UAF, C89/20.

⁸⁵ Behnke to Süß, March 1, 1942, UAF, C89/19; Süß to Behnke, May 13, 1942, UAF, C89/19.

⁸⁶ Feigl to Süß, April 16, 1942, UAF, C89/19.

⁸⁷ As reported by F.K. Schmidt to T. Lange, August 2, 1944, Springer Archives, C931: F.K. Schmidt.

⁸⁸ F. Springer to F.K. Schmidt, October 20, 1942, Springer Archives, C152: Doetsch.

zur Capellen were only published by Springer some years after the war [Betz 1948], [Magnus/Oberhettinger 1949], [Meyer zur Capellen 1950]. In April 1944 the monographs of Magnus and of Feigl and Schmidt had been included in a list of works Süss had commissioned⁸⁹. The latter was never published.

Springer's main mathematical adviser F.K. Schmidt was well aware of the hard and obvious competition between Doetsch and Süss. Süss kept his expansive plans in mathematical publishing strictly to himself, which Schmidt observed with anxiety with regard to the independence of Springer's publishing policies. This independence had not only been threatened by the *Zentralblatt* affair, but at the same time by Süss' intentions to reorganise the system of mathematical journals. In November 1939 Süss and *Ministerialrat* Kummer had met in the *Ministry of Education and Research* and had discussed a possible fundamental reorganization of the mathematical journals⁹⁰. After the Nazis' rise to power the idea had been discussed to reduce the number and variety of scientific journals and thereby put an end to what the Nazis thought of as a fragmented situation [Knoche 1991, p. 418]. Though nothing had come of these plans, Kummer and Süss discussed the possibility of specialisation of mathematical journals as a new organising principle. This would have been the end of the traditional journals of broad mathematical variety. Süss had immediately pursued the task and discussed the fate of the *Mathematische Annalen*, published by Springer, with its managing editor Behnke. Behnke, however, was not very enthusiastic about Süss' plans⁹¹. Eventually the course of the war put an end to these aspirations to reorganise mathematical publishing.

Schmidt, apart from his fears about Springer's independence, considered that Doetsch was more factual and businesslike than Süss and thus believed him to be a better partner for Springer⁹². Nonetheless Schmidt

⁸⁹ Grau (*Reich Research Council*) to Süss, April 25, 1944, UAF, E6/8.

⁹⁰ Cf. Süss to Kummer, May 28, 1940, UAF, E4/45.

⁹¹ Behnke to Süss, February 17, 1940 and Süss to Behnke, February 27, 1940, UAF, C89/42.

⁹² Schmidt to Springer, October 30, 1942, Springer Archives, C152: Doetsch: "Die Pläne von Süss, die er streng geheim hält, scheinen sehr weit zu gehen. Ob sich mit seinen Absichten das Bestehen selbständiger Sammlungen noch verträgt, vermag ich nicht zu sagen. Doetsch scheint mir der sachlichere."

clearly saw that Süss, who in the past had not been known to have friendly feelings towards Springer, was in a strong position and that Doetsch would need Springer's support against him⁹³. In early 1943 Doetsch's influence in the *Forschungsführung* drastically diminished, which procured Süss with a factual monopoly to commission mathematical monographs — probably to be published by the *Akademische Verlagsgesellschaft*. Consequently Springer saw the danger that their predominance in the field of mathematics would collapse, because simultaneous work by other mathematicians on the same topic was virtually impossible during the war. Therefore Schmidt was to negotiate with potential post-war authors regardless of Süss' activities⁹⁴.

Süss' various attempts to interfere in the system of mathematical publishing since 1938 were somehow reminiscent of a planned economy. The DMV was to become the absolute center of all professional influence in mathematics. He made this perfectly clear in a letter to Feigl in April 1941: “*I have the imperialistic goal to exclusively gain for the DMV all rights and responsibilities for mathematics*”⁹⁵. Naturally this ambitious goal was not compatible with Doetsch's influential position in the *Aviation Ministry*. But the course the founding of a *Reichsinstitut für Mathematik* and the publication program took were unmistakable signs of Doetsch's deteriorating power base in the *Forschungsführung* and Süss' seemingly ever rising star.

Süss had largely isolated Doetsch within the mathematical community and within science politics by the end of 1942. He was helped in his campaign against Doetsch by a crucial turn in German science policies in summer 1942, when it became clear that the war was not a *Blitzkrieg* any more.

