## **TEXTES & DOCUMENTS**

# OPPOSITION TO THE BOYCOTT OF GERMAN MATHEMATICS IN THE EARLY 1920s: LETTERS BY EDMUND LANDAU (1877–1938) AND EDWIN BIDWELL WILSON (1879–1964)

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ABSTRACT. — This paper, through the publication of two of their letters, sheds light on the political positions of two influential mathematicians of the first half of the 20<sup>th</sup> century, the German Edmund Landau and the American Edwin Bidwell Wilson. It provides substantial evidence for the widespread rejection of the political boycott of German mathematics not only by the Germans but also by the community of American mathematicians in the early 1920s.

RÉSUMÉ (Opposition au boycott des mathématiques allemandes dans les années 20 : lettres d'Edmund Landau (1877–1938) et d'Edwin Bidwell Wilson (1879–1964))

Deux parmi les quelques lettres publiées ici : l'une du mathematicien allemand Edmund Landau, l'autre du mathématicien américain Edwin Bidwell Wilson, donnent des éclaircissements sur les positions politiques de leurs auteurs par rapport au boycott de la science allemande du début des années 1920. Elles documentent le refus croissant de ce boycott, non seulement de la part des Allemands, mais aussi de la part de la communauté mathématique aux États-Unis.

Key words and phrases : International Congresses of Mathematicians after World War I, Boycott of German mathematics, International Mathematical Union.

Texte reçu le 30 novembre 2010, révisé le 8 février 2011, accepté le 6 mars 2011.

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#### 1. INTRODUCTION

The Versailles treaty of June 1919, half a year after the end of World War I, profoundly influenced the postwar mentalities of the European peoples. One of its effects was the formation of the League of Nations, the forerunner of today's United Nations. It is arguable, however, that the treaty's deficiencies contributed to the perpetuation of prejudices and hostilities, to rearmament, to new military conflicts, and ultimately to World War II. One of its consequences was the foundation of the *Conseil international de recherches* (International Research Council, henceforth IRC) in Brussels in July 1919 under the leadership of the French mathematician Émile Picard (1856–1941). The IRC oversaw the creation in the various scientific disciplines of "international unions" that excluded from membership the so-called "Central Powers," that is, Germany, Austria, and their allies. These unions, representative of the increasing societal importance of science and of the need to find state support for fundamental research, were nevertheless marked by the war and by the hostilities that underlay their creation. <sup>1</sup>

The International Mathematical Union (IMU) of the IRC was founded during the International Congress of Mathematicians at Strasbourg in September 1920 with the Belgian mathematician, Charles-Jean de la Vallée Poussin (1866–1962), elected as its first President [Lehto 1998, p. 23]. The very fact that this congress was held in Strasbourg, a city that had been under German rule until 1918, made a strong political statement. Following an impromptu offer by the American delegates Leonard E. Dickson and Luther P. Eisenhart, it was decided that the next congress would take place in New York City in 1924 [Archibald 1938, p. 19]. It soon became clear, however, that most mathematicians and politicians in the United States were unwilling to support a mathematical congress that excluded the Central Powers. By 1922, the Canadian mathematicians—and

<sup>&</sup>lt;sup>1</sup> Lehto [1998, p. 33] cited, in particular, a "lack of mathematical substance" in the work of the union in mathematics, meaning apparently that purely political measures dominated over practical work like funding of publications etc. For a more recent account of the impact of World War I, cf. Parshall [2009].

particularly John C. Fields (1863–1932)—had stepped in and declared their willingness to organize the 1924 congress in Toronto.

The fact that this congress still excluded the Central Powers led to a boycott by mathematicians such as the Englishman G. H. Hardy (1877–1947) and the American Oswald Veblen (1880–1960). When those present in Toronto passed a resolution, basically on the initiative of representatives of the American Mathematical Society, to lift the ban, <sup>3</sup> the almost immediate result was the withdrawal of the proposal that had been made in Strasbourg to have the 1928 ICM in Belgium, a country closely allied with France. Italy then came forward to fill the void with an offer to host. There, in Bologna, mathematicians convened—for the first time in the post-World War I era—regardless of their nationality.<sup>4</sup>

Given the different political situations of the countries in which they were living, it should come as no surprise that in the early 1920s many mathematicians from war-affected, allied countries such as France and Belgium supported the boycott against German mathematics, while mathematicians from the former Central Powers almost unanimously opposed it. More interesting and less foreseeable were the positions of mathematicians from what might be called third-party countries, countries formerly allied with France (such as Great Britain and the United States), or with Germany, or from the ostensibly "neutral" countries particularly in Scandinavia. Again, it is not surprising that soon after the war, the mood in the Scandinavian countries was decidedly against the boycott. The brothers Niels and Harald Bohr, the physicist and the mathematician, respectively, showed their impatience with the situation in an interview in Copenhagen in September of 1925 with Augustus Trowbridge, a functionary of the Rockefeller Foundation. They announced that the Scandinavian countries would most likely withdraw from the IRC if the boycott continued. In their view, "[s]cientifically, the Germans are as important to us as any

<sup>&</sup>lt;sup>2</sup> The eponymous Fields Medal was awarded for the first time at the Oslo Congress in 1936. The money for its endowment came partly from funds earmarked for the congress in Toronto and partly from Fields's private fortune.

<sup>&</sup>lt;sup>3</sup> See Wilson's letter in section 3 below.

<sup>&</sup>lt;sup>4</sup> It should be noted, however, that Germany had not joined the IMU at that time and would not join it until after the Second World War, owing in part to the fact that the IMU was suspended around 1932 [Lehto 1998, p. 56 ff.].



