German-speaking migration of mathematicians to and from Czechoslovakia, caused by National Socialism in Germany[1]

Reinhard Siegmund-Schultze

Abstract. For the investigation of German-speaking and non-German-speaking academic emigration during the rule of the Nazi regime in Germany (1933–1945), the files of the *Society for the Protection of Science and Learning* (SPSL), now located at the Bodleian Library in Oxford, U.K., are a particularly valuable source for historical analysis. The present article looks at the situation of the German-speaking mathematical refugees who immigrated to or emigrated from Czechoslovakia for political reasons in the period under question. The SPSL files are used for the first for this purpose.

Migrace německy mluvících matematiků do Československa a z něj kvůli nacistickému režimu v Německu. Pro studium emigrace, ať už německy mluvící či ne, během nacistického režimu v Německu (1933–1945) představuje velice cenný pramen z hlediska historické analýzy fond Society for the Protection of Science and Learning (SPSL, Společnost pro ochranu vědy a výzkumu), nyní uložený v Bodleian Library v Oxfordu ve Velké Británii. Předkládaný článek sleduje situaci těchto německy mluvících matematiků, uprchlíků, kteří imigrovali do Československa nebo odtud emigrovali ve sledovaném období z politických důvodů. Fond SPSL byl použit pro takové bádání poprvé.

Keywords: Academic anti-Semitism • political persecution under the Nazi regime • migration of German speaking mathematicians • Society for the Protection of Science and Learning

[1] Revised and extended version of a presentation, given at the 2nd Winter School on History of Mathematics of the Brno Branch of the Union of Czech Mathematicians and Physicists (Jednota českých matematiků a fyziků, brněnská pobočka), 5 February 2012, near Brno. I thank Martina Bečvářová (Prague), Helena Durnová (Brno), Jan Kotůlek (Ostrava), and my colleague Rolf Nossum for advice and careful reading. After writing this text I became aware of a book about Heinrich Löwig (Bečvářová et al., [2]), which uses rich archival material, however not the files of the SPSL which are at the centre of this paper.

1. Introduction: German-speaking mathematical emigration in general

In a recent book (2009) I have investigated the fates and the scientific impact of "German-speaking" mathematicians fleeing from Hitler's Germany after 1933, including those fleeing from the territories occupied by the Nazis since 1938. The persons described in the book were united by common traits of scientific education and socialization and by the common German language, at least for the purpose of scientific communication, even if in several cases they originally came from East European countries and entered the German-Austrian-Czech system in order to undertake their university education or to work as mathematicians there.

One result of the historical analysis mentioned was a list of 145 German-speaking refugees, who for the most part had finished their university studies before they were expelled. In addition I compiled a list of 17 German-speaking mathematicians who were killed by the Nazis or forced to commit suicide, among them three from Prague (Ludwig Berwald, Walter Fröhlich, and Georg Pick). A third list attached to the book of 2009 comprised 72 mathematicians who were victimised by the Nazis in other respects. Indeed, in order to fully understand scientific emigration from Nazi persecution one also has to look at the circumstances of those who tried to emigrate but failed, many of whom were persecuted or even killed by the Germans.

2. Emigration to and from smaller countries as a new research-goal

My book of 2009 focussed on emigration to the United States, where – for obvious historical reasons – about two thirds of the refugees ended up. Second to the U.S., it was the United Kingdom which absorbed most mathematical refugees, while the Soviet Union, the only other bigger country in Europe which was never fully occupied by the Germans, threw out most of the immigrants even before the war began, due to xenophobic and even lunatic Stalinist policies. There were several major European countries which served as intermediate stops on the way to further emigration or became an impasse for refugees when they were finally occupied. Among them were France, the Netherlands, and Czechoslovakia.

3. Problems not to be addressed here: "Non-German-speaking" mathematical emigration and "non-affected" Germans

Although in the overall emigration of mathematicians during the period of the Third Reich the "German-speaking" refugees dominated both by their number and with respect to the total of their international prestige and research output, the "non-German speaking" refugees should always be kept in mind as a complement and as a comparative example. In particular, the Polish school of mathematics, which was almost eradicated by the Nazis, was scientifically a very strong one too. What is more, one might say that the fates of Polish mathematicians, many of whom were killed by the Nazis, were in total even more tragic than those of the German-speaking refugees and other German-speaking victims.

It is mainly due to problems of language and of sources (archives) that I am not including in my research other refugees than the "German-speaking." There are, however, encouraging signs, e.g. that colleagues in the Czech Republic (M. Bečvářová, H. Durnová, J. Kotůlek) and in Poland (R. Duda) are taking on the task of reporting about their countrymen.[2]

One other task which, again, cannot be addressed here, although it belongs to the complete historical picture too, is the situation and behaviour of those German mathematicians who were not persecuted by the Nazis and stayed in their posts, who in rare cases supported the persecuted but quite often got promotion as a result of the expulsion of their former colleagues.[3] In the specific case of Czechoslovakia, it cannot be denied that also the fate of some German mathematicians, such as Gerhard Gentzen and Theodor Vahlen, who died in connection with their arrests in Prague in 1945, deserves the attention of historians.[4] What is more, the so-called "Beneš decrees" and connected Czechoslovakian legislation issued during and shortly after the war by the

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[2] Duda, Durnová and Kotůlek gave successful talks at an international workshop "Emigration of Mathematicians and Transmission of Mathematics: Historical Lessons and Consequences of the Third Reich" in November 2011 in Oberwolfach, Germany.

[3] For this perspective, however, I refer to the book Segal, [28]. In Prague, in particular, German mathematicians such as G. Gentzen and E. Mohr assumed positions, after others, such as Berwald and Löwner, had been expelled.

[4] Gentzen, a student of David Hilbert, is famous for his proof of a consistency proof of a restricted system of arithmetic (Menzler-Trott, [16]). Vahlen had strongly supported the Nazis and escaped to Prague in 1945 (Siegmund-Schultze, [29]). Both Gentzen and Vahlen died apparently from starvation in Czech prisons. Menzler-Trott refers to work by P. Vihan on Gentzen's last days.

government in exile would have to be taken into account. In this sense the German mathematicians were indeed, if indirectly "affected" by the Nazi occupation of Czechoslovakia. Without discussing the Czech post-war policies here, we must at least examine their tragic effect on the fate of one Jewish victim of German origin (Heinrich Löwig), who had survived the Nazi camps (see below).

4. The "new" and as yet unexhausted source of the SPSL-files

In both cases, German-speaking and non-German-speaking emigration, the files of the *Society for the Protection of Science and Learning* (SPSL), now kept at the Bodleian Library in Oxford, are a particularly valuable source for historical analysis. The SPSL was the new name (since 1935) of the *Academic Assistance Council*, founded in London in 1933.[5] It became a very effective privately organised committee in aid of academic refugees during the 1930 and 1940s. After the war, and continuing until the present day under the name of CARA (*Council for the Assistance of Refugee Academics*), it has extended its help also to refugees from other regimes. With respect to mathematical and physical refugees from the Nazis, these files were first analysed by Robin Rider [23]. I have used the files myself, though not very comprehensively, in my book of 2009, which focussed on emigration to the United States, where American support organizations played an even bigger role. Rolf Nossum has recently analysed the SPSL files with respect to non-German speaking mathematical refugees, among them Emil Schoenbaum (1882–1967) and Štefan Schwarz (1914–1996) from Czechoslovakia (Nossum, [18]).

The present article returns to the situation of the German-speaking mathematical refugees and uses the SPSL files more comprehensively[6] than has been hitherto done for the case of Czechoslovakia as a country of temporary refuge or origin of emigration.

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5 For a political perspective on the early years of the AAC/SPSL see Zimmerman [33].

6 More and more detailed information is in the personal files of the mathematicians themselves, which are listed and given with exact call numbers below. I thank Rolf Nossum (Kristiansand) for discussion and support during my archival research at the Bodleian Library. The Library receives thanks for giving access to the files and permission to publish excerpts.

5. The case of Czechoslovakia – general remarks

Czechoslovakia is a particularly important and interesting case as a stopping place for refugees from the Nazis after 1933. The fates of the mathematicians migrating to and from Czechoslovakia due to Nazi pressure are varied. A first printed report on the situation of the German speaking mathematicians in Czechoslovakia in the 1930s and 1940s was given in the early 1970s by the former mathematician at the German University in Prague, Max Pinl, with the support of Auguste Dick (Pinl/Dick, [21]).[7] A recent analysis of the files of the SPSL reveals many more details and enables a more reliable analysis, also with respect to the reasons[8] for emigration.

A few general historical remarks are necessary, in order to understand the situation of the persecuted mathematicians in the country. Czechoslovakia had been under the rule of the Habsburg monarchy until the end of World War I. In the second half of the 19th century, as a result of national conflicts within the country, two of the three leading institutions of higher education, Charles-Ferdinand University in Prague (Míšková, [17]) and the Technical University in Prague (Birk, [5]) had been divided into German and Czech speaking and teaching institutions. Mathematics was well represented both in Prague and at the German Technical University in Brno (Šišma, [32]) until 1918.[9] The latter was possibly even stronger mathematically before 1918 than the two German speaking institutions in Prague; Brno had among its faculty for instance applied mathematicians of the calibre of Georg Hamel and Richard von Mises (Šišma, [31]), and pure mathematicians such as Ernst Fischer, Heinrich Tietze, and Johann Radon.