⁹³ Schmidt to Springer, November 3, 1942, Springer Archives, C152: Doetsch: “*Doetsch braucht [uns], um sich gegen Süss zu behaupten.*”

⁹⁴ Memorandum of a conference at Springer Verlag on February 9, 1943, Springer Archives, C408: Hasse: “*Professor Schmidt berichtet über die Schwierigkeiten, die durch die Aktion von Süss entstanden sind. Dadurch, dass das Gesamtgebiet der Mathematik im Hinblick auf die Kriegswichtigkeit aufgeteilt und zur Bearbeitung an verschiedene Autoren abgegeben wurde, besteht die Gefahr, dass ein Einbruch in die Vorherrschaft Springer's auf dem Gebiete der Mathematik entsteht. [...] Es wird empfohlen, dass Professor Schmidt, ohne Rücksicht auf Süss, diejenigen Autoren mit Ablieferungstermin nach dem Kriege verpflichtet, die ihm am besten zu sein scheinen.*”

⁹⁵ Süss to Feigl, April 3, 1941, UAF, C89/51: “*Für die DMV habe ich das imperialistische Ziel, ihr allein alle Rechte und Pflichten für die Mathematik zu verschaffen.*”

The obvious problems German military operations ran into and especially the loss of air superiority led to a growing understanding of the importance of science to the war by the government and military establishments. The ensuing reorganization both of the *Forschungsführung* of the *Aviation Ministry* and of the *Reich Research Council* weakened Doetsch's position considerably and opened up new chances for Süss and the *DMV* [Ludwig 1974, pp. 217–239], [Walker 1989, *passim*], [Trischler 1992, pp. 246–257], [Macrakis 1993, pp. 90ff]. And so for the remaining years of the Third Reich Süss became one of the main brokers and organizers of mathematics and war-time mathematical research. Süss, however, did not just wait for these fortunate circumstances, but actively sought to isolate Doetsch and thereby to extend his own power. On the one hand he permanently pointed to the well known difficulties in Doetsch's character, simultaneously presenting himself as the more efficient spokesman for mathematics and mathematicians, which he undoubtedly was. On the other hand he came to excellent terms with Nazi government officials and actively supported and fulfilled their policies, an aspect which was a central element of his success.

7. EXCHANGING GIFTS, OR BUILDING NETWORKS OF INFLUENCE AND POWER

The exchange of gifts, even though frequently trivialized to scratching each other's backs (*manus manum lavat*), is nevertheless fundamental to the process of gaining and retaining access to the corridors of power and influence⁹⁶. This also pertains to Süss, whose success cannot simply be explained by marvellous conjunctures, be it in the summer of 1937 or in the summer of 1942.

In both his offices, as president of the *DMV* and as Rector of Freiburg University, Süss took great pains not only to preserve the status quo, but also to expand his respective spheres of influence. In doing so his extraordinary capacities as organizer and mediator were of crucial importance. Moreover he apparently had a rare talent to come to friendly terms with

⁹⁶ A lot of ink has been spilt on patronage and gift-exchange lately. For an excellent discussion see [Biagioli 1993, pp. 36–53].

most of his contemporaries. This talent was extremely useful in his dealings with the government officials in the *Office for Scientific Affairs*: with the possible exception of *Ministerialrat* Kummer, Süß got along very well with all of them. Moreover he was on good terms with the men in charge of the *Office for Scientific Affairs*, namely with the aforementioned Otto Wacker and with Rudolf Mentzel (1900–1987)⁹⁷. Wacker succeeded Vahlen in 1937 and Süß had already known him as *Minister of Culture and Education* in Baden. In 1939 Mentzel took over from Wacker. Both Wacker and Mentzel were SS-officers and represented the interest of the SS in the *Office for Scientific Affairs*. Possibly Süß knew Mentzel from Greifswald, where Mentzel had taken his Habilitation in military chemistry (*Wehrchemie*) in 1933 [Pedersen 1994], [Rasch 1994], [Hentschel 1996], [Hammerstein 1999]. In addition to this Süß was very friendly with the minister himself, Bernhard Rust (1883–1945) [Pedersen 1994], from 1940 onwards and directly approached Rust with his problems and wishes when he needed to.