FIGURE 1. The picture shows, from left to right, the American topologist and geometer Oswald Veblen (1880–1960), the German number theorist Edmund Landau (1877–1938), and the Danish analyst Harald Bohr (1887–1951). The three were good friends and vehemently opposed to the boycott. The picture was probably taken in Princeton in the summer 1931 (kind information H. Wefelscheid). Courtesy of The Shelby White and Leon Levy Archives Center at the Institute for Advanced Study, Princeton.

nation. We are not politically unanimously pro-German, but scientifically we are. ... [Trowbridge] was rather surprised at the heat with which the Scandinavian view was presented" [Siegmund-Schultze 2001, p. 59].

Of course, the opinions of individual mathematicians from all three types of countries varied depending on political—in particular, nationalistic—positions and on scientific relationships maintained with mathematicians from the enemy nations during the war. Nationalists such as Picard and Gabriel Koenigs on the French side and Ludwig Bieberbach and Erhard Schmidt on the German—as well as conservatives or individualists from allied or politically neutral countries such as the Englishman W. H.

Young, the Italian Vito Volterra, and the Dutchman L. E. J. Brouwer<sup>5</sup>—tended to resist reconciliation. The self-righteously anti-boycott stance of some of them represented an emotional attitude of the insulted that led, in reality, to the boycott's perpetuation.<sup>6</sup> The general and dominant tendency, however, was to renounce the boycott and to move toward a normalization of international scientific contacts. This was especially true as admission to the League of Nations increasingly became an explicit goal of German foreign policy. Finally, the political pressure for reconciliation on protagonists such as Picard reached a critical point. At an extraordinary meeting of the IRC in Brussels in June of 1926, the exclusion clause was repealed, and Germany was invited to adhere to the various international scientific unions [Schroeder-Gudehus 1973, p. 110–111]. Then, however, it was the German government that failed in its efforts to convince leading German scholars to join.<sup>7</sup>

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The letters published here for the first time reflect opinions about the boycott typical of—on the one hand—the German, and—on the other hand—the "third party" positions. From 1922 and 1924, they predate the boycott's official cessation in 1926 and reveal the opinions of the liberal, German-Jewish, pure mathematician from Göttingen, Edmund Landau (1877–1938), and of the more conservative, American applied mathematician, Edwin Bidwell Wilson (1879–1964), respectively. Not surprisingly,

<sup>&</sup>lt;sup>5</sup> Young's individualist efforts to save the relationship between the IRC and the IMU has been described in detail by Lehto [1998, p. 50–56]. Brouwer's pro-German position was inspired by his aversion to French nationalism [Dalen 1999/2005].

<sup>&</sup>lt;sup>6</sup> Paradoxically, their anti-boycott stance actually resulted in Bieberbach and Schmidt boycotting the Bologna Congress of 1928, even though its main organizer, Salvatore Pincherle, who was then the President of the IMU, had gone out of his way to make it open to all nations. They would find certain elements of the organization inacceptable, like an excursion to Riva del Garda (September 7, 1928) in former southern Tyrol which had become Italian in 1919. This sort of resistance against getting over the boycott was quite frequent in the late 1920s, see [Schroeder-Gudehus 1973].

<sup>&</sup>lt;sup>7</sup> It was only after World War II that a renewed IMU became gradually responsible for holding the International Congresses of Mathematicians. Political problems persisted, although of very different kinds represented by the situations in the Soviet Union, East Germany, and Taiwan. The difficult history of the IMU and its ambiguous relationship to the ICMs is described in detail in [Lehto 1998].

both positions—though in their details not identical—were anti-boycott. Voices in favor of the maintenance of the boycott, represented by the addressee of one of the letters, Émile Picard, will not be heard directly here.

What makes these letters particularly interesting is their personal and frank tone. Wilson's letter also reflects on the positions on the boycott of *other* American mathematicians, leaving no doubt of his opinion that a majority within the American community opposed it. The fact that even Wilson, one of the most French-leaning and anti-German of American mathematicians, supported the boycott's termination, confirms the intensity of that feeling at the time.

While Wilson has been relatively neglected as a historical figure (he deserves much more attention, see below), Landau, as a representative of the flourishing Göttingen school of the first third of the 20th century, has not. Still, efforts to supplement the analysis of his well-studied work in number theory and complex function theory with a look at his political positions and social actions, are of rather recent date. Leo Corry and Norbert Schappacher have begun to redress that in their interesting and richly documented contribution [Corry/Schappacher 2010]. There, they argue that Landau's address at the opening of the Hebrew University in Jerusalem in 1925, in which he discussed twenty-three problems in number theory, reflects meaningfully on his position toward Zionism and the boycott. In particular, Landau drew telling connections in the conclusion of his address between the ideal of pure, disinterested research and international cooperation [Corry/Schappacher 2010, 466]:

I am certain that I should not fear to be asked by you, for what purpose does one deal with the theory of numbers and what application it may have. For we deal with science for the sake of it and dealing with it was a solace in the days of internal and external war that as Jews and as Germans we fought and still fight today.

Landau also referred in his address to the Englishmen G. H. Hardy and John E. Littlewood (1885–1977) as his "friends" and made kind mention of the "Jewish mathematician Yaakov Hadamard in Paris, and ... the excellent Belgian scholar de la Vallée Poussin" [Corry/Schappacher 2010, 462]. For Landau, Hadamard apparently represented the "good," non-chauvinistic

French mathematician, who supported the Zionist cause of the university in Jerusalem. Landau's mention of de la Vallée Poussin, the first President of the IMU, could be interpreted as conciliatory to the politically moderate Belgians.