After the foundation of the First Republic (1918–1938) under President Tomáš Garrigue-Masaryk, ethnic diversity and conflicts persisted, particularly due to the large German population in the Sudetes, the Northern part of Bohemia and Moravia. The Czechoslovakian government principally allowed German scholars to stay in their positions, but they had to assume Czechoslovakian citizenship.

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7 Pinl has given similar reports also for emigration from German university within Germany (Pinl, [20]). A less detailed account in English is given in Pinl/Furtmüller, [22].

8 Pinl, also in his other meritorious reports, deliberately avoids talking about "reasons" for persecution. In particular, he does not speak about anti-Semitism. This deliberate suppression of information has later been criticized by other mathematicians, insisting that it was not adequate to historical analysis (Siegmund-Schultze, [30], p. 336).

9 From 1899 there existed a separate Czech Technical University in Brno, too. Thanks to Martina Bečvářová (Prague) for information.

This was in a way natural, because the Habsburg monarchy did not exist anymore. After WWI mathematics at the German Technical University in Brno had lost its previous strong position, and Prague became the centre of German mathematical life in Czechoslovakia during the interwar decades. The focus on Prague became even stronger under German occupation which had implications also for the situation of the German-speaking refugees to Czechoslovakia.[10] Consequently, this article deals almost exclusively (with the partial exception of Erdélyi and Löwig) with mathematicians in Prague. I shall, however, not always specify to which of the two German-speaking Universities in Prague (the general and the Technical one), or in fact, to which high-school these mathematicians were connected,[11] because the persecution was a general phenomenon which affected state institutions directly.

When Hitler came to power in Germany in 1933, Czechoslovakia and France were – not least for geographical reasons – obvious countries of refuge for scientists, humanists, or for literary people. The political atmosphere in these two countries was certainly less hostile to foreigners, in particular less anti-Semitic, than in Poland or Austria.[12] Czechoslovakia with its strong German speaking minority and with its German academic institutions had advantages over France as a destination for immigrants. However, neither country offered many job opportunities to foreigners, in particular academics.

The Munich Pact (often called the Munich betrayal or Munich dictate by the Czechs) of September 1938 led to the occupation by the Germans of the Sudetenland in the Northern, Western and Southern parts of the country where the German speaking population was in majority, a region much bigger than the Sudetes mountains in the North. In the remaining state, the so-called "Second Republic," the pressure both on the German academic institutions in general

[10] Erdélyi said in a questionnaire, received 14 December 1938 at the SPSL: „The ‚Mathematisches Seminar an der Technischen Hochschule Brünn' is not active anymore." (SPSL 278/4, fol. 157).

[11] Paul Funk was, for instance, employed at the German Technical University in Prague, and Walter Fröhlich had part-time teaching positions there and at the German University, beside his job as a school teacher. Berwald, Löwner and Pick belonged to the traditional University. See Hornich [13].

[12] A biographer writes about the reasons for Bers to go from Latvia to Czechoslovakia in 1934: "Because it was a democratic country, because they let him in, because he had an aunt there (hence he could manage without working–a condition of entry for most students to most countries), and perhaps because Charles Loewner was there." (Abikoff, [1], p. 19). The picture of a relatively easy entrance into Czechoslovakia is confirmed but also modified in reports about Erdélyi (see below).

and the Jewish scholars in particular grew.[13] This may have been related to fear and expectation of full occupation by the Germans in the "Protektorat Böhmen und Mähren" of March 1939. A feeling for the historical situation is for instance expressed in a letter written after Munich by Max Pinl to an American mathematician.[14] The German-Jewish physicist at Prague and successor to Albert Einstein, Philipp Frank, then visiting the U. S., wrote on 14 October 1938 to his friend Richard von Mises in Turkish exile:

> "The situation in Prague seems to be a very bad one. The Czech government is apparently a pure Nazi-government, and I am convinced we all will fare very badly if the university will be liquidated." [15]

6. The eighteen German-speaking mathematicians, persecuted in occupied Czechoslovakia

In order to get the full picture of "German-speaking" mathematical migration to and from Czechoslovakia one would have to look also at those refugees who left the country *before* the Munich Pact, in particular those who used it before Munich as a stopping place prior to further emigration.[16]

In the following I will, however, mainly focus on those German-speaking mathematicians, who were persecuted on Czechoslovakian territory in the period after the Munich Pact of September 1938 and the ensuing occupation of the Sudetenland and finally of the remaining parts of Bohemia and Moravia. The SPSL files, in particular the questionnaires which the persecuted mathematics had to complete for the Society (see below), show that Jewish scientists were dismissed by the universities and high-schools shortly after the Munich agreement

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[13] More detailed discussion one finds in Míšková [17] and Bečvářová et al. [2]. In January 1939 the Czechoslovak government introduced restrictive measures for state employees of Jewish descent and on 27 January made a ruling about the residency of emigrants – all such persons were to leave the country within one to six months.

[14] Appendix 3. 5. in Siegmund-Schultze, [30]).

[15] Richard von Mises Papers, Harvard University Archives, HUG 4574.5. fol. 1938. My translation from German. On Philipp Frank the SPSL kept the file 327/6.

[16] Although there may have existed more individuals, I am only aware of two, namely the mathematician, physicist, and philosopher Paul Hertz (1881–1940) from Göttingen, who finally escaped from Hamburg to the U.S. in 1939, and the philosopher of science and refugee from Berlin, Walter Dubislav (1895–1937), who died in a personal tragedy in Prague. Hertz was supported by the SPSL (file 499/3). There were others scientifically close to the mathematicians who left Czechoslovakia before 1938, in particular the logician Rudolf Carnap.

and before the occupation of Prague in March 1939.[17] Bohemia and Moravia were reduced in size, surrounded by countries which were under German influence,[18] including Slovakia which was adopting increasingly Nazi-friendly policies, becoming a kind of Nazi puppet state. We have documentation in the SPSL files that two refugee-mathematicians, Romberg and Schwerdtfeger, had to travel by air (not a very usual means of transport at the time) in order to leave Prague and to reach their destinations in Norway and Switzerland, respectively.

None of the mathematicians under consideration here had any viable alternative besides leaving the country, but not all succeeded in doing so. Some of them were arrested or deported or even killed by the Nazis.

I am writing about the following group of 18 "German-speaking" mathematicians, 13 of whom were in close contact with the SPSL. Eleven of the 18 mathematicians had come rather recently to Czechoslovakia, all (except Mohr) due to Nazi pressure in Germany or persecution elsewhere: Behrend, Bers, Erdélyi, Löwner, Mohr, Pinl, Pollaczek, Romberg, Scherk, Schwerdtfeger, and Sternberg. Unlike the other seven they did not hold Czechoslovakian citizenship.

No	Name	Mathematical discipline	SPSL: box, file
1	Felix Adalbert Behrend (1911–1962)	Number theory	277, 4
2	Lipman Bers (1914–1993)	Complex function theory	none
3	Ludwig Berwald (1883–1942)	Differential geometry	none
4	Arthur Erdélyi (1908–1977)	Approximations, special functions	278, 4
5	Walter Fröhlich (1902–1942)	Geometry and topology	489, 1
6	Paul Funk (1886–1969)	Calculus of variations, physics	279, 2
7	Paul Kuhn (1901–?)	Number theory, statistics	none
8	Heinrich Löwig (1904–1995)	Functional analysis and algebra	282, 1
9	Karl Löwner (1893–1986)	Complex function theory	282, 2
10	Ernst Mohr (1910–1989)	Applied mathematics	none
11	Georg Pick (1859–1942)	Diff. geometry, function theory	none
12	Max Pinl (1897–1978)	Differential geometry	283, 3
13	Felix Pollaczek (1892–1981)	Number theory, statistics	283, 4
14	Werner Romberg (1909–2003)	Numerical analysis	337, 9
15	Peter Scherk (1910–1985)	Number theory	284, 6
16	Hans Schwerdtfeger (1902–1990)	Mathematical physics	284, 9
17	Wolfgang Sternberg (1887–1953)	Math. physics and probability	285, 2
18	Artur Winternitz (1893–1961)	Foundations of geometry	286, 3