But Süß' network of influence did not just come into being by his charming of Nazi government officials and his support of their policies, be it the *Judenfrage* or mathematical publishing. His remarkable success in the polycracy of government offices and with officials responsible for questions of science was also a result of the distribution of academic honours as Rector of Freiburg University. Apart from regular doctorates, the universities could confer honorary doctorates and the title of a *Honorary Senator* or *Citizen* (*Ehrensensator*, *Ehrenbürger*). As a rule Nazi politicians did not accept honorary doctorates, following the example Hitler had set in 1933. Therefore the universities normally took recourse to the latter honours, if they wanted to decorate a Nazi official [Heiber 1992, pp. 51–73]. Three of the occasions, when Süß conferred academic honours at Freiburg University, are in the category of gift-exchange and should be seen in the context of his professional policies as president of the *DMV*: Karl Gärtner (1897–1944) became *Ehrensensator* in March 1942, Otto Ambros (1901–1990) received an honorary doctorate in November 1944 and Adolf Baeumker (1891–1976) obtained a doctorate in physics in January 1945 [Remmert 1999a].

Gärtner had joined the *NSDAP* in 1930 and in 1933 had been advanced

⁹⁷ For the following see [Remmert 1999a], on the *Office for Scientific Affairs* [Macrakis 1993, pp. 78–80].

speedily from primary school teacher to become a leading official in the *Ministry of Culture and Education* in Baden. In 1940 he was among other things responsible for Freiburg University. Consequently Süss and Gärtner frequently met to discuss official affairs and got to know each other quite well. In March 1942 the Senate appointed Gärtner *Ehrensensator* of Freiburg University, following a proposal of Süss, who wanted to strengthen the ties to Gärtner. In a letter of thanks to Süss in February, Gärtner explained that he was not interested in a new honorary title, but would only become *Ehrensensator* in order to “*come even closer to Süss personally and to his university*”⁹⁸. In fact Süss and Gärtner got along very well. When Süss urgently needed a place to found his *Reichsinstitut für Mathematik* in late 1944, Gärtner put the *Lorenzenhof* in Oberwolfach at Süss’ disposal to prevent his accepting a call to Göttingen. The *Lorenzenhof* had been bought by the state of Baden in 1942 for Freiburg University. It is doubtful whether the *Reichsinstitut für Mathematik* would have actually come into being without Gärtner’s help, because suitable buildings were scarce near the end of the war.

Of course in the polycratic organization of science policies in the Third Reich it was by no means sufficient to rely on one power group, especially not on the rather weak *Ministry of Education and Research*. Süss was well aware of this problem, in particular as he had the ambitious project of founding a *Reichsinstitut für Mathematik*. So it was natural for him to look for allies in other departments of power. One of these was the powerful *Office for Economic Development (Reichsamt für Wirtschaftsausbau)* in the *Ministry of Economics*. This office was headed by Carl Krauch (1887–1968), who was a leading industrialist and one of the most influential organizers of science in the Third Reich [Wankmüller 1980], [Hentschel 1996], [Mehrtens 1996], [Benz 1997], [Remmert 1999a]. Krauch headed the *I.G. Farben* since 1940 and had become a member of the *Reich Research Council* in 1939 representing the whole chemical industry. When the war began Krauch was put in charge of the organization of chemical research with special regard to work important to the war. Doetsch had tried in

⁹⁸ Gärtner to Süss, February 24, 1942, UAF, B1/163: “*Wenn ich mich bereit erklärt habe, die Würde eines Ehrensensators der Universität Freiburg anzunehmen, so tue ich das nicht, um mir einen neuen Ehrentitel zuzulegen, sondern allein aus dem Gefühl heraus, daß ich Ihnen persönlich und der von Ihnen geleiteten Universität dadurch noch näher komme, als das bisher schon der Fall ist.*”

vain to secure support for his publication program from Krauch's *Office for Economic Development* in October 1942⁹⁹. In June 1943 Süß sought to get into touch with Krauch to discuss a possible representation of mathematics in the *Reich Research Council*. Since he had been put in charge of its publication program, Süß had intended to have mathematics directly represented in the *Reich Research Council*. As a first step to such a representation he was busy founding a working group for mathematics (*Arbeitskreis Mathematik*) within the department for physics in June 1943 and hoped for Krauch's support. His ultimate goal was an independent department for mathematics, which only came about in January 1945.