The rather direct and openly political statement that Landau made in his letter of March 17, 1922 to the Swedish function theorist Gösta Mittag-Leffler (1846–1927) (see section 2.2 below) would seem to counter the received image of him as guarded and aloof. He did not deny his strong sense of German patriotism during the war, speaking in the first person plural of "when we seemed to be victorious and when we were doing badly." However, as a statement about all German mathematicians, his claim that "we in Germany ... have never, from 1914 to the present, rejected individual 'enemy' scholars" is certainly too broad. The spirit of the time may perhaps be better captured by the signature of Landau's Göttingen colleague Felix Klein on the infamous militaristic appeal of ninety-three German intellectuals "An die Kulturwelt" (To the civilized world) of October 1914.8

In sharing his thoughts with Mittag-Leffler, Landau approached a well-known proponent of internationalism and opponent of the boycott. As documented in [Dauben 1980], Mittag-Leffler, the founder (in 1882) and editor of *Acta Mathematica* who lived in politically neutral Sweden, had tried everything in his power to encourage the resumption of international contacts after World War I. He asked various leading mathematicians from France, Germany, and other countries to contribute articles to his journal in the hope that this would help ease tensions. He also sustained an international correspondence with many of the major mathematical figures of the postwar period. Among them, Hardy, who was a good friend of Landau's and one of the most vocal opponents of the boycott, wrote to

 $<sup>^8</sup>$  Wilson alluded to this document in his letter to Émile Picard of December 19, 1924 (see below).

<sup>&</sup>lt;sup>9</sup> Mittag-Leffler's correspondence with Landau is part of the Swedish mathematician's extensive estate, which was originally deposited at the institute he founded in Djursholm (near Stockholm) and which bears his name. Although the originals have apparently recently been transferred to the Swedish Academy of Sciences in Stockholm, copies remain at the Mittag-Leffler Institute, which has granted permission to publish the letters. For a first attempt at a comprehensive biography of Mittag-Leffler, see [Stubhaug 2007].

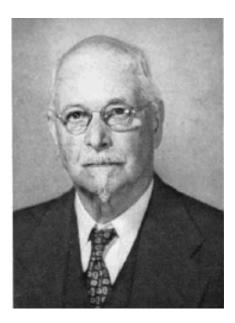


FIGURE 2. Edwin Bidwell Wilson (1879–1964), an influential and outspoken American applied mathematician and social scientist. Picture taken from [Hunsaker/MacLane 1973, p. 284].

Mittag-Leffler on September 30, 1921 from Jena, where he had participated in a meeting of the German Mathematicians' Association (DMV) [Dauben 1980, p. 276–277]:

For my own part I ... am in no circumstances prepared to take part ... in any Congress from which for good reasons or for bad, mathematicians from particular countries are excluded.

These two most active proponents of the abolition of the boycott, the Swede Mittag-Leffler and the Englishman G.H. Hardy, also come into the picture in the correspondence below, albeit indirectly. Mittag-Leffler's effort in March 1922 to secure Landau as the author of an obituary for the Frenchman Camille Jordan (1838–1922), who had died in January, failed, as we shall see.

Similar sentiments were in evidence on the other side of the Atlantic. American applied mathematician, physicist and social scientist, Edwin Bidwell Wilson, also added his voice to the debate on the boycott. 10 Wilson had entered the American mathematical stage in 1901 with the publication of a book on vector analysis [1901] that made the views of his teacher, Josiah Willard Gibbs, more widely known. After a foreign study tour in Paris in 1902–1903, he worked broadly on the foundations of geometry and of the calculus as well as in applied mathematics, becoming head of the Department of Physics at the Massachusetts Institute of Technology in 1917 and moving to Harvard School of Public Health in 1922. His most important theoretical contribution to applied mathematics was perhaps his notion independently of Jerzy Neyman and Egon Pearson-of the confidence interval in statistics [Hunsaker/MacLane 1973, p. 294ff]. He may have made his greatest contributions to science at the organizational level, however. As chair, for example, of the committee for natural sciences of the National Resources Board, founded by President Franklin Roosevelt in 1934, Wilson "combined as completely as anyone could the points of view of the social and natural sciences" [Dupree 1957, p. 359]. He continued to serve the broader mathematical community following his retirement from Harvard in 1945. As a scientific advisor to the Office of Naval Research from 1948 until his death in 1964, he was repeatedly honored by the government for his service.

Wilson's altruism, however, often came at the price of what has been described as his "caustic tongue" [Hunsaker/MacLane 1973, p. 290]. A result perhaps of the marginal position of applied mathematics in the United States [Siegmund-Schultze 2003] as well as of his conservative political views, that "caustic tongue" manifested itself not only in his personal correspondence but also in sharply worded polemics in articles and reviews. For example, his article on "The So-called Foundations for Geometry" [1904] was explicitly, and according to [Hunsaker/Maclane 1973] without full justification critical of Hilbert's 1899 book, *Grundlagen* 

<sup>&</sup>lt;sup>10</sup> The Harvard Archives hold Wilson's extensive and largely untapped *Nachlass* of 39 boxes (HUG 4878.203).

der Geometrie (1899). Published in 1904 in a German journal, it set a certain tone for Wilson's interactions with the German mathematical community.

Indeed, it is Wilson's clear aversion to German scholars and to what he perceived as the tendencies in German science to achieve world dominance that makes his position on the boycott of the 1920s—and ultimately his rejection of it—particularly relevant. In 1916, for example, in the heated atmosphere prior to the United States' entry into World War I, Wilson gave this "explanation" for "why German scholarship is so much a la mode in this country: ... it stimulates mediocrity." Then again in 1918, he penned an anti-German article in *Science* entitled "Insidious Scientific Control" [1918].

