Geombinatorics XXXI(3), 2021, 138–142

"The detailed treatment of the plenary lectures" promised but not delivered: Alexander Soifer's Review in 7 movements of

"Meeting under the Integral Sign? The Oslo Congress of Mathematicians on the Eve of the Second World War

by Christopher D. Hollings and Reinhard Siegmund-Schultze

History of Mathematics, Vol. 44
American Mathematical Society, Providence, 2020
ISBN 978-1470443535
338 + xix pp.
Hardcover US$120.00

1. The Authors Sum-Up their Book

We offer the authors the courtesy of commencing our review with their summary of their book that appears on the back cover together with lovely smiling postage stamp size faces of the two authors:

> This book examines the historically unique conditions under which the International Congress of Mathematicians took place in Oslo in 1936. This Congress was the only one on this level to be held during the period of the Nazi regime in Germany (1933-1945) and after the wave of emigrations from it. Relying heavily on unpublished archival sources, the authors consider the different goals of the various participants in the Congress, most notably those of the Norwegian organizers, and the Nazi-led German delegation. They also investigate the reasons for the absence of the proposed Soviet and Italian delegations.
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> In addition, aiming to shed light onto the mathematical dimension of the Congress, the authors provide overviews of the nineteen plenary presentations, as well as their planning and development. Biographical information about each of the plenary speakers rounds off the picture. The Oslo Congress, the first at which Fields Medals were awarded, is used as a lens through which the reader of this book can view the state of the art of mathematics in the mid-1930s.

Is there enough material to dedicate the whole book to one International Congress of Mathematicians? The authors dig wider by including years

preceding the Congress and years following it. This is certainly a major undertaking, and the authors deserve our gratitude.

The most impressive in the book is the description of the German delegation using the Congress to 'normalize' Nazism, make it acceptable and palatable, especially in Norway, a Nordic country, designated by Hitler as a part of the future Great Reich. It seems they succeeded in using Nazi insignia in public events in Oslo.

Let us now look at certain particulars.

2. The Style

The style is generally very good, with some odd sentences. For example:

"Toeplitz' undecided letter to Courant" (p. 69). Letters cannot be undecided, writers can.

"Hecke and Landau both became teachers there of Hasse" (p. 178). The word order is not the best possible.

Throughout the book, Dutch names are written in German style: van der Corput, van der Waerden. A token of respect would have prompted the use of Dutch writing of Dutch names, with capital "Van" unless it is preceded by the first name or the initials.

Throughout the book, the authors emphasize the names of the quoted historians by putting their names in **bold**. Should names stand out more than the quoted facts and ideas?

3. Mistakes

"van der Waerden (born 1902)" (p. 72). In fact, Van der Waerden was born on February 2, 1903.

"The political developments of the early 1930s (the takeover of power by Stalin in the Soviet Union and by Hitler in Germany)" (p. 89). In fact, Stalin became General Secretary of Communist Party of the Soviet Union on April 3, 1922. He became the head of the Soviet Union upon Lenin's death on January 24, 1924.

"Stalin's policy of building 'Socialism in one country'" (p. 94), and in the footnote 16 "new Stalinist policies." In fact, the principle of building socialism in one country was introduced much earlier by Vladimir Lenin in his split from Karl Marx' call for a worldwide revolution.

4. Declarations without Substantiations

"The French Bourbaki movement that had been very much [sic] inspired by German Algebra around 1930" (p. 137). This surprising allegation is declared without any evidence.

"Students of the Jewish mathematician Emmy Noether tried to annul her dismissal in 1933 by stressing the "Arian character" of her theories" (p. 191, footnote). Which students? Stressing to whom? Where is the evidence? Let us not reduce history to a collection of gossips.

