

The German Physical Society in the Third Reich

Physicists between Autonomy and Accommodation

This is a history of one of the oldest and most important scientific societies – the German Physical Society – during the Nazi regime and immediate post-war period. The German Physical Society had Jewish scientists among its members, including the prominent Fritz Haber and Albert Einstein, when Adolf Hitler was appointed chancellor of Germany in January 1933. As Jewish scientists subsequently began to lose their jobs and emigrate, the society began to lose members. In 1938, under pressure from the Reich Ministry for Science, Education and Culture, the society forced out the last of its Jewish colleagues. This action was just the most prominent example of the tension between accommodation and autonomy that characterized the challenges facing physicists in the society. They strove to retain as much autonomy as possible but tried to achieve this by accommodating themselves to Nazi policies, which culminated in the campaign by the society's president to place physics in the service of the war effort.

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Mark Walker is the John Bigelow Professor of History at Union College. He is the author of *Nazi Science: Myth, Truth, and the German Atomic Bomb* (1995) and of *German National Socialism and the Quest for Nuclear Power, 1939–1949* (1989). He has coauthored several books, including *The Kaiser Wilhelm Society under National Socialism* (2009), *Politics and Science in Wartime: Comparative International Perspectives on the Kaiser Wilhelm Institutes* (2005), and *Science and Ideology: A Comparative History* (2003). His articles have appeared in *Journal of Contemporary History*, *Physics Today*, *Historical Studies in the Natural Sciences*, *Nature*, *Physics in Perspective*, *Minerva*, and *Metascience*.

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Frontmatter
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Physicists between Autonomy and Accommodation

Edited by

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This book is dedicated to Paul Forman.

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Foreword

The German Physical Society (*Deutsche Physikalische Gesellschaft*, DPG) is the oldest and largest professional society of physics in the world and originated from the Physical Society of Berlin (*Physikalische Gesellschaft zu Berlin*). Founded in 1845, the membership of the Physical Society, along with its scientific reputation, has steadily been growing ever since. This development became particularly visible during the decades around 1900 when Germany assumed a worldwide leadership role in many areas of physical research. In that period, the society's presidents included such leading figures as Emil Warburg, Max Planck, and Albert Einstein – living symbols of excellence in physics. Indeed, Planck and Einstein counted among the most prominent scientists of the early 20th century.

The year 1933 put an abrupt end to this flowering in physics and brought on trenchant changes. The National Socialist dictatorship persecuted political opponents and nonconformists and deprived Jewish intellectuals and scientists of their livelihoods. A consequence of this racist, discriminatory, and repressive policy was the partial demise of physical research in Germany. To date, the role played by the German Physical Society in this process has not received adequate treatment. Only biographies and surveys of the overall historical processes in the physical sciences have addressed this chapter in the history of physics in Germany. The German Physical Society is aware of this deficit.

In view of this desideratum, Dieter Hoffmann, chairman of the society's history of science division, *Fachverband "Geschichte der Physik,"* proposed during the planning stage in preparing for the Year of Physics 2000 that the history of the German Physical Society in the Third Reich become the subject of a special study. The society's president at that time,

Alexander Bradshaw, welcomed this proposal immediately and without reservation. It was a matter of particular importance to the German Physical Society that it examine its own past during the National Socialist period. For this reason, the society's board established a committee to clarify the conditions necessary for a reassessment of the history of the German Physical Society. The outcome of this inquiry was the suggestion to the board in spring 2001 to call to life a research project funded by the German Physical Society and to entrust its direction to Mark Walker, the American historian of science. The expectation was that this project would also avail itself of the expertise within the society. In agreement with Mark Walker, Dieter Hoffmann was then named codirector of the project. Theo Mayer-Kuckuk, former president of the German Physical Society, was assigned the task of official contact between the society and the editors. An international group of independent authors worked on various aspects of the history of the German Physical Society in the Third Reich during the years that followed. Their results are presented here in this book.

On behalf of our society, I would like to express my hearty thanks to the two editors, Mark Walker and Dieter Hoffmann, and to all the other contributors for the completed volume. This work is more than a consistent documentation and analysis of the history of the German Physical Society and physics in Germany. It is an act against forgetting. How the future will develop depends quite crucially on our ability to continue to confront our own history and learn from it.

Eberhard Umbach
President of the *Deutsche Physikalische Gesellschaft*
Würzburg
29 October 2006

Preface

The German Physical Society (*Deutsche Physikalische Gesellschaft*, DPG), one of Germany's oldest professional associations, has a rich tradition. Its membership in the decades after its founding in 1845 kept pace with its rising renown in the scientific world. This reputation came from the fact that the research conducted in Germany in the decades straddling the turn of the 19th century to the 20th century defined global standards in many areas of physics. The year 1933 signified a grave setback for this highly developed physics culture. The racist campaigns and repressive policies of the National Socialist dictatorship barred Jewish intellectuals and scientists from making a living, consequently forcing many to emigrate. Albert Einstein is symbolic of this exodus of intelligentsia from Germany. His emigration signaled the decline of physical research in Germany.