Anti-Semitic prejudices may also have played a role in Wilson's aversion to German science. In a letter in 1926 to Roland Richardson, the Secretary of the American Mathematical Society, Wilson referred to the "so completely Jewish atmosphere as now prevails in Göttingen, particularly in mathematics" [Siegmund-Schultze 1994, p. 311], although he was not blind to the defects of applied mathematics in the U. S. and recognized good work when he saw it. He thus stifled his anti-Semitism when making reference to men like Albert Einstein and Norbert Wiener, whom he justifiably viewed as outstanding.<sup>12</sup>

Wilson's correspondence with the organizer of the International Mathematical Congress in Toronto, J. C. Fields in June and July of 1925—about one year after the ICM and shortly after the IRC had confirmed the exclusion of the Central Powers from the various unions—also sheds light on his views. In particular, it makes clear that the American Oswald Veblen, a good friend of Hardy and Landau, had refused to go to Toronto because of the exclusion of the Germans. Wilson saw a strategy at work there and wrote to Fields on June 20, 1925, comparing the German-trained function theorist William F. Osgood (1864–1943) with Hardy in England:

Wilson to J. H. Wigmore, April 20, 1916, Wilson Papers, Box 2, file (G-Z).

<sup>&</sup>lt;sup>12</sup> Wilson acknowledged, at least occasionally, his own limitations, describing himself to Picard in 1924 as a "poor politician" (see below).

I do not think that Osgood was any less unreasonable than Hardy. The number of American mathematicians that stayed away from the Congress was probably not large but there were some rather important ones; not only did Osgood stay away but every mathematician at Harvard stayed away.

Fields, in his response, tried to downplay the anti-boycott mood by pointing to the example of the leading Harvard mathematician, George D. Birkhoff, whose absence in Toronto owed at least ostensibly to a lecture tour in California. Wilson acknowledged that the anti-boycott sentiment—among those American mathematicians who finally did attend the Toronto ICM—was not too extreme. In his view, the only one who "had an intransigent attitude was" Virgil Snyder (1869–1950), who, as a student of Felix Klein's in Göttingen in the 1890s, favored German over French participation in the international congresses. The majority of Americans, however, wanted equal rights for all.

Wilson's letter to Picard of December 19, 1924, is a rather long document, because Wilson tries to represent diverging standpoints in order to be more convincing. The comparison between German-French animosities and the divide between southerners and northerners in the United States seems an interesting and useful one. The letter goes into some general historical tendencies such as the rise of Soviet Russia, testifying to anti-communist fears among American intellectuals, particularly of those like Wilson on the politically more conservative side. Anticipating correctly the future alliance between France, Western Germany, and the U.S. in the Cold War, Wilson cannot be chided for deficiencies in his short-term predictions, such as his denial of possible attacks by Germany on France. The letter is characterized by a certain verbosity, which might have been caused by an attempt to be diplomatic vis-à-vis the President of the International Research Council, Émile Picard. If this was on Wilson's mind, one has to say that he was not very successful in his effort. Indeed Wilson's presentation was less than diplomatic. As he bluntly put it, he regarded "the organization of the International Research Council as possibly, though not surely, a bad thing for future international cooperation among scientific people." This nevertheless underscored the urgency with

 $<sup>^{13}\,</sup>$  Wilson to Fields, June 20, 1925 and Fields to Wilson, July 2, 1925, in HUG 4878.203, box 8, file F (1925).

which the resumption of normal international mathematical communication was felt within the American mathematical community in the early 1920s.

# 2. AN EXCHANGE OF LETTERS FROM 1922 BETWEEN GÖSTA MITTAG-LEFFLER AND EDMUND LANDAU $^{14}$

# 2.1. Mittag-Leffler to Landau

p.t. Tällberg, Sweden, 13/3.1922

Prof. Dr. E. Landau Herzberger Chaussee [sic] 48 Göttingen

Dear Friend,

Can you and would you write an article on Camille Jordan for my Acta, including a description of his scientific achievements? French, although even better English. One or two sheets<sup>15</sup> in Acta format. I believe, apart from its scientific importance, such an article from your hand would also serve the interest of Germany and of the reemergence of international scientific relations. Please respond quickly, address Djursholm, whether you are willing to take on such a task.

Yours most faithfully [Mittag-Leffler]

Lieber Freund,

Können und wollen Sie für meine Acta einen Aufsatz schreiben über Camille Jordan mit einer Schilderung von seinen wissenschaftlichen Leistungen? Französisch, am liebsten doch englisch. Ein oder zwei Bogen in Acta-Format. Ich glaube, abgesehen von seiner wissenschaftlichen Bedeutung, ein solcher Aufsatz von Ihrer

<sup>14</sup> Institute Mittag-Leffler (Djursholm) and Swedish Academy of Sciences (Stockholm). Our translations from the original German, which is reproduced after the translation. Mittag-Leffler's letters are typewritten, Landau's letter is handwritten.

<sup>15</sup> One "sheet" = *Bogen* contains 16 pages.

Hand würde auch im Interesse Deutschlands und des Wiederaufstehens der internationalen wissenschaftlichen Beziehungen sein. Bitte antworten Sie schleunigst, Adresse Djursholm, ob Sie einen solchen Auftrag annehmen wollen.

Ihr ergebenster

# 2.2. Landau to Mittag-Leffler

Oberstdorf, 17.3.22

Dear colleague and friend!<sup>16</sup>

Many thanks for your friendly lines from the 13th and the request to write an obituary for Camille Jordan in the Acta. Unfortunately I am not in a position to comply. I have only written an obituary once, for Dedekind, whose works I have always known very well, whose working area was my own and with whom I exchanged publications and had permanent personal relations. Even that obituary cost me so much time and effort that I wouldn't have accepted had I known beforehand.

Jordan is much farther from me; he did not work much in pure number theory and analysis, <sup>17</sup> and I have never read his main publication, the *Traité des Substitutions*. I learned group theory and Galois theory orally from Frobenius, and for my lectures I used modern German and English textbooks. Jordan never responded to my hundreds of mailings (from my first publication in 1899 until his death) with a single one of his works in return (naturally I bought the *Cours d'analyse*, but I am too much of an amateur in the field of real functions to be able to appreciate the masterpiece authoritatively), so that I would have to delve into everything first (the more so since the French literature after 1914 is almost unknown to me). Ergo: it is impossible.