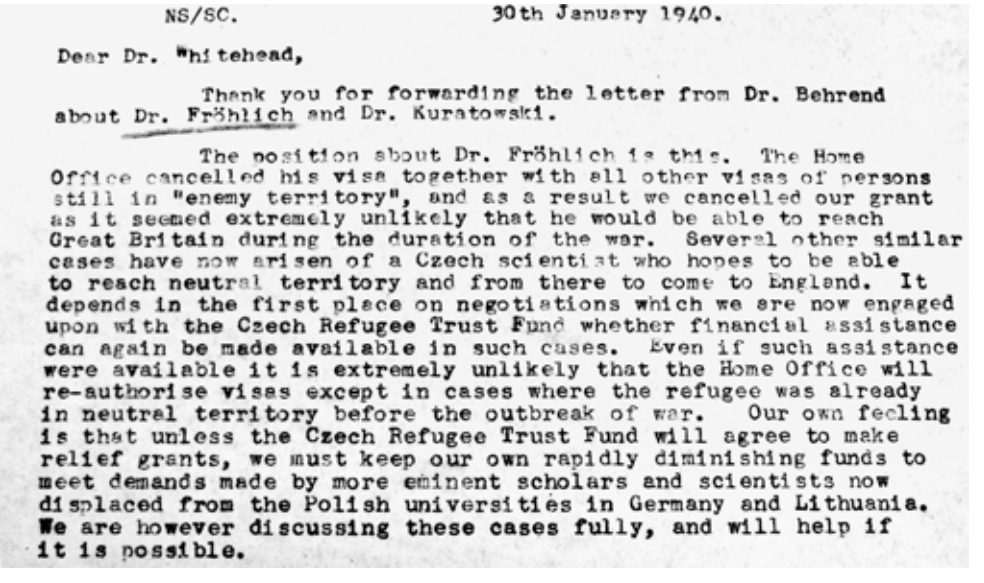
[17] Walter Fröhlich, for instance, was dismissed for "race reasons" (rassische Gründe) from all three of his jobs, in particular effective 1 October 1938 for the two Prague Universities (SPSL 489, 1, fol. 64). A similar "reason" was given in Löwig's case, see below.

[18] Jan Kotůlek alerts me to the fact that there still existed a short border with Poland, the crossing of which was, however, illegal.

7. The seven "non-refugees" among the eighteen

Three of the eighteen mathematicians in the list, namely Berwald, Fröhlich, and Pick, all citizens of Czechoslovakia, would not be able to save their lives (Pinl/Dick, [21]). Berwald (Pinl, [19]) and, above all, Pick were the two oldest of the eighteen, a circumstance which weakened their prospects for emigration considerably. Berwald and Pick do appear in the records of the SPSL, however not with files of their own, but merely as writers of opinions in favour of other persecuted mathematicians. Due to their advanced age, Berwald and Pick probably deemed emigration and support by the SPSL for themselves as hopeless. When they were finally deported by the Nazi occupiers in 1942, contacts with London were broken off anyway. Fröhlich, although relatively young, tragically perished as a consequence of political restrictions on emigration at the time. He had already received an English visa by mediation of the SPSL. But he could not, in the end, escape from Czech territory, because the British cancelled the visa after the war broke out in September 1939. This is for instance documented by a letter of the SPSL to the English topologist John H. C. Whitehead (1904–1960) from 30 January 1940.

In addition to Berwald, Fröhlich, and Pick, there were four more mathematicians among the eighteen, who were unable to flee: Funk, Löwig, Mohr,



NS/SC. 30th January 1940.

Dear Dr. Whitehead,

Thank you for forwarding the letter from Dr. Behrend about Dr. Fröhlich and Dr. Kuratowski.

The position about Dr. Fröhlich is this. The Home Office cancelled his visa together with all other visas of persons still in "enemy territory", and as a result we cancelled our grant as it seemed extremely unlikely that he would be able to reach Great Britain during the duration of the war. Several other similar cases have now arisen of a Czech scientist who hopes to be able to reach neutral territory and from there to come to England. It depends in the first place on negotiations which we are now engaged upon with the Czech Refugee Trust Fund whether financial assistance can again be made available in such cases. Even if such assistance were available it is extremely unlikely that the Home Office will re-authorise visas except in cases where the refugee was already in neutral territory before the outbreak of war. Our own feeling is that unless the Czech Refugee Trust Fund will agree to make relief grants, we must keep our own rapidly diminishing funds to meet demands made by more eminent scholars and scientists now displaced from the Polish universities in Germany and Lithuania. We are however discussing these cases fully, and will help if it is possible.

From a letter by the SPSL to English topologist John Whitehead, SPSL, 489, 1, fol. 126, Courtesy Bodleian Library Oxford

and Pinl. Funk and Löwig were Jewish like the three who were killed; they went through Nazi concentration camps, but luckily survived.[19]

The SPSL kept files for four of the seven "non-refugees": Fröhlich, Funk, Löwig, and Pinl. Fröhlich has been mentioned. The Society was not able to help the other three either, for various reasons: Funk was probably too old and as a mathematician with strong interests in applications less attractive.[20] Löwig had never held a salaried academic position, although he had a venia docendi at the German University in Prague since 1935 (see Bečvářová et al., [2]). Pinl was probably not prominent enough a mathematician at the time. On Mohr the SPSL had no file; his persecution occurred very late, in 1944.

All but three of the eighteen on the list were Jewish or at least not "full Aryans" according to the Nazi occupiers. According to the infamous "Nuremberg laws" of 1935, they were thus – in spite of their predominantly German cultural background – precluded from becoming full citizens ("Reichsbürger") of the Third Reich after the gradual occupation of Czechoslovakia in 1938/1939, and they were persecuted due to their "race".

The three non-Jewish mathematicians on the list, Schwerdtfeger, Pinl, and Mohr, came into open political conflict with the Nazis at crucial points of time (respectively 1933, 1939, and 1944). (Of course, there were political dissenters among the Jewish mathematicians too, e. g. Bers and Romberg.[21]) Schwerdtfeger left Germany in 1936 as a political opponent to the Nazis (Schwerdtfeger et al, [28]). He tried (in vain) to use Prague as a stopping place to organize his immigration to the Soviet Union, where he had hoped to find employment. Pinl had fled from unemployment and political pressure in Berlin in 1935 and then found a minor position (Privatdozent and a teaching assignment) at the German University in Prag. He was dismissed there for "democratic attitude" ("demokratische Gesinnung," SPSL 183/3, fol.192) on 3 February 1939, i. e. before occupation. That same year Pinl was temporarily arrested and had to leave a university career altogether. He found a job in industry, contributing to mathematical war research (Kracht, [14]). In 1944, in the final phase of the regime in 1944, Mohr was sentenced to death for "enemy propaganda". He

[19] More on Löwig below in a separate section.

[20] As expressed in a letter by Hermann Weyl (Institute for Advanced Study, Princeton) to the SPSL, dated 28 April 1939 (SPSL 279/2, fol. 20/21).

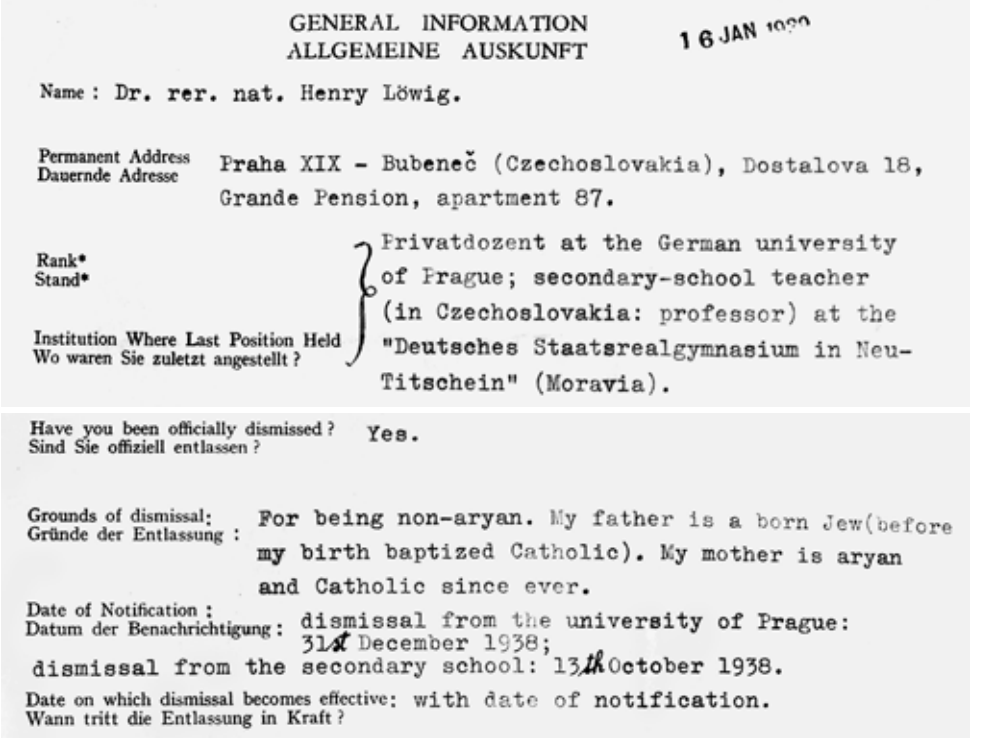
[21] From an undated letter, written by Werner Romberg late in 1938 from Prague to the SPSL, it follows that he had been persecuted in Germany in 1934 also for racist "reasons" (SPSL 337/9, fol. 431). Not knowing this I treated Romberg in my book as a purely political refugee (Siegmund-Schultze, [30]).

could only be saved at the last moment before his execution by a research assignment, organized for him by his colleague at Prague, Hans Rohrbach, and supported by other Germans of some influence within the regime (Litten, [15]).