5. Yet Another Attempt to 'Beautify' Helmut Hasse

"As we saw at the end of the preceding section, Hasse was more willing than Siegel to adopt to the political circumstances without [sic] being a fervent Nazi" (p. 170). OK, let us look at the preceding section (p. 169). In December 1940 in the Nazi-occupied Paris, Hasse showed up uninvited at Elie and Henry Cartan home in the Nazi Navy uniform and offered collaboration, which was to exclude the Polish mathematicians. Hasse referred to "Fuhrer" who had deemed the Poles "incapable and unworthy of co-operation." Cartan promptly showed Hasse the door. I refer the reader to many more examples of Helmut Hasse being unquestionably a fervent Nazi [Soifer 2015]. The authors' inclusion of the anti-Nazi Jewish-German Siegel in one sentence with Hasse was, in the reviewer's opinion, offensive toward the memory of the great mathematician Siegel.

This reviewer has been witnessing in a number of books by German historians and mathematicians, for exmple [FLR 2014], the desire to invent the 'Good-Man-Hasse' image and minimize his anti-Semitism, racism, enthusiastic support of and service to the armament of the Nazi regime, and his active war work on torpedoes for the Oberkommando der Kriegsmarine in particular. This book conforms to this tendency, as the authors almost apologetically present a gentle criticism of Hasse (p. 192): "He apparently [sic] shared some [sic] German nationalist resentments

Table 1: All valid pairs (m, n) for $m < 100$.

m	n
8	$-7, 3, 5, 15$
16	$-39, -5, 21, 55$
24	$-95, -21, -11, 9, 15, 35, 45, 119$
32	$-175, -45, 77, 207$
40	$-279, -77, -51, -35, 7, 15, 25,$ 33, 75, 91, 117, 319
48	$-407, -117, -15, 13, 35, 63,$ 165, 455
56	$-559, -165, -115, -49, -9, 21,$ 35, 65, 105, 171, 221, 615
64	$-735, -221, 285, 799$
72	$-935, -285, -203, -63, -33, 27,$ 45, 105, 135, 275, 357, 1007
80	$-1159, -357, -195, -25, -19, 17,$ 63, 99, 105, 275, 437, 1239
88	$-1407, -437, -315, -77, -65, 33,$ 55, 153, 165, 403, 525, 1495
96	$-1679, -525, -135, 11, 85, 231,$ 621, 1775

Table 2: All valid pairs (m, s) for $m \leq 400$.

m	s
8	7, 13
16	19, 49
24	21, 31, 39, 109
32	67, 193
40	35, 37, 65, 79, 103, 301
48	43, 57, 147, 433
56	49, 61, 91, 151, 199, 589
64	259, 769
72	63, 93, 117, 247, 327, 973
80	73, 91, 95, 245, 403, 1201
88	77, 133, 143, 367, 487, 1453
96	91, 201, 579, 1729
104	91, 169, 181, 511, 679, 2029
112	97, 133, 163, 343, 787, 2353
120	105, 111, 127, 133, 155, 195, 237, 309, 545, 679, 903, 2701
128	1027, 3073
136	119, 221, 301, 871, 1159, 3469
144	129, 171, 259, 441, 1299, 3889
152	133, 247, 373, 1087, 1447, 4333
160	139, 217, 335, 965, 1603, 4801
168	147, 157, 183, 217, 223, 273, 453, 597, 763, 1327, 1767, 5293
176	169, 209, 379, 539, 1939, 5809
184	161, 299, 541, 1591, 2119, 6349
192	283, 777, 2307, 6913
200	175, 185, 325, 395, 515, 637, 1505, 1879, 2503, 7501
208	217, 247, 523, 637, 2707, 8113
216	189, 279, 351, 741, 981, 2191, 2919, 8749
224	211, 241, 469, 1351, 3139, 9409
232	203, 377, 853, 2527, 3367, 10093
240	215, 219, 273, 285, 427, 457, 691, 735, 1209, 2165, 3603, 10801
248	217, 403, 973, 2887, 3847, 11533
256	4099, 12289
264	229, 231, 341, 399, 429, 511, 1101, 1199, 1461, 3271, 4359, 13069
272	323, 337, 833, 883, 4627, 13873
280	245, 247, 259, 271, 305, 349, 455, 553, 613, 721, 755, 995, 1237, 2107, 2945, 3679, 4903, 14701
288	273, 307, 603, 1737, 5187, 15553
296	259, 481, 1381, 4111, 5479, 16429
304	361, 409, 931, 1099, 5779, 17329
312	273, 277, 403, 507, 543, 703, 1417, 1533, 2037, 4567, 6087, 18253
320	331, 793, 1295, 3845, 6403, 19201
328	287, 533, 1693, 5047, 6727, 20173
336	291, 301, 399, 481, 489, 811, 1029, 1339, 2361, 3031, 7059, 21169
344	301, 559, 1861, 5551, 7399, 22189
352	313, 427, 737, 2123, 7747, 23233
360	315, 333, 343, 381, 399, 465, 585, 711, 927, 997, 1235, 1635, 2037, 2709, 4865, 6079, 8103, 24301
368	437, 577, 1127, 1603, 8467, 25393
376	329, 611, 2221, 6631, 8839, 26509
384	1051, 3081, 9219, 27649
392	343, 427, 637, 1057, 1393, 2413, 4123, 7207, 9607, 28813
400	365, 455, 475, 673, 1225, 1891, 2015, 6005, 10003, 30001