<sup>16</sup> The present translation deliberately maintains the long-winded structure of some of Landau's German sentences; the many parentheses were atypical for average German writers. They seem to express the immediacy and honesty of Landau's response to Mittag-Leffler.

<sup>17</sup> Landau apparently defines "analysis" here in the sense of complex function theory, which, together with number theory, was closest to his interest. The belated reference in the letter to Jordan's work in real analysis shows, once again, the spontaneity of Landau's letter.

Given the very political, secondary aim of your request, which you mention in your letter, I do not want to end with the above reasons for my refusal, which I would also have had to give in the case of a Swede or a German. Rather I have to remark, in full appreciation of your good intentions:

The reemergence of international relations, as far as I can see from my vantage point, has long been completed with all leading colleagues in England, America, Poland, Italy etc., I mean with the entire scientific world except France. The most important contacts with England and Italy were not lost even during the war. Relative to France, I myself (and by the same token we Germans in general) do not have to take the initiative. During the entire war (when we seemed to be victorious and when we were doing badly) and some time after it, I sent, as before, all my books and offprints without exception to all French colleagues with whom I was in correspondence. Only Abbé Fouët 18 reacted gratefully, and only to him will I continue to send my publications. At about the time of the foundation of the boycott organization<sup>19</sup> and of the scandalous "international" Strassburg Congress (to the election as an honorary president of which the old C. Jordan allowed himself to be misused, and where Sweden would have honored herself by absence, had not, unfortunately, my friends Nörlund<sup>20</sup> and Cramér<sup>21</sup> participated in good faith) my dignity forced me to discontinue the ignored regular postings of my works.

The man who is writing this is no chauvinist and hopes that the French will regain contact with the international scientific world. We in Germany have done our part and have never, from 1914 until today, rejected individual "enemy" scholars.

<sup>&</sup>lt;sup>18</sup> The Jesuit mathematician, Edouard Amédée Marie André-Fouet (1854–1939), was dean of the École des sciences of the Institut catholique de Paris and author of Leçons élémentaires sur la théorie des fonctions analytiques (1907).

Here, the reference is to the "Conseil International de Recherches," which was led by Picard and founded in 1919.

Niels Erik Nørlund (1885–1981), a Danish mathematician close to Mittag-Leffler, worked primarily in difference equations and geodesy. Because he was at the Swedish university in Lund from 1912 until 1922, he was often taken to be Swedish. However, he attended the Strasbourg Congress as a delegate from Denmark [Villat 1921, p. viii].

<sup>&</sup>lt;sup>21</sup> The Swedish mathematician, Harald Cramér (1893–1985), was a pioneer of mathematical statistics, in particular of risk theory and stochastic processes.

With most cordial greetings Yours Edmund Landau.

#### Hochverehrter Herr Kollege und Freund!

Vielen Dank für Ihre freundlichen Zeilen vom 13. und die Aufforderung, in den Acta einen Nachruf auf Camille Jordan zu schreiben. Leider bin ich dazu nicht in der Lage. Ich habe ein einziges Mal einen Nachruf geschrieben, auf Dedekind, dessen Schriften ich von jeher gut kannte, dessen Arbeitsgebiet das meine war, und mit dem ich in Schriftenaustausch und fortdauernden persönlichen Beziehungen stand. Aber auch dieser Nachruf hat mich so viel Zeit und Arbeit gekostet, dass ich ihn nicht übernommen hätte, wenn ich es vorher gewusst hätte.

Jordan steht mir viel ferner; in reiner Zahlentheorie und Analysis hat er wenig gearbeitet, und sein Hauptwerk, den Traité des Substitutions, habe ich nie gelesen; ich hatte Gruppentheorie und Galoissche Theorie mündlich von Frobenius gelernt und für meine Vorlesungen moderne deutsche und englische Lehrbücher zu Rate gezogen. Auch hat Jordan meine hunderte von Zusendungen (seit meiner ersten Arbeit 1899 bis zu seinem Tode) niemals durch Sendungen seiner Schriften beantwortet (den cours d'analyse habe ich mir natürlich gekauft; hier bin ich wiederum in der Theorie der reellen Funktionen zu sehr Amateur, um dieses Meisterwerk autoritativ würdigen zu können), so dass ich (zumal die französische Literatur seit 1914 mir kaum bekannt ist) mich erst in alles einarbeiten müsste. Also: es geht nicht.

Bei dem hochpolitischen Nebenzweck Ihrer Aufforderung, den Sie in Ihrem Schreiben nennen, will ich mich aber nicht auf die obige Motivierung meiner Absage beschränken, die ich auch in dem Falle hätte geben müssen, dass es sich um einen Schweden oder Deutschen gehandelt hätte; sondern ich muss auch dazu, in voller Würdigung Ihrer guten Absichten, bemerken:

Das Wiederaufstehen der internationalen Beziehungen ist, soweit ich von meinem Ausgangspunkte aus es übersehe, mit allen massgebenden Kollegen in England, Amerika, Polen, Italien etc., ich meine fast der ganzen Welt ausser Frankreich, längst erfolgt. Die wichtigsten Fäden mit England und Italien waren auch während des Krieges nicht gerissen. Frankreich gegenüber habe ich (und analog wir Deutschen) keine Initiative zu ergreifen. Ich habe während des ganzen Krieges (als wir Sieger schienen, und als es uns schlecht ging) und noch einige Zeit nachher wie früher meine Bücher und S.A. [Sonderabdrucke; R.S.] lückenlos an alle französischen Kollegen gesandt, mit denen ich in Korrespondenz war. Nur Abbé Fouët reagierte durch Dank, und nur ihm sende ich von den genannten weiter meine Schriften.