8. Support and selection of refugees by the SPSL and by its advisors

The SPSL worked under severe restrictions with respect to financial means for the (very modest) stipends. It had to deal with overriding political conditions, such as the cancellation of visas after the outbreak of the war (as discussed above in the case of Fröhlich), and the internment of "enemy aliens" by the British government. Other restrictions were self-inflicted and resulted partly from the scarcity of means. Scientifically excellent refugees had to be preferred over average researchers, younger and promising ones over older, scientists with previous academic positions over those who had not been lucky enough to have academic employment prior to emigration.

The SPSL requested the applicants to – as a first step – complete a three page questionnaire.



GENERAL INFORMATION
ALLGEMEINE AUSKUNFT

16 JAN 1939

Name : Dr. rer. nat. Henry Löwig.

Permanent Address / Dauernde Adresse: Praha XIX - Bubeneč (Czechoslovakia), Dostalova 18, Grande Pension, apartment 87.

Rank* / Stand*: Privatdozent at the German university of Prague; secondary-school teacher (in Czechoslovakia: professor) at the "Deutsches Staatsrealgymnasium in Neu-Titschein" (Moravia).

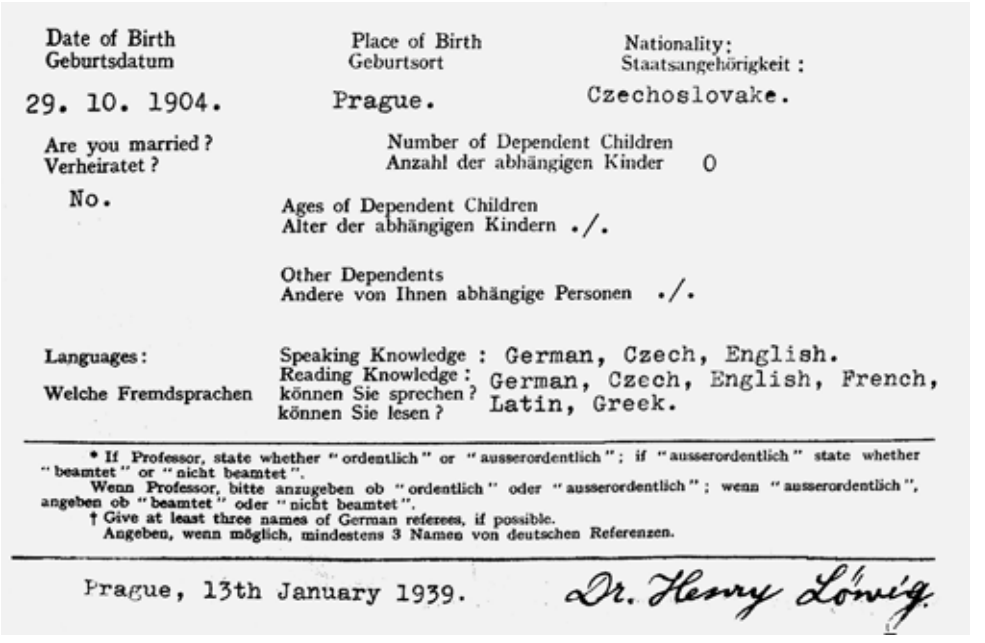
Institution Where Last Position Held / Wo waren Sie zuletzt angestellt ?

Have you been officially dismissed ? / Sind Sie offiziell entlassen ? Yes.

Grounds of dismissal: / Gründe der Entlassung : For being non-aryan. My father is a born Jew(before my birth baptized Catholic). My mother is aryan and Catholic since ever.

Date of Notification : / Datum der Benachrichtigung : dismissal from the university of Prague: 31st December 1938; dismissal from the secondary school: 13th October 1938.

Date on which dismissal becomes effective: with date of notification.
Wann tritt die Entlassung in Kraft ?



Date of Birth Geburtsdatum	Place of Birth Geburtsort	Nationality: Staatsangehörigkeit :
29. 10. 1904.	Prague.	Czechoslovake.

Are you married ?
Verheiratet ?
No.

Number of Dependent Children
Anzahl der abhängigen Kinder 0

Ages of Dependent Children
Alter der abhängigen Kindern ./.

Other Dependents
Andere von Ihnen abhängige Personen ./.

Languages:
Welche Fremdsprachen

Speaking Knowledge : German, Czech, English.
Reading Knowledge : German, Czech, English, French,
können Sie sprechen ?
können Sie lesen ? Latin, Greek.

* If Professor, state whether "ordentlich" or "ausserordentlich"; if "ausserordentlich" state whether "beamtet" or "nicht beamtet".
Wenn Professor, bitte anzugeben ob "ordentlich" oder "ausserordentlich"; wenn "ausserordentlich", angeben ob "beamtet" oder "nicht beamtet".
† Give at least three names of German referees, if possible.
Angeben, wenn möglich, mindestens 3 Namen von deutschen Referenzen.

Prague, 13th January 1939. Dr. Henry Löwig.

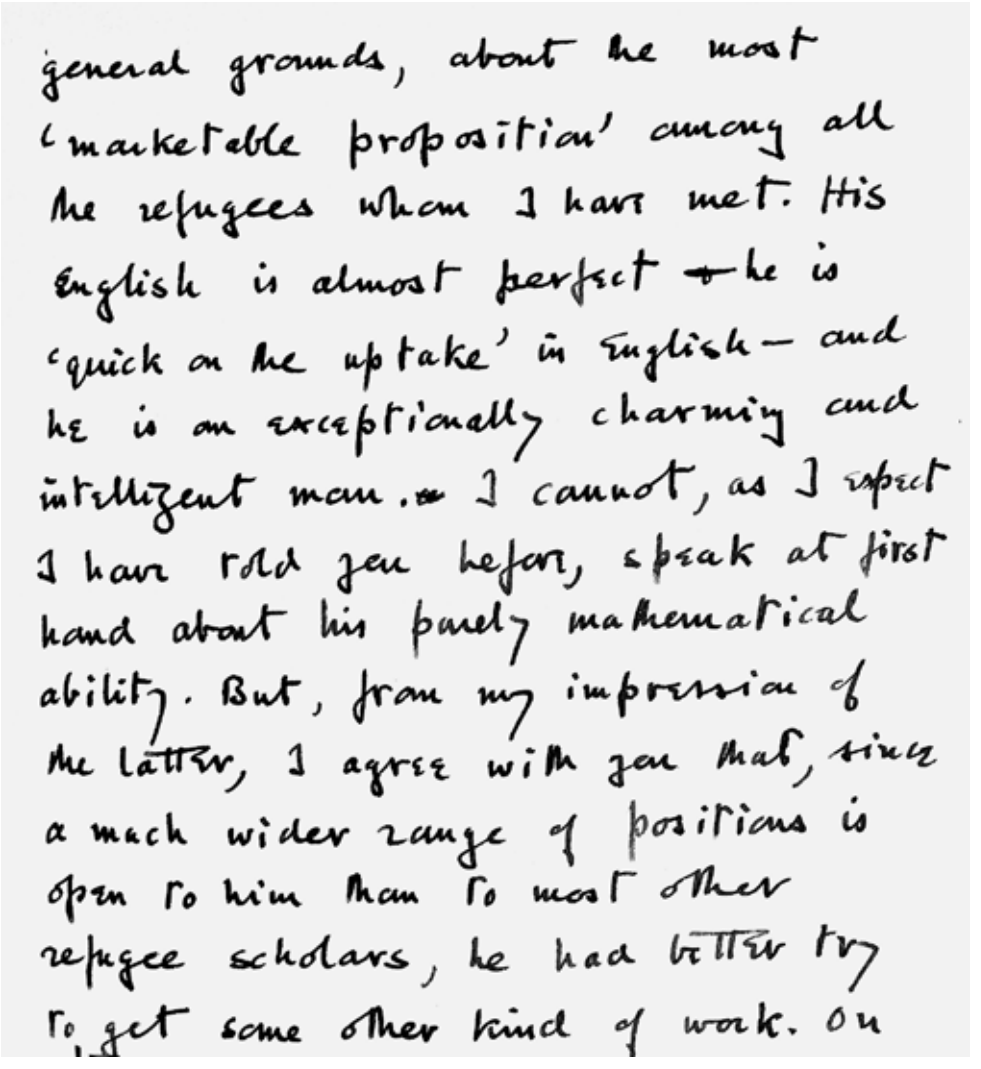
As an example, excerpts from the first two pages of the questionnaire for Löwig, SPSL 282/1, fol.1–2. Courtesy Bodleian Library Oxford

The SPSL then usually involved reviewers (for example John von Neumann for Löwig as in Appendix 1) and tried to solicit additional financial support from the reviewers' institutions, in case they showed interest for a particular candidate. The candidate had the bigger chances to find a job the more "marketable", i. e. adaptable to the host country Britain, he was. In some instances this could backfire against the candidate, for instance, if he was considered as sufficiently flexible to even take jobs outside mathematics. Thus topologist J. Whitehead, in a letter to the SPSL, dated 4 January 1940, praised Behrend for his English, charm and intelligence and drew the conclusion that Behrend could find a job outside mathematics. [22]