The mediator between Süß and Krauch was Otto Ambros, who held a doctorate in chemistry and had been on the large board of directors of the *I.G. Farben* since 1938. From 1941 Ambros planned and ran the *I.G. Farben plant Buna IV*. The SS provided sufficient slave labour from the specially erected concentration camp Auschwitz III (Monowitz). Ambros and Krauch were sentenced to several years of imprisonment at the Nuremberg trial [Schmaltz/Roth 1998], [Remmert 1999a].

Ambros had met Süß in Freiburg in June 1943 and several days later wrote to Süß that Krauch would gladly receive him in Berlin to talk about the *Reich Research Council*, where Süß was to represent mathematics¹⁰⁰. Whereas the details of how Krauch may have supported Süß are not known, Süß himself explicitly acknowledged this support in a letter to Walter Gerlach in January 1944¹⁰¹. Not only had Ambros' mediation in this instance been fruitful for Süß' professional policy, but he had also arranged for the *I.G. Farben* to support the department of chemistry at Freiburg University, and notably the later Nobel Prize winner Hermann Staudinger. Given Süß' double gratitude to Ambros, as Rector and as president of the *DMV*, it does not come as a surprise that Ambros was awarded an honorary doctorate from Freiburg University in November 1944. The circumstances of his decoration, however, were unusual. In April 1944 Süß had reported to the *Ministry of Education and*

⁹⁹ Doetsch to Prandtl, October 6, 1942, Archives of the Max-Planck-Society in Berlin, Prandtl-papers, *Herausgabe mathematischer Werke*.

¹⁰⁰ Ambros to Süß, June 21, 1943, UAF, C89/40.

¹⁰¹ Süß to Gerlach, January 24, 1944, UAF, C89/18. There is no correspondence between Süß and Krauch in the Süß-papers.

Research, that Ambros had received an honorary doctorate in Freiburg. At that time the case had not yet been discussed in Freiburg's Faculty of Natural Science and Mathematics. Its Dean Reinhard Mecke formally proposed Ambros as a candidate for an honorary doctorate only in May 1944. Apparently the initiative to honour Ambros did not come from the faculty, but from the Rectorate. The actual certificate was finally issued in November 1944. As circumstances then prevented Ambros from coming to Freiburg, the doctorate was only celebrated in Freiburg in 1951 after his release from imprisonment.

It was natural for Süss also to look for allies in the *Forschungsführung* of the *Aviation Ministry*. The obvious choice would have been Doetsch, had circumstances allowed for it. Instead Süss approached Adolf Baeumker, Doetsch's superior in the *Forschungsführung*. Baeumker was one of the most important organizers of aviation research in the Third Reich [Trischler 1992], [Hein 1995], [Hentschel 1996, p. 306]. In the early war years Doetsch could count on Baeumker's support in the *Forschungsführung*. Baeumker had even pushed through Doetsch's promotion to major in 1941, especially in order to strengthen his status in dealing with the *Ministry of Education and Research*. Things had changed in 1942 when frictions between Doetsch and Baeumker appeared and the *Forschungsführung* was reorganized, which resulted in the aforementioned weakening of Doetsch's position. Though it is difficult to say, when Baeumker and Süss came into close contact with each other, they were busy exchanging gifts in January 1945. Süss was to become a corresponding member of Hermann Göring's *German Academy of Aeronautical Research* (*Deutsche Akademie für Luftfahrtforschung*), which was managed by Baeumker. And the 54-year-old Baeumker received a doctorate in Freiburg in late January 1945 — the last degree conferred by the Freiburg Faculty of Natural Science and Mathematics up to January 1946. As a thesis he submitted an essay on the management of research in natural and technical sciences [Baeumker 1944]. Though this paper had scarcely anything to do with physics, he graduated in physics, the referees being the Rector Wilhelm Süss, the Dean Reinhard Mecke (a physical chemist) and Süss' *Dozentenbundführer* at Freiburg University, Eduard Steinke (a physicist). At this time Freiburg University had already been destroyed by the air-raid on Freiburg in November 1944. Even before he received his doctorate