with the Nazis." Just "apparently," are you not sure? Only "some," Gentlemen?

I included a long laundry list of Hasse's serious indiscretions in [Soifer 2015]. I responded to [FLR 2014] whitewashing Hasse in my zbMATH review [Soifer 2014] of that book. Let me quote a short paragraph from the latter review:

> So, why do the editors go to such a great extent in creating a myth? Is it because for them – and, sadly, for many mathematicians around the world – Mathematik über alles, and all moral concerns are negligible? Or is it because there was a severe shortage of heroic mathematicians in Nazi Germany? If they wanted a genuine hero, they could have written for instance about Erich Hecke. There is an eternal dispute whether mathematics is discovered or invented. There is no dispute – history ought not to be invented.

The renown German Historian of Science Moritz Epple of the Goethe University opened my eyes on the reason why some German scholars count on the success of whitewashing Hasse and his ilk:

> I was born in 1960 into a country in which virtually everyone of the older generation was declared free of any serious guilt, except the few obvious villains whose involvement in atrocious and – for me as a young person – completely unfathomable crimes was so obvious that no one could get around it. But all the others, the van der Waerdens, own family members, older teachers and later even some professors: What about them?
>
> ... well, to put a long story short: To NOT talk about the moral problems that their earlier lives involved seemed to be the silent agreement that kept (and to some extent still keeps) this society going.
>
> Ever since I understood this (if I really understood – who can be sure) I felt the need to join those who addressed these issues with careful, but sharp judgement, and to break, rather than to prolong, the silent agreement of suspending judgement. Conflicts were the unavoidable consequence for all of us.

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Professor Epple rings the bell we all must hear. I will not tire to repeat this quotation often – to remind you and me of our solemn duty to protect the integrity of science and life.

6. Unfulfilled Promise

the reader of this book can view the state of the art of mathematics in the mid-1930s
The authors "aiming to shed light onto the mathematical dimension of the Congress" (back cover), so that "the reader of this book can view the state of the art of mathematics in the mid-1930s" (ibid). They promise "the detailed treatment of the plenary lectures of the Oslo congress" (p. 143). Contrary to these aims and promises, I found no inclusion of mathematics of the talks nor these authors' treatment of the talks at all, only an assembly of a secondary material: some reviews of talks. In one instance the authors explicitly choose "not to go into a detailed analysis of the talk" (p. 193). Quotations of contemporaneous reviews are of interest, but a limited one. To fulfill their promise, the authors should have presented *mathematics* of the talks and their own assessment of talks' values in 1936 and today.

7. Summing-Up

The book addresses the history, prehistory, and post history of the important 1936 International Congress of Mathematicians. It is a solid historical work that includes the organization of the Congress and some contemporaneous reviews of the Congress' talks. Regretfully, it includes no Mathematics presented at the Mathematical Congress, and no evaluation of that mathematics by the authors themselves.

Bibliography

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