In the same letter, Whitehead came to the opposite conclusion with respect to A. Winternitz, about whom he said:

> "Winternitz is altogether a different kettle of fish – nice but one of the 'goofiest' men I have ever met. It is difficult to imagine anything he could do except

[22] On the versatile mathematician Felix Behrend see (Cherry/Neumann, [7]).


general grounds, about the most
'marketable proposition' among all
the refugees whom I have met. His
English is almost perfect – he is
'quick on the uptake' in English – and
he is an exceptionally charming and
intelligent man. I cannot, as I expect
I have told you before, speak at first
hand about his purely mathematical
ability. But, from my impression of
the latter, I agree with you that, since
a much wider range of positions is
open to him than to most other
refugee scholars, he had better try
to get some other kind of work. On

Topologist J. H. C. Whitehead on F. Behrend in a letter to the SPSL, dated 4 January 1940 (SPSL 277/4, fol.: 254/255), Courtesy Bodleian Library Oxford

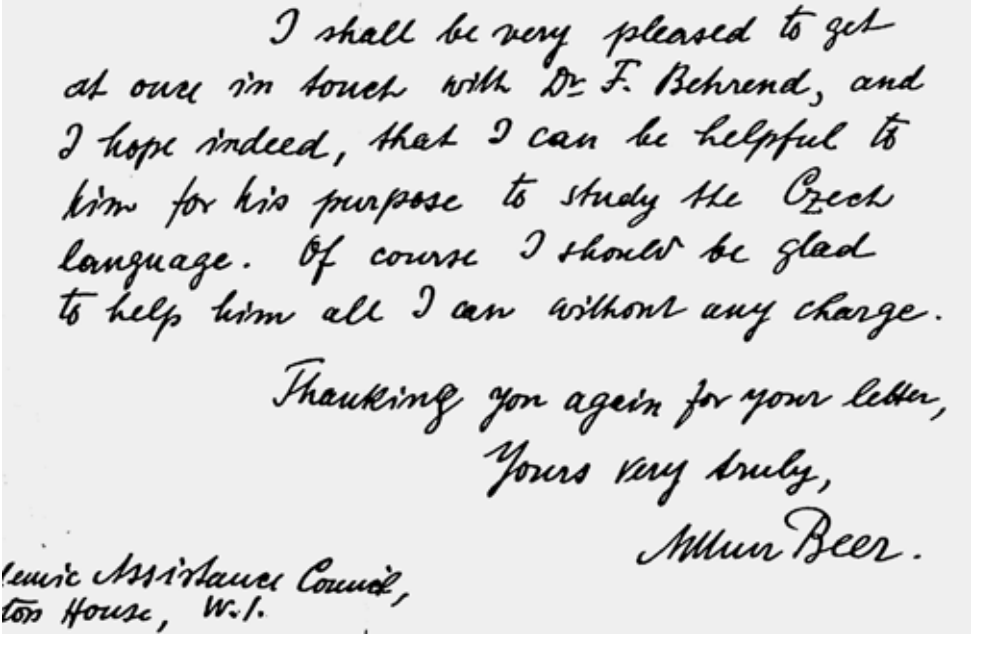
mathematics. But he is balanced by his wife, who is as clever as they come – very much to the spot, with first rate qualifications in languages."[23]

[23] J. H. C. Whitehead on A. Winternitz in a letter to the SPSL, dated 4 January 1940 (SPSL 277/4, fol. 254/255)

The SPSL cooperated with other help organizations (notably the American Emergency Committee) in order to enlarge the resources. In the case of refugees from Czechoslovakia the *Czech Refugee Trust Fund* played a role, which has been mentioned above in connection with Fröhlich.

Not all contacts between the SPSL and the prospective refugees led to stipends, or visas or other actual help for emigration. At worst the scholar was left with nowhere to go, as the cases of Pinl, Löwig and, above all, Fröhlich show.

But often the Society served as an intermediary in making contacts with influential scientists and thus helped indirectly. This could even mean mediating help for language training as in the case of Behrend, when he intended to go to Czechoslovakia in 1935. Behrend apparently received training in this language from a Czech physicist at Cambridge, who did not even charge him a fee.



I shall be very pleased to get at once in touch with Dr F. Behrend, and I hope indeed, that I can be helpful to him for his purpose to study the Czech language. Of course I should be glad to help him all I can without any charge.

Thanking you again for your letter,

Yours very truly,

Arthur Beer.

...emic Assistance Council,
...ton House, W.1.

Letter dated 1 May 1935 by Czech Solar physicist Arthur Beer (Cambridge) to SPSL, (SPSL277/4, fol. 215), Courtesy Bodleian Library Oxford

9. The mathematical impact of the eighteen

Of the 18 mathematicians at least two would prove to be very influential scientifically during their future stay in the United States, namely Löwner and

his student Bers; the latter took his doctoral degree with Löwner in Prague in 1938. Their work on schlicht (Löwner) and quasiconformal (Bers) functions is still stimulating today. Löwner's teacher Pick is remembered for Pick's theorem on reticular geometry and for his friendship and collaboration with Einstein in Prague.

Four of the 18 have left their marks within *applied mathematics* on a high theoretical level: Erdélyi, Funk, Romberg, and Pollaczek:

Erdélyi's contributions to asymptotic analysis and special functions are well remembered today. Funk's work on linear difference equations and on the calculus of variations and its applications in physics and engineering belongs to the classics in the respective fields. Pollaczek was a noted applied mathematician, particularly for his statistical work within telecommunications and for queuing theory (Schreiber/Gall, [26]). Finally, we owe to Werner Romberg a well-known method in numerical analysis (or at least the completion of an earlier method by L. F. Richardson), although Romberg was originally a physicist and his work in applied mathematics was mainly done after the war in Norway. The latter was his country of exile, from which he had to temporarily flee to Sweden in 1943 (Hemmer, [10]). All these four applied mathematicians were unable to leave Europe, at least until the end of the war,[24] with Funk and Pollaczek barely being able to survive under Nazi occupation, Pollaczek in hiding in France. That none of them went to the US, the safest place of emigration, before the war, had at least partly to do with the overwhelming American preference for pure mathematicians among the immigrants. An awareness of the need for applications matured in the U. S. only with war-preparedness around 1940 and with the entrance into the war in late 1941.

But even being a pure mathematician of some fame did not guarantee easy emigration, as the case of Heinrich Löwig, to be discussed in a separate section below, will show.

10. The eleven among the eighteen who managed to escape, and the role of their mathematical qualifications

Except for Bers, there exist files in the SPSL of the other eleven refugees. That means the SPSL was involved in the flight of almost all of those who managed to escape from occupied or soon to be occupied Czechoslovakia.

[24] Erdélyi went temporarily to California after the war.

There are no traces of contact between Bers and the SPSL in London. Most likely Bers did not even try because he might have known that as a relatively young scholar without previous academic position he was not eligible for a SPSL grant. Bers went through France, and he came to the U. S. on a special initiative by Eleanor Roosevelt for political refugees, probably in connection with the mission of the American Varian Fry in France.[25]

In principal the prospects for refugees of emigration were much better in case of outstanding research prowess. The four mathematicians among the 18 who owed their rescue to personal relations and particular biographical circumstances rather than fame and outstanding results in research were Kuhn, Schwerdtfeger, Sternberg and Winternitz. Pavel (or Paul) Kuhn was working as an actuary in Prague. He had been interested in number theory for many years and had therefore been in contact with Viggo Brun in Trondheim in Norway, to whom he finally owed his emigration to Norway (Siegmund-Schultze, [30], p. 127). Schwerdtfeger was personally supported by several mathematicians particularly in Switzerland (G. Pólya, E. Hopf), but less so by his fellow-refugees in the U. S. (Courant, Weyl), who had sufficient influence to mediate academic jobs. The latter were not really convinced of Schwerdtfeger's mathematical abilities; Hermann Weyl even wrote once in 1936 to a colleague that Schwerdtfeger "should not really be a mathematician" (Siegmund-Schultze, [30], p. 165). Schwerdtfeger was finally saved by physicist Max Born (an old acquaintance from Göttingen) and by astronomer William Bragg in Scotland who mediated a job for him in Bragg's country of origin, Australia. Sternberg was the only one of the four who had held an established academic position, namely in Breslau where he had been expelled in 1933 (Schaefer, [24]). He was therefore well within the realm of the SPSL support scheme; he had also respectable, if not outstanding results on his account both in mathematical physics and probability theory. But his age and a lack of personal adaptability to the various circumstances of emigration (Hebrew language in Palestine) mitigated against him. Only his friendship with Richard Courant in the U. S., who had already escaped to America in 1935, saved Sternberg's life and finally secured him a modest position in America. Winternitz owed his survival to the purely accidental circumstance that he had been born in England in 1893, when his father, the noted Austrian born orientalist Moritz Winternitz (1863–1937), held a position