Baeumker thanked Süss warmly and reassured him that he “*would not fail to do anything corresponding both to official interests and the feelings of my heart*”¹⁰². These words reveal that Süss had created sufficient scope of action for himself even in the *Aviation Ministry*, his most intimate enemy’s basis of power. In 1941/42 the foundation of a *Reichsinstitut für Mathematik* had seemed impossible for both Doetsch and Süss, given the heavy competition in the polycratic triangle of government offices responsible for such an enterprise, namely the *Office for Scientific Affairs* in the *Ministry of Education and Research*, the *Forschungsführung* in the *Aviation Ministry* and the *Office for Economic Development* in the *Ministry of Economics*. Though the reorganization of the *Reich Research Council* in summer 1942 was intended to facilitate the finding of common denominators in science policies, the foundation of a *Reichsinstitut für Mathematik* was still a matter of controversy for the interested parties. It has been shown that in founding the *Reichsinstitut für Mathematik* Süss eventually profited from the competition between Mentzel in the *Office for Scientific Affairs* and Krauch in the *Office for Economic Development* [Mehrtens 1996, pp. 117f]. But Süss succeeded not only by playing a given hand skilfully. He was also well aware of how to work with gift-exchange and to exploit its possibilities. In the resulting network of influence Otto Ambros, Carl Krauch, Adolf Baeumker and Karl Gärtner played their important roles, especially with respect to the foundation of the *Reichsinstitut für Mathematik*.

Süss’ gifts to Gärtner, Ambros and Baeumker show how important it was for him to have a power base in Freiburg. Süss as president of the *DMV* had scarcely anything to offer of interest to non-mathematicians, whereas Süss as Rector of Freiburg University had. For Süss the combination of his various functions was vital: they reinforced each other and could be put to mutual use.

¹⁰² Baeumker to Süss, January 7, 1945, UAF, C89/4: “*Ich fühle mich jetzt schon Ihnen in gewissem Sinne sehr verpflichtet und will nichts versäumt haben, was dienstlichen Interessen ebenso sehr wie Gefühlen meines Herzens entspricht.*”

8. DENAZIFICATION AND CONTINUITY IN THE POST-WAR YEARS¹⁰²

After the war the battlefield of enmity between Süß and Doetsch narrowed again to the scene at Freiburg University. But they fared very differently. Doetsch lost his professorship in the course of denazification in late 1945 and only was reinstated in 1951. The Freiburg committee of denazification (*Selbstreinigungsausschuß*) accused him of several denunciations during the Nazi period. In their view these did not stem from political convictions but rather from defects in his character. The committee insisted on his dismissal even though only one of the charges could be proved and Doetsch presented several witnesses for his case. Furthermore Doetsch pointed to his Weimar pacifism to justify his behaviour during the early years of the Third Reich. The committee saw his dilemma but did not consider it an excuse. The committee's persistence was due to Süß who was on excellent terms with its chairman, the historian Gerhard Ritter [Remmert 1999a]. Doetsch fought for his reinstatement for 6 years and was repeatedly acquitted by the committee of denazification (*Landesreinigungsausschuß*), but the university sided with Süß who also managed to bring the military government in line against Doetsch¹⁰⁴. In February 1949 the French curator of Freiburg University, Jacques Lacant, left no doubt in a letter to his superior Lieutenant-Colonel Monteux, that to act on Doetsch's repeated acquittals, *i.e.* to reinstate him, was not in the interest of the military government as it disavowed the Freiburg professors who had brought the charges against him. Lacant left it to Monteux to judge the possible psychological effect of such a disavowal¹⁰⁵. Clearly the situation was hopeless for Doetsch who even considered emigrating. The situation only changed with the new federal legislation in 1951 which as a corollary forced Freiburg University to give Doetsch a professorship again [Frei 1996, pp. 69–100], [Remmert 1999a].

¹⁰³ On German science after 1945, denazification and continuity *cf.* [Cassidy 1994], [Ash 1995], [Vollnhals 1995].

¹⁰⁴ *Cf.* the French denazification dossiers on Gustav Doetsch, Archives de l'occupation française en Allemagne et Autriche, Colmar (Archives Colmar), AC 183/1b, BADE 2560 d.189 230 and BADE 4103/2.