Etwa zur Zeit der Gründung der Boykottvereinigung und des skandalösen "internationalen" Strassburger Kongresses (zu dessen Ehrenvorsitz sich der greise C.Jordan missbrauchen liess und bei dem Schweden durch Abwesenheit sich geehrt hätte, wenn nicht leider—in guter Absicht—meine Freunde Nörlund und Cramér hingegangen wären) zwang mich meine Würde, meine ignorierten regelmässigen Drucksendungen einzustellen.

Der dies schreibt, ist kein Chauvinist und hat auch den Wunsch, dass die Franzosen wieder den Anschluss an die internationale wissenschaftliche Welt finden werden. Wir in Deutschland haben das unsrige gethan und von 1914 bis heute nie Ablehnung gegen den einzelnen "feindlichen" Gelehrten gezeigt.

Mit herzlichsten Grüssen Ihr Edmund Landau

# 2.3. Mittag-Leffler to Landau

Djursholm, 23/3.1923

Prof. Dr. E. Landau Herzberger Landstrasse 48 Göttingen

Dear Friend,

Many thanks for your letter of 17/3 and the interesting manuscripts enclosed with it. Thanks to you there is a very lively mathematical life in Göttingen. I find your refusal to write an appreciation of Camille Jordan very natural.

For years Camille Jordan did not sent his publications to me, either. And I was always on good terms with him. But did he, in fact, write anything in recent years, apart from new editions of his works?

With regard to the Strassburg Congress, Nörlund went [in order to]<sup>22</sup> effect [that] the Congress become a "Congrès international <u>de</u> mathématiciens" instead of a "Congrès internat. <u>des</u> mathématiciens." He succeeded and in the first report in the Comptes Rendus you find "de" instead of

<sup>&</sup>lt;sup>22</sup> These words are missing in the copy.

"des". $^{23}$  However, Picard—although "de" was accepted by the congress on Nörlund's recommendation—later used "des" contrary to the decision of the Congress. $^{24}$ 

On the reasons why Cramér went to Strassburg, I have not made inquiries.

Yours most faithfully [Mittag-Leffler]

Lieber Freund,

Vielen Dank für Ihren Brief vom 17/3 und die beigelegten interessanten Schriftstücken [sic]. Dank Ihnen herrscht ein sehr lebhaftes mathematisches Leben in Göttingen. Ich finde Ihre Ablehnung einer [sic] Würdigung von Camille Jordan zu schreiben sehr natürlich.

Camille Jordan hat auch mir nicht seit Jahren etwas von seinen eigenen Arbeiten geschickt. Ich stand doch immer sehr gut mit ihm. Aber hat er etwas in den letzten Jahren geschrieben, ausserhalb neuen Auflagen seiner Werke?

Was den Strassburger Kongress betrifft, ging Nörlund [lacuna] bewirken, dass der Kongress ein "Congrès international <u>de</u> mathématiciens" statt eines "Congrès internat. <u>des</u> mathématiciens" wurde. Es ist auch gelungen und in dem ersten Referat in den Comptes Rendus finden Sie auch <u>de</u> statt <u>des</u>. Allerdings hat Picard—obgleich "de" auf Antrag von Nörlund von dem Kongress angenommen wurde—später wider den Entschluss des Kongresses "des" aufgenommen.

Über die Gründe, die Cramér nach Strassburg geführt haben, habe ich keine Forschungen angestellt.

Ihr ergebenster

This explanation contradicts somewhat the one Mittag-Leffler gave in his letter to Leo Königsberger, dated December 20, 1920 [Dauben 1980, p. 275]. There, Mittag-Leffler said that Nørlund tried to replace "Congrès des mathématiciens" by "Congrès de mathématiques." The latter is indeed the name that the General Secretary of the Congress, the Frenchman Gabriel Koenigs, used in his report on the Congress's concluding session [Villat 1921, p. xxxiv-xxxix].

<sup>24</sup> The Strasbourg Congress's proceedings were of the "Congrès International des Mathématiciens" [Villat 1921]. The congress in Toronto styled itself the "International Mathematical Congress."

# 2.4. A 1924 Letter from Edwin Bidwell Wilson to Emile Picard<sup>25</sup>

[Harvard?] 12-19-24

Professor Émile Picard, Secretary Académie des Sciences Paris, France

#### Dear Professor Picard:

It was a great pleasure to me to read in the paper recently that you had been elected to the Académie Française. Science is now represented there by not only one of its most distinguished followers but by a person who fortunately can write in a style not often excelled by the most literary of the members.

It was a very great satisfaction to me when attending the meeting of the British Association and of the International Mathematical Congress at Toronto to meet again after 21 years two very good friends of the old days at the École Normale,<sup>27</sup> namely Dunoyer<sup>28</sup> and Fréchet and to hear at first hand some news from France and from you.<sup>29</sup>

There was a great storm at Toronto over the question of admission or exclusion of Germans from international mathematical congresses. I understand that this matter will come up for discussion next June or July at Brussells [sic] under your presidency.<sup>30</sup>

The text is edited from Wilson's typewritten copy, 5 pp., courtesy Harvard University Archives. It is located in Wilson's papers under HUG 4878.203, Box 7, f. P,Q. Wilson leaves out all accents; they have here been inserted. [/] denotes page turn.

Note that this is the French academy usually reserved for writers and humanists, not scientists.

<sup>&</sup>lt;sup>27</sup> Wilson was there in 1902–1903. Cf. [Hunsaker/MacLane 1973, p. 285].

<sup>&</sup>lt;sup>28</sup> This was undoubtedly Louis Dunoyer (1880–1963), the French physicist and son-in-law of Picard

 $<sup>^{29}\,\,</sup>$  This confirms that Picard was not at the boycott congress in Toronto. He had been present at Strasbourg in 1920.