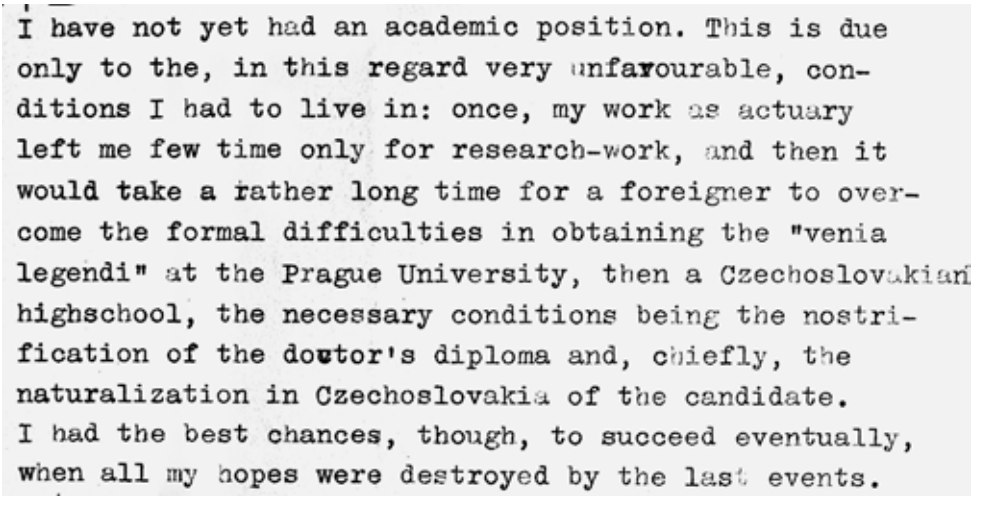
[25] See Abikoff [1] and Bers [4]. It was rather exceptional that previous political engagement of a scientist, even on the left political spectrum, would be helpful to emigrating to the U. S., where political immigrants frequently were considered with suspicion. See in more detail (Siegmund-Schultze, [30]).

at Oxford. He could therefore claim British citizenship and escaped after the German occupation in March 1939; his employment in Britain, however, remained difficult, and he was mainly sustained by his more worldly wife (see above Whitehead on Winternitz).

11. The "academically unemployed" and the short-term visitors of Czechoslovakia among the eleven refugees

Most of the 18 mathematicians in the focus of this paper had been staying in Czechoslovakia for a longer period of time prior to the Munich Agreement. Those who were "academically employed", i.e. had jobs given by the state, usually assumed Czechoslovakian citizenship.[26]

Those, however, who had remained without an academic job in Czechoslovakia, such as Behrend, Erdélyi, Scherk, and Schwerdtfeger, had to keep the citizenship of their original country, as Behrend describes. The number theorist Behrend had to work as an actuary, as he explains in a letter to G. H. Hardy, from 1 May 1939.



I have not yet had an academic position. This is due only to the, in this regard very unfavourable, conditions I had to live in: once, my work as actuary left me few time only for research-work, and then it would take a rather long time for a foreigner to overcome the formal difficulties in obtaining the "venia legendi" at the Prague University, then a Czechoslovakian highschool, the necessary conditions being the nostrification of the doctor's diploma and, chiefly, the naturalization in Czechoslovakia of the candidate. I had the best chances, though, to succeed eventually, when all my hopes were destroyed by the last events.

From Behrend to Hardy, 1 May 1939, copy, unsigned, SPSL 277/4, fol. 237, Courtesy Bodleian Library Oxford

[26] The citizenship is documented in the questionnaires which the applicants sent to the SPSL in 1938 and 1939. (See the picture above of Löwig's questionnaire and also Appendix 2, written by Löwig).

Erdélyi,[27] who according to his own report had fled to Czechoslovakia from Hungarian anti-Semitism in 1926, remained without citizenship, i. e. he was "stateless". In a letter dated 13 December 1938, written to the SPSL by E. G. C. Poole (Oxford New College), an editor of the Quarterly Journal of Mathematics, one reads among other things about Erdélyi:

> "He seems to have a power of formal manipulation and generalization which is reminiscent of writers of a hundred years ago and is rare today." (SPSL 278/4, fol. 149)

Poole said in the same letter that Erdélyi, who had some affiliation with the Technical University in Brno until 1936, then took a doctor degree in Prague, but stayed unemployed in Brno:

> "He wrote in April 1937, being a Jew he held no appointment and had not been allowed to receive his doctor's degree. … [He] had taken no part in politics. He said [in November 1938] he could hardly return to his native land, Hungary, owing to anti-Semitism and that Czechoslovakia was no longer able to continue its extraordinarily generous hospitality." (SPSL 278/4, fol. 151)

This report is contradictory and apparently not fully to the facts, as far as anti-Semitism in Czechoslovakia is concerned.[28] Erdélyi would finally flee to Edinburgh, supported by the SPSL and by E. T. Whittaker (1873–1956).

It is probably not coincidental that mathematicians without jobs or with precarious job conditions such as Pinl, tried hard to connect to Czech colleagues. From Behrend's vita it follows that he continued contacts to the Czech mathematician V. Jarník (1897–1970), at the Czech University in Prague,[29] who had figured already in Behrend's early publications, because Jarník had worked with Edmund Landau in Göttingen.

Another refugee to Prague and later to Canada, Peter Scherk, published in Czech mathematical journals such as the "Časopis pro pěstování matematiky a fysiky" (Scherk, [25]). Max Pinl translated V. Hlavatý's textbook on differential

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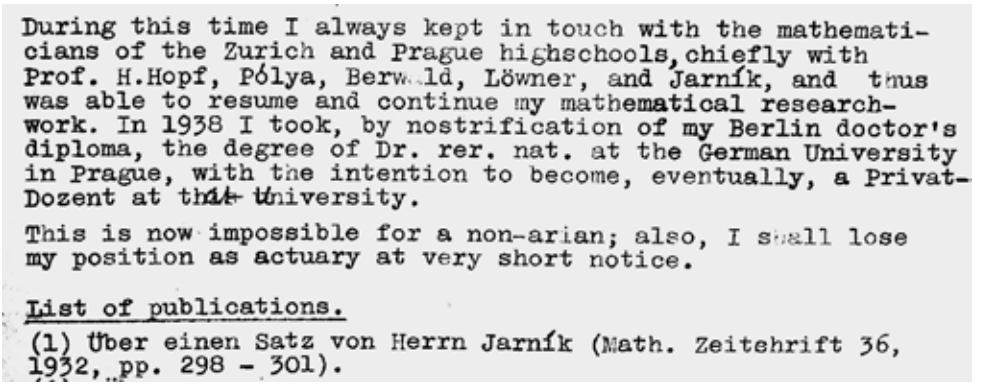
[27] On Erdélyi see Colton [9]. My colleague Rolf Nossum has first alerted me to the fact that Erdélyi too was "German speaking" according to my classification, although I did not include him in Siegmund-Schultze, [30]. Nossum discusses his case partly in Nossum [8].

[28] Kind information by M. Bečvářová (Prague).

[29] More details on Jarník see in Bečvářová/Netuka [3].



During this time I always kept in touch with the mathematicians of the Zurich and Prague highschools, chiefly with Prof. H.Hopf, Pólya, Berwald, Löwner, and Jarník, and thus was able to resume and continue my mathematical research-work. In 1938 I took, by nostrification of my Berlin doctor's diploma, the degree of Dr. rer. nat. at the German University in Prague, with the intention to become, eventually, a Privat-Dozent at this University.

This is now impossible for a non-arian; also, I shall lose my position as actuary at very short notice.

List of publications.

(1) Über einen Satz von Herrn Jarník (Math. Zeitschrift 36, 1932, pp. 298 - 301).

From Behrend's undated vita (1938), SPSL 277/4, fol. 194, Courtesy Bodleian Library Oxford

geometry into German (Hlavatý, [11]).[30] Behrend and Pinl, both living under precarious circumstances, shared a room in Prague during three and a half years, at the expense of the former and much younger of the two (Pinl, [20, Part I], p. 174). In the case of Peter Scherk, the Nazi authorities had used his regular visits to Prague in 1935–1936 on the invitation of Karl Löwner as a pretext to get rid of him when he wanted to return to Berlin in 1936. This provoked Weyl to the response that he had not yet experienced such an extreme case of arbitrary Nazi policies (Siegmund-Schultze, [30], p. 147).

Only three of the 18, namely Pollaczek, Romberg, and Sternberg were short-term visitors to Czechoslovakia, with Sternberg making sporadic visits to Prague from Palestine.

12. A personal tragedy even after the war: the late refugee Heinrich Löwig[31]

Heinrich Löwig (later during emigration called "Henry Lowig") was the only mathematician among the 18, who later was mentioned in Bourbaki's "Elements

[30] This follows also from Pinl's letter of 29 September 1939, sent to an American mathematician (Appendix 3. 5. in Siegmund-Schultze, [30]). Pinl also translated another book of Hlavatý [12]. Kind information by Jan Kotůlek.