¹⁰⁵ Letter of February 9, 1949, Archives Colmar, BADE 2560 d.189 230: "*De plus, les Professeurs anti-nazis qui nous ont en conscience signalé les charges pesant sur Doetsch seraient désavoués avec notre autorisation. Je laisse à juger de l'effet psychologique.*"

Süss on the other hand was suspended for just two months in summer 1945. Many local factors need to be taken into account to explain this striking difference between their respective fates during the process of denazification [Remmert 1999a]. Apart from the many “good deeds” Süss was credited for after the war, it was particularly important to him that the scope of his collaboration with the Nazis, as for instance his stance in the *Judenfrage*, was not generally known either in Freiburg or within the German mathematical community. In any case, most of those, who may have known about these things, had no interest in dragging them to light, be it that they were (1) deeply involved as Hasse and Sperner, (2) convinced of Süss’ integrity, as were many colleagues in Freiburg and in the mathematical community in general, (3) grateful like Heinrich Behnke and Erich Kamke, who had both been supported by Süss in protecting their families against Nazi racial politics, or (4) that they plainly saw Süss’ political value, like those who rightly connected the fate of Oberwolfach with that of Süss. The only overt accusation against Süss after the war came from Ferdinand Springer in 1946/47, backed up by F.K. Schmidt, who accused Süss of having tried to have Schmidt arrested in 1939 on his way to the United States. But Süss’ network both in Freiburg and within the mathematical community was strong enough to play the affair down¹⁰⁶. Harald Bohr was among the few mathematicians who had doubts about Süss’ integrity. In 1950 he wrote to Kamke that he wasn’t sure whether Süss had not been among “*the not quite harmless opportunists*”¹⁰⁷.

Finally it has to be realised that Süss was also sought after by the occupying powers as an expert on human resources in the German mathematical community and on what had been done in German mathematical research during the war. Consequently he was commissioned to publish the *FIAT-Reviews* on pure mathematics [Süss 1948]. The French military authorities took a strong interest in Süss. Not only had they supported his campaign against Doetsch, but they deliberately withheld information from the denazification committees¹⁰⁸. Among these were positive

¹⁰⁶ Cf. the dossier on Süss’ denazification in UAF, B34/74.

¹⁰⁷ Bohr to Kamke, February 27, 1950, UAF, E4/532: “*ein Opportunist nicht ganz ungefährlicher Art.*”

¹⁰⁸ For the following cf. the French denazification dossiers on Wilhelm Süss, Archives

political reports on Süss by Kreisleiter Fritsch, an other Nazi official, and a letter by the British University Officer E.V. Hartshorne, who reported that Süss had been considered for the national leadership of the *Lecturers' League* (*Reichsdozentenführer*) in July 1944¹⁰⁹.

Already in August 1945 Süss was making proposals for future collaboration with French mathematicians to the military government. The military government was sympathetic, but at the same time determined not to have Charles (Karl) Pisot back in Freiburg where he had taught during the war¹¹⁰. Franco-German cooperation in Freiburg started in the field of medicine and was extended to mathematics in 1946, when collaboration with French mathematicians came about in Oberwolfach¹¹¹. The above mentioned factors help to explain why Süss succeeded in retaining great parts of his network of influence and power after the war, especially in Freiburg. The isolation of his rival Doetsch was an important element in Süss' strategy of defence. It was much easier for Süss to fashion himself as the true advocate of mathematics and Freiburg University during the Third Reich if he could present Doetsch as an insincere broker of these interests, a broker who had welcomed elements of the Nazi ideology. Süss' active shaping of his (and Doetsch's) past was a common strategy, though extremely successful in his case. It went down in history via the obituaries of Ostrowski [Ostrowski 1958] and Gericke [Gericke 1968] and many a mathematician's memory of post-war tales specifically adapted to the needs of the new times — a process which Primo Levi has described so expressively [Levi 1988, pp. 30f]. Without judging their respective attitudes during the Third Reich, the post-war fates of Doetsch and Süss

Colmar, AC 183/1d, BADE 2560 d.205 486, BADE A 5825 and BADE 4103/7.

¹⁰⁹ Kreisleiter Fritsch on Süss, January 5, 1943, *Gaudozentenführer* on Süss, January 6, 1943, Archives Colmar, BADE A 5825. Excerpt from Hartshorne's letter in Archives Colmar, AC 183/1d.