A number of interesting and insightful studies about this phenomenon have appeared in recent decades – starting with Alan Beyerchen's pioneering work *Scientists under Hitler* (1977). They range from David Cassidy's detailed biography of Heisenberg, *Uncertainty* (1992), which has recently been updated as *Beyond Uncertainty* (2009), to Klaus and Ann Hentschel's anthology *Physics and National Socialism* (1996), a collection of important documents from this period in English translation. In these and the many other notable publications about the phenomenon of physics in the Third Reich, the DPG figures only marginally – if at all – within the general historical context of the developments in physics. Little is revealed about its specific function within the framework of active science policy and the constellations of political power in the Third Reich;

this, incidentally, applies to the role of scientific societies generally as mediators between research and politics.

This book intends to close this research lacuna. In the past few years, an international group of authors has worked on a variety of aspects of the history of the DPG during the Third Reich. The results of this research are compiled in this collection of essays. Like a mosaic, the separate sample components in the society's history are laid out and analyzed to arrive at an overall picture of its role during this period. Mark Walker provides an introduction to the general political conditions and sets the history of the society within the National Socialist context of the time. Richard H. Beyler examines general aspects of the partly successful attempt by the DPG to preserve its authority and autonomy even under the repressive conditions of the Nazi state. Stefan L. Wolff concerns himself with the emigration of physicists during the Third Reich and what this meant for the DPG; that is, what role this society played in the ostracism of Jewish colleagues in the field. Michael Eckert critically assesses the relation between the DPG and "Aryan physics" (*Deutsche Physik*) and the DPG's obdurate battle against political physics (*Parteiphysik*) that was so vehemently repudiated after the war. The Ramsauer era, which coincided with the war and bears the mark of the DPG's partial self-mobilization, is described in detail in Dieter Hoffmann's contribution. Richard H. Beyler, Michael Eckert, and Dieter Hoffmann examine the Planck medal, the highest distinction conferred by the society, because the awarding practice during the Third Reich is an exemplary indicator of the DPG's relations between autonomy and alignment. Gerhard Simonsohn offers a detailed survey of the then-current topics of physical research – mirrored in the physics conferences and other scientific activities of the DPG as well as in contemporary periodicals. The essays by Volker R. Remmert and by Ute Deichmann provide a comparative perspective on the DPG's mathematical and chemical sister societies during the Third Reich. Finally, two contributions focus on revealing continuities and discontinuities in the society's post-war history. Klaus Hentschel traces the mentality of physicists during the first post-war years by means of the technique of thick description, and Gerhard Rammer investigates the institutional commencement of the DPG after 1945 and its policy toward, or "grappling" with, its past.

This summary shows that although this book focuses on the history of the DPG during the despotic years of National Socialism, it is discussed from a comparative perspective. This comparison relates, on one hand, to the temporal dimension, whereby the years before and after

the Nazi dictatorship are taken sufficiently into account, also touching on the issue of the continuities and discontinuities in the society's history. On the other hand, the history of the DPG in the Third Reich is not treated in isolation but is placed within the general political context as well as within the history of science, and the conduct of the DPG is compared to that of other scientific societies during the Third Reich.

Three workshops helped further the necessary discussions about the topic at hand and procedural clarification among the authors. These meetings were open forums of discussion, in which others besides the participants in the research project could also take part. Other competent representatives of the field and interested members of the DPG were able to attend and make their own suggestions. The first workshop attracted particular attention and drew almost 50 members of the profession to the *Magnus-Haus* in Berlin.

In closing, we would cordially like to thank everyone involved in the production of this book. Thanks are particularly due to the German Physical Society, which not only generously funded the research project and assumed the printing costs for the original German version of this book but also gave its unwavering active support. Special thanks go to its two former presidents Alexander Bradshaw and Theo Mayer-Kuckuk for their great interest and active engagement in the furtherance of the research project. We must likewise express our gratitude to the managing directors of the DPG, Volker Häselbarth and Bernhard Nummer, and to their co-workers at the business office in Bad Honnef for many a constructive suggestion in overcoming practical bottlenecks and obstacles. Not least of all, we owe many thanks to numerous archives and libraries and, especially, to the society itself. They willingly helped make accessible to our research their – in many cases as-yet-untouched – treasures on the history of the DPG.

Uwe Hank put much effort and expertise into the editing of the majority of the contributions in the original German volume, and Ralf Hahn took care of the proofs and the production of the final manuscript; he also assisted in the research on the illustrations. We are grateful to Ann Hentschel for her very good translation of our book into English. Last but not least come the publishers, Wiley-VCH for the German version, and Cambridge University Press for the English edition.