[31] There is an extensive file on Löwig in the SPSL box 282, file 1, which comprises 120 sheets. Many more details about Löwig's life and repeated migrations one finds in Bečvářová et al., [2], soon to be published in English as well.

of the History of mathematics" (French original of 1971). That group of modern French mathematician wrote in their chapter on the history of topological vector spaces that in Hilbert space theory "casting off the restrictions of 'separability', … was effected around 1934, in the works of Rellich, Löwig, and F. Riesz." (Bourbaki, [6], p. 213). On August 4, 1939 the SPSL had received a letter supporting Löwig, written by the famous John von Neumann (1903–1957), himself a refugee from Germany at the Institute for Advanced Study in Princeton, USA (See Appendix 1). Löwig's future career after his work on Hilbert spaces around 1934 clearly suffered under the Nazi occupation of Czechoslovakia and the circumstances immediately after the war. He was not, originally, supported by the SPSL, because he had worked as a teacher at a German school in the Sudetes (Neutitschein, Nový Jičín) and thus had no previous salaried academic position. An enquiry by R. G. D. Richardson of the AMS at the SPSL from December 1939 (fol. 55) came too late, because the war had broken out in Europe. As a half Jew (according to Nazi terminology), Löwig had fled from his position as a school teacher after the Munich agreement. In his curriculum vitae, sent to the SPSL 21 August 1945, Löwig described his sufferings in the years after Munich first under the Czechs and then to a much stronger degree under the Nazis. For the period immediately after Munich one has of course to be aware that there did not exist many opportunities for Germans to teach in mutilated Czechoslovakia:

> "After the Munich pact had been signed I was not allowed to lecture at the university and to teach at secondary schools any longer, because two grandparents of mine were of Jewish religion. The Czech offices went, however, on to pay me a salary up to the 30th of June, 1940. Then I was superannuated. In 1943, I was compelled to work as an ordinary labourer in a factory for the German army. In August 1944, my father was, for his descent, arrested without having done anything against the law and transferred into the Small Fortress of Terezín, where he died some few days later. I was told of his death but in the beginning of October, 1944. I was still under the impression of this sad news when the order came that all half Jews are to be interned in especial camps. So it came that, in the time from the 16th October, 1944, up to the 5th of May, 1945, I wandered from one concentration camp to another. But the defeat of the Hitlerian Germany helped me to liberty again." (SPSL 282/1, fol.63)

In the same letter to the SPSL Löwig also said about the time after liberation:

> "My colleagues at the Charles University of Prague refused to employ me. … They considered me as a German." (SPSL 282/1, fol.60/61)

Indeed, the victim of the Nazis, Löwig, did not find a job in Czechoslovakia even after the war. He pointed out, in a memo sent to the SPSL on 22 November 1947 from London on his way to his Australian exile, that these policies contradicted even the text of the so-called "Beneš decrees" themselves. In fact, the latter, at least in their revised form, made exceptions for German Jews, who now had to be considered as victims of the Nazis too. Except for some minor differences in the dates compared to the published historical accounts of the Beneš legislation,[32] Löwig's report seems quite accurate and is thus a valuable document (See Appendix 2).

In the end the SPSL, which had been unable to help him before the war broke out, supported Löwig in finding a job. It was, once again, John von Neumann who assisted the Society in this effort. Löwig accepted a position in Tasmania (Australia). In 1957 he went on to Edmonton, Canada.

The case of Löwig, which now – on the basis of the files kept at the SPSL – can be better documented than Pinl was able to do,[33] reminds us, once again, of the losses due to emigration. Even those who, unlike Löwig, were lucky to escape in time before the war, often could not fully develop their potential, in particular, if they were ending up in scientific backwaters. Cases along this line are Behrend and Scherk, who did not have the full mathematical impact later that their early careers had promised.[34]

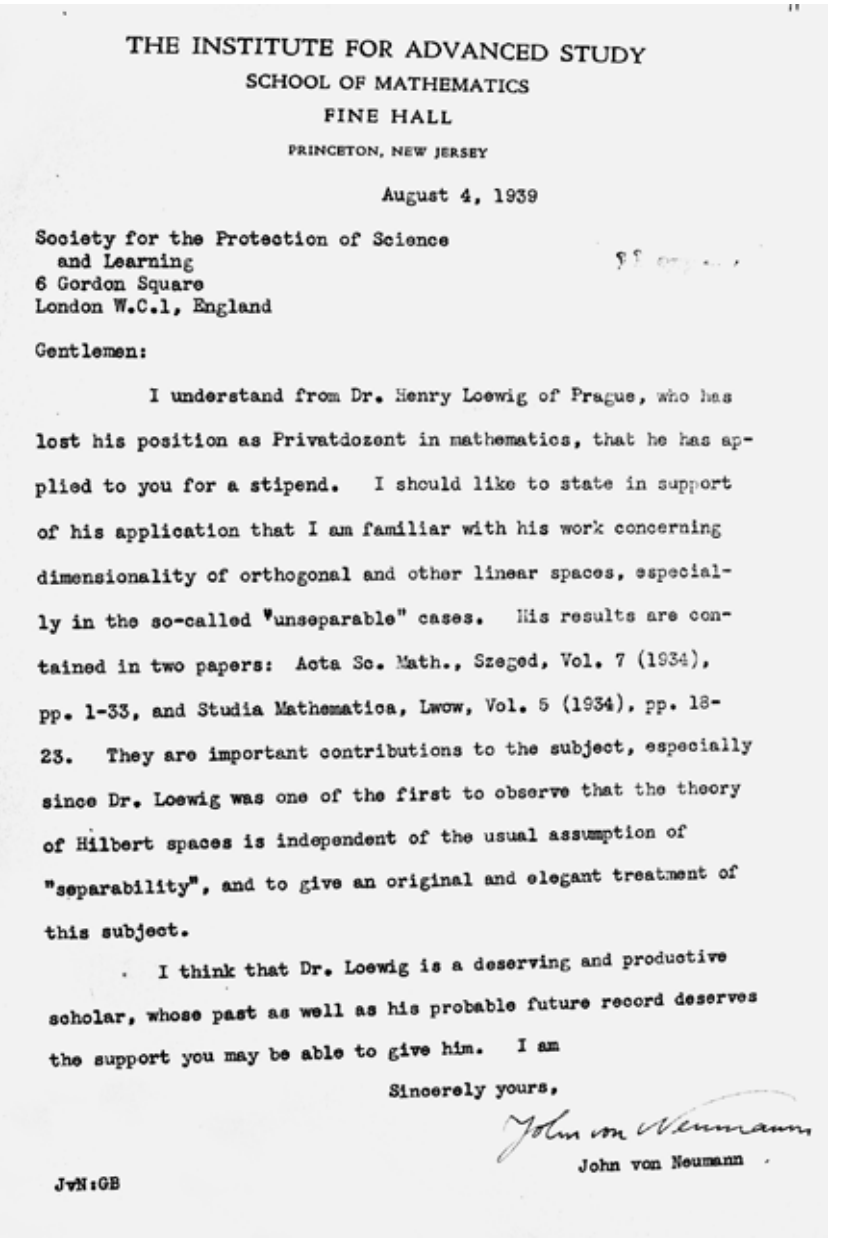
[32] A much more detailed discussion one finds in Bečvářová et al., [2].

[33] One has to admit that Pinl was not always careful enough in his historical reports. In the case of Löwig he even corresponded with him in Canada in the 1960s but still claimed erroneously in his published report that Löwig had left Czechoslovakia before the war broke out. (Pinl/Dick, [21], p. 175).

[34] On 4 June, 1947, Behrend sent a report to the SPSL saying: „My work here has in the main been devoted to teaching duties which were particularly heavy owing to a shortage of staff during the war years and a considerable increase of students in the post-war period. Very little time remained for original research." (SPSL 277/4, fol. 311).

Appendices:

Appendix 1: A letter in support of Heinrich Löwig written to the SPSL by John von Neumann (SPSL box 282, file 1, fol. 11), Courtesy Bodleian Library, Oxford



THE INSTITUTE FOR ADVANCED STUDY
SCHOOL OF MATHEMATICS
FINE HALL
PRINCETON, NEW JERSEY

August 4, 1939

Society for the Protection of Science
and Learning
6 Gordon Square
London W.C.1, England

Gentlemen:

I understand from Dr. Henry Loewig of Prague, who has lost his position as Privatdozent in mathematics, that he has applied to you for a stipend. I should like to state in support of his application that I am familiar with his work concerning dimensionality of orthogonal and other linear spaces, especially in the so-called "unseparable" cases. His results are contained in two papers: Acta Sc. Math., Szeged, Vol. 7 (1934), pp. 1-33, and Studia Mathematica, Lwow, Vol. 5 (1934), pp. 18-23. They are important contributions to the subject, especially since Dr. Loewig was one of the first to observe that the theory of Hilbert spaces is independent of the usual assumption of "separability", and to give an original and elegant treatment of this subject.

I think that Dr. Loewig is a deserving and productive scholar, whose past as well as his probable future record deserves the support you may be able to give him. I am

Sincerely yours,

John von Neumann

JvN:GB

Appendix 2: Heinrich Löwig's report to the SPSL, dated 22 November 1947 on the effect of the Beneš decrees on Germans of Jewish origin in Czechoslovakia (SPSL box 282, file 1, fol. 110/111). Courtesy Bodleian Library, Oxford.