¹¹⁰ Süss to lieutenant Cons, August 22, 1945, UAF, E 6/1; French memo of September 13, 1945, Archives Colmar, AC 183/1d. Not only Pisot but also Frédéric Roger had been in Freiburg and Oberwolfach for some time [Remmert 1999a]. On the employment of French prisoners of war in mathematics *cf.* [Siegmund-Schultze 1993, pp. 187–189 and 227f].

¹¹¹ *Cf.* [Heinemann 1991, pp. 73 and 115f]; among the first French mathematicians visiting Oberwolfach were Charles Ehresmann and Henri Cartan. A peak point was the Franco-German seminar in August 1949. Among the participants were Jean Braconnier, Martin Kneser, Georges Reeb, Jean-Pierre Serre and René Thom (UAF, E6/144 and 146). On the early Franco-German relations at Oberwolfach see UAF, E6/9 and 11.

clearly exemplify how networks of power or impotence stemming from the Third Reich could survive in the post-war-years and form the basis of continued success or failure.

9. CONCLUDING REMARKS

Doetsch and Süß had started collaborating with the new system on a mutual basis in 1934. Their respective comportment in the early and late years of the Third Reich and the transformation of their relationship have a common denominator: on the one hand both Doetsch and Süß had sought to profit personally from the process of redistribution of power within the German mathematical community at the beginning of the Third Reich and also during the war in order to extend their own power bases for the war- and post-war-period. On the other hand, though they pursued different professional policies during the war, they considered it a justification of their own respective activities that mathematics as a scientific discipline profited from their efforts. Both employed their power and influence not just in their own interests, but also to legitimize and advance mathematics as a scientific enterprise vis-à-vis the natural sciences, intending to improve or at least to preserve the financial situation for mathematics and mathematicians during and after the war. They did so by pointing out its utility and importance for the war, and successfully so. Both saw and seized the war as a unique opportunity to advance the status of mathematics as a scientific discipline and create a power basis for mathematics and for themselves in the post-war-period. The much disputed *Reichsinstitut für Mathematik*, which Süß eventually founded, was such a basis. In principle this propagation of mathematics' utility was a very old strategy, but once again a very successful one.

But it was not only the wish to legitimize and strengthen mathematics in the post-war period, especially by procuring material resources, which lay at the core of Doetsch's and Süß' individual strategies. Both were also drawn by power itself, and were unwilling or incapable to resist its appeal. Both were by their own decision deeply involved in the process of nazification in science and at the universities. Taking part in this process, whose political framework lay beyond their control and which led to the active collaboration of numerous other German scientists with the Nazi

regime, they were at a certain point greatly restricted in their liberty of action.

The history of mathematics and mathematicians in Nazi Germany has often been highlighted as a history of extremes, of which Bieberbach and *Deutsche Mathematik* or the abolishment of the Göttingen mathematical tradition stand as emblematic. But there was more at stake than the fate of a group of Nazi mathematicians or the enforcement of anti-Semitic legislation, however depressing. The everyday collaboration with Nazi party and government officials and the undermining of elementary human standards in the name of what was so hastily defined as the “common good” — the “good of mathematics” — in post-war legitimising discourses, are even closer to the essence of National Socialism. For example, the dehumanising in bureaucies, as described by Zygmunt Bauman [Bauman 1989, pp. 102-106], can be seen strongly reflected in the vocabulary the *DMV* board used in discussing the *Judenfrage* in 1938.

On the other hand the willing offer to put mathematical knowledge and mathematicians at the military’s disposal, which was characterised as self-mobilisation [Ludwig 1974], not only resulted from nationalistic loyalties, ideological beliefs or chauvinistic zeal, but was also an essential element of the legitimising and expansive strategies of mathematicians’ professional policies. This process of self-mobilisation was rooted in a development going back to World War I, if not to the Franco-German War of 1870/71, when it became more and more evident with the growing degree of mechanisation in the military, that mathematical techniques were not only fundamental to society but at the same time indispensable to the military [Timerding 1919], [Mehrtens 1996], [Remmert 1999b]. The twelve years of Nazi rule offered many opportunities for mathematicians in Germany to fight for power and its social and material attributes, be it between themselves or for mathematics as a scientific discipline. Although these circumstances may have been historically unique, aspects of the strategies pursued and the readiness to put mathematics to war are, however, not — neither in history nor today.

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