Dieter Hoffmann and Mark Walker
Berlin and Schenectady

2011

Abbreviations

AEA	The Albert Einstein Archive of the Jewish National and University Library at the Hebrew University of Jerusalem, Israel
AEG	German General Electricity Company (<i>Allgemeine Elektrizitäts-Gesellschaft</i>)
AHQP	Archive for the History of Quantum Physics
AIP	American Institute of Physics, Niels Bohr Library, College Park, MD
BA	Federal German Archives, Berlin and Koblenz (<i>Bundesarchiv</i>)
BASF	Baden Aniline and Soda Factory (<i>Badische Anilin- & Soda-Fabrik</i>)
BLO	Bodleian Library, Oxford
BSC	Bohr Scientific Correspondence in AHQP
CITA	Archives of the California Institute of Technology, Pasadena, CA
DAL	German Academy for Aviation Research (<i>Deutsche Akademie für Luftfahrtforschung</i>)
DChG	German Chemical Society (<i>Deutsche Chemische Gesellschaft</i>)
DDR	German Democratic Republic (<i>Deutsche Demokratische Republik</i>)
DFG	German Research Foundation (<i>Deutsche Forschungsgemeinschaft</i>)
DGtP	German Society for Technical Physics (<i>Deutsche Gesellschaft für technische Physik</i>)
DMA	Archives of the Deutsches Museum, Munich (<i>Deutsches Museum Archiv</i>)

DMV	German Mathematical Association (<i>Deutsche Mathematiker-Vereinigung</i>)
DPG	German Physical Society (<i>Deutsche Physikalische Gesellschaft</i>)
DPGA	Archives of the German Physical Society (<i>Archiv der Deutschen Physikalischen Gesellschaft</i>)
EHR	Ehrenfest Scientific Correspondence in AHQP
FIAT	Field Information Agency, Technical
GAMM	Society for Applied Mathematics and Mechanics (<i>Gesellschaft für angewandte Mathematik und Mechanik</i>)
GDCh	Society of German Chemists (<i>Gesellschaft Deutscher Chemiker</i>)
GDNÄ	Society of German Scientists and Physicians (<i>Gesellschaft Deutscher Naturforscher und Ärzte</i>)
Gestapo	Secret State Police (<i>Geheime Staatspolizei</i>)
HATUM	Historical Archives of the Technical University of Munich (<i>Historisches Archiv der Technischen Universität München</i>)
HBA	Aschaffenburg Library (<i>Hofbibliothek Aschaffenburg</i>)
KWG	Kaiser Wilhelm Society for the Advancement of the Sciences (<i>Kaiser-Wilhelm-Gesellschaft zur Förderung der Wissenschaften</i>)
KWI	Kaiser Wilhelm Institute (<i>Kaiser-Wilhelm-Institut</i>)
LTAMA	Archives of the State Museum for Technology and Work in Mannheim (<i>Archiv des Landesmuseums für Technik und Arbeit in Mannheim</i>)
LTI	<i>lingua tertii imperii</i> (Viktor Klemperer's acronym for the nazification of the German language)
MPG	Max Planck Society (<i>Max-Planck-Gesellschaft</i>)
MPGA	Archives of the Max Planck Society (<i>Archiv der Max-Planck-Gesellschaft</i>)
MPiFP	Max Planck Institute for Physics (<i>Max-Planck-Institut für Physik</i>)
MR	Reich Mathematical Federation (<i>Mathematische Reichsverband</i>)
NS	National Socialist (Nazi)
NSBDT	National Socialist League of German Engineers (<i>Nationalsozialistischer Bund Deutscher Technik</i>)
NSDAP	National Socialist German Workers Party (<i>Nationalsozialistische Deutsche Arbeiterpartei</i>)
NSDDB	National Socialist German University Lecturers League (<i>Nationalsozialistischer Deutscher Dozentenbund</i>)

Abbreviations

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OKW	Supreme Command of the Armed Forces (<i>Oberkommando der Wehrmacht</i>)
PAW	Prussian Academy of Sciences (<i>Preußische Akademie der Wissenschaften</i>)
PGzB	Physical Society of Berlin (<i>Physikalische Gesellschaft zu Berlin</i>)
PTR	Imperial Physical-Technical Institute (<i>Physikalisch-Technische Reichsanstalt</i>)
REM	Reich Ministry for Science, Education and Culture (<i>Reichsministerium für Wissenschaft, Erziehung und Volksbildung</i>)
RFR	Reich Research Council (<i>Reichsforschungsrat</i>)
RLM	Reich Aviation Ministry (<i>Reichsluftfahrtministerium</i>)
RLUC	The Josef Regenstein Library, Special Collections, University of Chicago
RTA	Reich Association for the Technical and Scientific Work (<i>Reichsgemeinschaft der technisch-wissenschaftlichen Arbeit</i>)
SA	Storm Troopers (<i>Sturmabteilung</i>)
SBPK	Prussian State Library, Berlin (<i>Staatsbibliothek Preußischer Kulturbesitz</i>)
SPSL	Society for the Protection of Science and Learning
SS	<i>Schutz-Staffel</i>
UAM	Archives of the University of Munich (<i>Universitätsarchiv, Ludwigs Maximilian Universität München</i>)
UFA	Archives of the University of Freiburg (<i>Archiv der Universität Freiburg i.Br.</i>)
UMI	Italian Mathematical Union (<i>Unione Matematica Italiana</i>)
VdCh	Association of German Chemists (<i>Verein deutscher Chemiker</i>)
VDEh	Archives of the German Iron & Steel Institute (<i>Verein Deutscher Eisenhüttenleute</i>)
VDI	Union of German Engineers (<i>Verein Deutscher Ingenieure</i>)