Dr. Henry Löwig
9, Kingsley Close
London, N. 2. November the 22nd, 1947

Details of national and racial politics in Czechoslovakia

(1) Before 1938, every Czechoslovak citizen had to profess a "nationality" (národnost) according to his mother tongue or the language he used in the family; only Jews, i.e., persons of Jewish religion, were entitled[35] to profess Jewish nationality. The nationality was registered in various official documents; in particular, it was noted at a census in 1930.
(2) When the Germans occupied Czechoslovakia in 1938 and 1939, they pronounced that Jews (persons having at least three grandparents of Jewish religion), half-Jews (two grand-parents of Jewish religion) and even persons married with Jews could not be considered as persons of German nationality. Besides it is known how they treated such persons, irrespective of their mother tongue, during the war.
(3) After the war, the great majority of the Germans living in Czechoslovakia were dispossessed of their Czechoslovak citizenship, they were expelled, and their property was confiscated.
(4) But ignoring (2) the Czechs pronounced immediately after the end of the war that all persons who professed German nationality at the census of 1930 were considered as "Germans". E.g. they refuse to return property confiscated by the Nazis to Jews who returned from concentration camps saying that they are "Germans".
(5) In August 1945, a law was issued to the effect that Germans who professed Czech nationality after the 20th of May 1938, or participated in fighting for the liberation of Czechoslovakia or suffered under the terror of the Nazis, were excepted from (3). In particular persons named under (2) who professed German nationality in 1930, were considered as "Germans who had suffered under the terror of the Nazis".

[35] I read the "entitled" in the sense that there was no point or need for Löwig to register with the nationality "Jewish". He seems to stress this only to show that the Nazi policies mentioned in (2) were totally arbitrary.

(6) In spite of this, the Czechoslovak authorities vex persons named under (5) as much as they can. If such a person applies for a citizenship certificate, he has to wait for more than a year. A similar thing happens if he wants his confiscated property to be returned to him. Finally such persons have difficulties in getting their pensions and are not accepted into the Civil Service although no law to this effect has been published.

(Signed): Henry Löwig.

Literature

[1] W. ABIKOFF. Remembering Lipman Bers. *Notices American Mathematical Society*, 42, 1995. no 1, p. 8–18.

[2] M. BEČVÁŘOVÁ et al. *The Forgotten Mathematician Henry Lowig (1904–1995)*. Edition History of Mathematics, volume 52. Prague, Matfyzpress, 2012.

[3] M. BEČVÁŘOVÁ – I. NETUKA (2010): *Jarník's notes of the lecture course Punktmengen und reelle Funktionen by P. S. Aleksandrov (Göttingen 1928)*. Edition History of Mathematics, volume 43. Prague, Matfyzpress, 2010 (English, German).

[4] L. BERS. The Migration of European Mathematicians to America. In: P. Duren (ed.). *A Century of Mathematics in America*. Volume I. Providence, AMS, 1988, pp. 231–243.

[5] Alfred BIRK. *Die Deutsche Technische Hochschule in Prag 1806–1931 (Festschrift)*. Prag, Lerche, 1931.

[6] N. BOURBAKI. *Elements of the History of Mathematics*. Berlin, Springer 1984.

[7] T. M. CHERRY and B. H. NEUMANN. Felix Adalbert Behrend. *Journal Australian Mathematical Society*, 4, 1964, pp. 264–270.

[8] J. W. COHEN. Obituary: Felix Pollaczek. *Journal of Applied Probability*, 18, 1981, pp. 958–963.

[9] D. COLTON. Arthur Erdélyi. *Bulletin of the London Mathematical Society*, 11, 1979, pp. 191–207.

[10] P. Ch. HEMMER. Werner Romberg (1909–2003). *Aarbok Norges Tekniske Vitenskapsakademi*, 2005, pp. 125–126.

[11] V. HLAVATÝ. *Differentialgeometrie der Kurven und Flächen und Tensorrechnung*. Groningen, Noordhoff, 1939 (translated from Czech into German by M. Pinl).

[12] V. HLAVATÝ. *Differentielle Liniengeometrie*. 2nd edition. Groningen, Noordhoff, 1945 (translated from Czech into German by M. Pinl).

[13] H. HORNICH. Paul Funk. *Almanach der Österreichischen Akademie der Wissenschaften*, 119, 1969, pp. 271–277.

[14] M. KRACHT. Maximilian Pinl in memoriam. *Jahresbericht DMV*, 83, 1981, pp. 119–124.
[15] F. LITTEN. Ernst Mohr – das Schicksal eines Mathematikers. *Jahresbericht DMV*, 98, 1996, pp. 192–212.
[16] E. MENZLER-TROTT. *Gentzens Problem: Mathematische Logik im nationalsozialistischen Deutschland*. Basel, Birkhäuser, 2001.
[17] A. MÍŠKOVÁ. *Die Deutsche (Karls-) Universität vom Münchener Abkommen bis zum Ende des Zweiten Weltkrieges: Universitätsleitung und Wandel des Professorenkollegiums*. Prag, Karolinum, 2007.
[18] R. NOSSUM. Emigration of mathematicians from outside German-speaking academia 1933–1963, supported by the Society for the Protection of Science and Learning. *Historia Mathematica*, 39, 2012, pp. 84–104.
[19] M. PINL. In Memory of Ludwig Berwald. *Scripta Mathematica*, 27, 1965, no. 3, pp. 193–203.
[20] M. PINL. Kollegen in einer dunklen Zeit. Part I: *Jahresbericht DMV*, 71, 1969, pp. 167–228; part II: *JDMV*, 72, 1971, pp. 165–189; part III: *JDMV*, 73, 1971/1972, pp. 53–208.
[21] M. PINL and A. DICK. Kollegen in einer dunklen Zeit. Schluß. *JDMV*, 75, 1974, pp. 166–208.
[22] M. PINL and L. FURTMÜLLER. Mathematicians under Hitler. *Yearbook Leo Baeck Institute*, 18, 1973, pp. 129–182.
[23] R. RIDER. Alarm and opportunity: Emigration of mathematicians and physicists to Britain and the United States, 1933–1945. *Historical Studies in the Physical Sciences*, 15, 1984, pp. 107–176.
[24] C. SCHAEFER. Wolfgang Sternberg. *Physikalische Blätter*, 10, 1954, p. 30.
[25] P. SCHERK. Über differenzierbare Kurven und Bögen. *Časopis pro pěstování matematiky a fysiky*, 66, 1937, pp. 165–171, 172–191.
[26] F. SCHREIBER and P. LE GALL. In Memoriam Félix Pollaczek (1892–1981). *Archiv für Elektrotechnik und Übertragungstechnik*, 47, 1993, pp. 275–281.
[27] P. SCHWERDTFEGER, R. POTTS and T. WALL. Hans Schwerdtfeger 1902–1990. *The Australian Mathematical Society Gazette*, 18, 1991, no 3, pp. 65–70.
[28] S. L. SEGAL. *Mathematicians under the Nazis*. Princeton and Oxford, Princeton University Press, 2003.
[29] R. SIEGMUND-SCHULTZE. Theodor Vahlen – zum Schuldanteil eines deutschen Mathematikers am faschistischen Miβbrauch der Wissenschaft. *NTM–Schriftenreihe*, 21, 1984, no 1, pp. 17–32.
[30] R. SIEGMUND-SCHULTZE. *Mathematicians Fleeing from Nazi Germany: Individual Fates and Global Impact*. Princeton, Princeton University Press, 2009.

[31] P. ŠIŠMA. Georg Hamel and Richard von Mises in Brno. *Historia Mathematica*, 29, 2002, pp. 176–192.
[32] P. ŠIŠMA. *Zur Geschichte der Deutschen Technischen Hochschule Brünn. Professoren, Dozenten und Assistenten 1849–1945*. Linz, Universitätsverlag Rudolf Trauner, 2009.
[33] D. ZIMMERMAN. The Society for the Protection of Science and Learning and the politization of British science in the 1930s. *Minerva*, 44, 2006, pp. 25–45.

Summary

The SPSL files provide biographical and political background information for most of the eighteen mathematicians who fall into the categories of the investigation. Almost all of them were persecuted on anti-Semitic grounds. However, the opportunities and conditions of emigration were very different, depending on age, qualification and research subject of the refugees. Three of the fifteen lost their lives due to Nazi persecution, one mathematician (H. Löwig) was even persecuted after the war due to bureaucratic reasons and lack of political sensitivity.

Resumé

Fond SPSL poskytuje informace biografického a politického charakteru pro většinu z 18 matematiků, jejichž osudy zkoumal tento článek. Téměř všichni byli pronásledováni jako Židé, z pozic antisemitismu. Nicméně příležitosti a podmínky emigrace se velice lišily v závislosti na věku, kvalifikaci a na vědeckém zaměření uprchlíků. Tři z pěti zemřeli kvůli nacistické perzekuci, jeden matematik (H. Löwig) byl dokonce pronásledován i po válce, kdy se stal obětí „úřadování“ a politické necitlivosti.

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