<sup>&</sup>lt;sup>30</sup> Wilson apparently alludes here to the impending third assembly of the IRC in 1925, which, by a narrow margin, still opposed the elimination of the exclusion clause. Cf. Schroeder-Gudehus [1973, p. 103].

If I may do so without impropriety or offence I should like to put before you the following considerations which occur to me. They are personal considerations. I have no official connection with any body which is a party directly or indirectly to this controversy and I don't want any connection with such bodies. I am a poor politician and I am not sure but that academic politics is a poor kind of politics.

Let me say in the first place that I don't like the Germans. I never did like them. That is one reason that I went to France to study when almost all my friends told me I should go to Germany. Second, I do like the French which is another reason I went to France to study. I have some contacts with German science and have made acquaintances in past years both personally and by correspondence with a number of German scientists whom I regard somewhat highly for their scientific contributions, still I am not so eager to meet them at international mathematical congresses as to be led to favor any action which would result in the absence from such congresses of the French, among whom I have more friends and whom on the whole I should much prefer to meet.

There are, however, a great many Americans [/] who have practically no friends in France and have a great many friends in Germany. These persons[,] even when they most strongly detest the conduct of the Germans during the war and when they most severely blame the German intellectuals for signing the famous document that appeared in the early weeks of the war,31 nevertheless, desire the opportunity at international mathematical congresses to renew their acquaintances among German scientific men. There is a third group in America who are strongly pro-German who not only received their mathematical education in Germany but who so completely absorbed German Kultur that they have very little use for French and Italian culture, and would perhaps on the whole prefer an international congress with Germans present and French absent than to go without the presence of the Germans. Thus there are in the main three parties as I see it. A very small minority representing my own point of view who would prefer to do without the Germans if they could see the French; a much larger minority who would prefer to do without the

This refers to the appeal "An die Kulturwelt" of October 1914 (see above).

French if only they could see the Germans; and a majority who will not be happy unless arrangements can be made whereby the congresses become thoroughly international in the sense that one may there meet both Germans and French. There was a conference on this matter, a purely informal conference, to which I was invited in Toronto. There was only one man<sup>32</sup> in a group of one dozen of our leading mathematicians who was in favor of taking so strong a stand as to say that he didn't care whether the French stayed away from the congresses or not [,] provided only the rules were so changed that the Germans could come. Everyone else who spoke, and there must have been 8 or 10 who did speak, said that the problem was one of getting both Germans and French to the congresses, not that the French and Germans might associate with each other but that the rest of us might be able to associate first with one then the other as we saw fit. It was the well nigh unanimous sense of the conference that any action which no matter how worded would actually result in the withdrawing of the French and Belgians from these congresses would be most unfortunate and that the real problem was to get both nations represented at the congresses not officially but through the presence of their leading scientific men. Inasmuch as this point of view was so nearly unanimous and inasmuch as I myself would prefer to have the congresses open to all nations I thought it best not to make the statement which I have above made to you, that so far as my own personal preferences went I should rather keep the French and do without the Germans provided I could not have both in attendance.

Now this is as I see it a very serious matter. Before the war the Germans were very numerous in their attendance on congresses. One might almost say with truth that except for the nation within whose territory the congress was held the greatest delegation was inevitably from Germany. This means that for all those persons whose natural attachments either from their previous education or from their scientific interests lie with German scientists any congress in which the Germans are not present is really no international congress at all. So long, therefore, as the rules of the International

<sup>&</sup>lt;sup>32</sup> Wilson's correspondence with J. C. Fields reveals (see above) that this was Virgil Snyder. Cf. [Parshall/Rowe 1994, p. 217f.].

Mathematical Union or of the International Research Council prevent the attendance of Germans at international congresses we can't hope to have any whole-hearted participation in those congresses on the part of a good many American mathematicians and among this many I include not only those who are [one word illegible /] pro-German but those who still being heartily in favor of the Allies in the recent war do none the less have their scientific contacts more with Germans than with the French, or Italians, or English.

I don't know what will be the decision six months hence at Brussells.<sup>33</sup> After all it doesn't perhaps make any very great difference. We can do without our quadrennial mathematical congresses for a number of years if necessary. Or we can have them as we had one in Toronto without participation by the Germans. In this latter case, however, I very much fear that the participation by that group of modern<sup>34</sup> mathematicians who are led by G. H. Hardy [lacuna]. <sup>35</sup> Indeed it might perhaps be better not to have congresses than to have them one-sided and half-hearted affairs. We can, as I said, do without them. The immediate decision isn't particularly important. In due course of time it is inevitable no matter what one person or any group of persons may desire that the congresses shall be open to Germans, and it is further inevitable that in due time both Germans and French will participate in the same congresses although perhaps not with any very great intercourse between the representatives of these two nations, and further in due time though perhaps only after 30 or 40 or 50 years it is inevitable that French and Germans will participate in these congresses with more or less cordiality one with another just as between 1900 and 1914 a number of eminent French mathematicians including Poincaré were very welcome.<sup>36</sup>

As mentioned above, it was negative; the exclusion clause was upheld until 1926.

 $<sup>^{34}</sup>$  The qualification "modern" would seem to be tray something about Wilson's conservative feelings both mathematically and politically, feelings he probably shared with Picard.

 $<sup>^{35}</sup>$  There is a mark for an insertion at this point in the copy, but the insertion was not included. Wilson undoubtedly wanted to express that Hardy and his friends would not participate in such a case.

<sup>&</sup>lt;sup>36</sup> The sentence is crossed out in the copy beginning with the word "eminent" and is apparently incomplete. Wilson may have intended to refer to Poincaré's visit to Göttingen in 1909.

French scientists were apparently entirely willing to go to German universities and German scientists were willing to go to Paris and were not particularly unwelcome there. The real question, I suppose, that must be decided is whether through the International Research Council an attempt will be made to hasten the time when both nations will be at the congresses or whether the attempt will be made to delay that time and the decision though in some quarters regarded as highly important, will as a matter of fact not be vital for the long range future of scientific cooperation.

One hundred years ago France was smarting under a defeat by allies representing England and Germany. Not only were the relations between France and Germany uncordial but so were the relations between France and England. In the recent past we found the former antagonists England and France fighting on the same side and with the utmost cordiality for their common rights and protection. It would be not at all surprising if 100 years from now we might find the French and Germans allies in a desperate fight against some invader. As I see it the real danger in Europe today is Russia—not today but for the future. The English wore off their imperialism to a point where they would no longer aggressively attack European nations perhaps two centuries ago. The last aggressive attack on their neighbors by the French was a century since and there has been no real danger of the resurrection of an offensive militarism in France since Napoleon's time. I am inclined to believe that the Germans have in the recent war exhausted their desires for a military offensive against their European neighbors. I very much doubt that they will again attack France. Nations grow up just as individuals do but Russia has never grown up.<sup>37</sup> She has a tremendous territory and tre[/]mendous population and vast material resources. If ever the time should come when Russia shall have been generally educated and when the material resources of the country shall have been generally developed, it is not unlikely that the nation in the first flush of its youthful power may fall into the hands of an aggressive

<sup>&</sup>lt;sup>37</sup> This conveys a typical form of anti-communism, which saw the Russian Revolution of 1917 as an outgrowth of older Russian traditions and, in particular, as a sign of the lack of Russian civilization. Also Wilson's total blindness to American imperialism is striking, beginning with the Monroe Doctrine of 1822 and developing in the aftermath of the Spanish-American War of 1898.

militaristic government which blind to the disasters which befell France in 1815, and Germany in 1918, will undertake to try out the proposition of conquering the European world, and at that time France could not afford to let Russia conquer Germany any more than recently England could afford to let Germany conquer France.

Things move slowly in international relations and even in national relations. We had a civil war between the north and the south which was terminated in 1865, since which time both north and south have been living under the same constitution and under the same government as they did before 1861. There is today the heartiest cooperation between southerner and northerner in business, in the public health, 38 and in many of our activities in these United States. There still persists, however, the sharp cleavage in the political field. Every four years when we have an election the south, that is those states which formerly seceded from the Union and made the Confederacy, can be relied upon to vote for the democratic candidate for president even when he doesn't represent their economic point of view today, and the north can in the main be counted upon to vote for the republican candidate. This is merely because it was a republican administration in the north that fought the civil war to a successful conclusion. If Lincoln had been a democrat the north would today be democratic and the south republican. If after the elapse of 60 years we have not in this country come in the political field to abandon our historic alignment how can we expect that in Europe, where the antagonisms between nations are older and certainly no less acute, the opposite parties shall settle down politically in union one with another? To my way of thinking we can't expect it. I think that is the key to our American (foreign) policy, which perhaps isn't well understood in Europe. We want to be helpful but we don't believe that we can safely assume that European alignments have been forgotten in Europe and that it is safe for us to venture into those prominent European entanglements from which our first president warned us away.

Now as I see it the only hope of getting back to reasonably universal and cordial relations among scientific men lies in our exercising a great deal

<sup>&</sup>lt;sup>38</sup> These two areas were within Wilson's competence. He held a professorship in public health at Harvard University to which he applied his expertise in mathematical statistics.

of good taste and charity and keeping out of political entanglements. In a certain sense the International Research Council is political. In this country our state department pays our dues and it would not do so if there were no political aspect to the organization of the International Research Council. I should expect that this political aspect would enable certain persons in power to continue the exclusion of Germans if they so determined and thereby to delay the resumption first of pleasant scientific cooperation between the various groups of scientists in this country with the French on one hand and the Germans on the other, and further delay the gradual reestablishment of amicable scientific relationship between the French and the Germans. I personally regard the organization of the International Research Council as possibly, though not surely, a bad thing for future international cooperation among scientific people. I personally believe that when re[/]lations between two parties are strained it is best to have nothing which will add to the group consciousness of either party and to have all arrangements so thoroughly informal and individual that each person of whatever nation comes not as a representative in any way of his nationality but as a scientist with his scientific interests. And I venture to forecast that in those fields such as physics where we have no international organization<sup>39</sup> under the International Research Council we may attain to truly international congresses earlier than in those branches such as mathematics where there is such an organization.

This is a very long letter. It isn't written with any aim of influencing in any way either you or anybody else in the exercise of responsibilities imposed upon you. It wouldn't have been written, and couldn't have been written, if I had not been dragged in against my will to the disagreeable tempest which raged at Toronto. Although the greater part of the letter deals with that matter the real object is to felicitate you and mathematical science on your election to the Académie Française, and to renew though at a great distance the pleasures of intercourse with you which I had when I was fortunate enough to be a student at the École Normale. I should be happy if

This remark does not entirely accord with the facts. An "International Union of Pure and Applied Physics," which excluded the Germans, was founded in Brussels in 1922 under the umbrella of the IRC. Germany only joined it as late as 1954. Cf. http://www.iupap.org/70Years.pdf, last access November 2010.

you would give my best regards to Dunoyer, and if you would remember me kindly to Hadamard, Borel and Painlevé. I am hopeful that events may still turn out in the not too distant future in such a way that I may again get to Paris and have the pleasure of seeing you all again once more.

Yours very truly, [E.B. Wilson]

# Acknowledgments

I am grateful to June Barrow-Green (London) and Norbert Schappacher (Strasbourg) for giving valuable advice as to content and language. The same applies to an extraordinarily helpful anonymous reviewer. To the library of the Institute Mittag-Leffler (Djursholm) and the Harvard University Archives go thanks for allowing the publication of the letters reproduced or translated in the appendices. Thanks also to The Shelby White and Leon Levy Archives Center (Princeton) for allowing the publication of the photograph with Landau.

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