WORLD VIEWS AND SCIENTIFIC DISCIPLINE FORMATION

BOSTON STUDIES IN THE PHILOSOPHY OF SCIENCE

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VOLUME 134

WORLD VIEWS AND SCIENTIFIC DISCIPLINE FORMATION

*Science Studies in the German Democratic Republic
Papers from a German-American Summer Institute, 1988*

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SPRINGER SCIENCE+BUSINESS MEDIA, B.V.

Library of Congress Cataloging-in-Publication Data

World views and scientific discipline formation : science studies in the German Democratic Republic / edited by William R. Woodward and Robert S. Cohen.

p. cm. -- (Boston studies in the philosophy of science ; v. 134)

Includes index.

ISBN 978-94-010-5395-2 ISBN 978-94-011-3164-3 (eBook)

DOI 10.1007/978-94-011-3164-3

1. Science--Germany (East)--History. 2. Science--Social aspects--Germany (East)--History. I. Woodward, William Ray, 1944--II. Cohen, Robert S. III. Series.

Q174.B67 vol. 134

[Q127.G35]

001'.01 s--dc20

[509.43]

91-3697

ISBN 978-94-010-5395-2

The translations from the German in this Volume are by William R. Woodward

printed on acid-free paper

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© 1991 by Springer Science+Business Media Dordrecht

Originally published by Kluwer Academic Publishers in 1991

Softcover reprint of the hardcover 1st edition 1991

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TABLE OF CONTENTS

PREFACE / Robert S. Cohen	ix
OPENING ADDRESS / Karl-Friedrich Wessel	xi
FOREWORD / Helga Hörz	xv
I: INTRODUCTION	
WILLIAM R. WOODWARD / World Views and Scientific Discipline Formation: How East German Science Studies Contributed to the Fall of the Cultural Wall	1
MARTIN GUNTAU and HUBERT LAITKO / On the Origin and Nature of Scientific Disciplines	17
II: IDEAS AND INSTITUTIONS	
KARL-FRIEDRICH WESSEL / Relating Evolutionary Theory to the Natural Sciences	29
HERBERT HÖRZ / Dialectical Understanding of the Unity of Scientific Knowledge	39
GÜNTER KRÖBER / History of Science in the GDR: Institutions and Programmatic Positions	49
III: MATHEMATICS IN A SOCIO-POLITICAL CONTEXT	
HANS WUBING / Historiography of Mathematics: Aims, Methods, Tasks	63
HARTMUT HECHT and DIETER HOFFMANN / The Berlin 'Society for Scientific Philosophy' as Organizational Form of Philosophizing in the Medium of Natural Science	75
REINHARD SIEGMUND-SCHULTZE / Mathematics and Ideology in Fascist Germany	89
IV: PSYCHOLOGY CONSTRUCTS ITS SUBJECT MATTER	
ADRIAN BROCK / Imageless Thought or Stimulus Error? The Social Construction of Private Experience	97

LOTHAR SPRUNG / The Berlin Psychological Tradition: Between Experiment and Quasi-Experimental Design, 1850–1990	107
MARY MOSHER FLESHER / Move over Darwin: The Ontogenetic Sources of William Preyer's Developmental Psychology	117
MARTIN MÜLLER / On the Interdisciplinary Genesis of Ex- perimental Methods in Nineteenth-Century German Psychology	129
V: PHYSICS IN THE CONTEXT OF PHILOSOPHY AND THEORY OF SCIENCE	
MARTIN KOCH / From Boltzmann to Planck: On Continuity in Scientific Revolutions	141
DIANA BARKAN / Walther Nernst and Quantum Theory	151
ULRICH RÖSEBERG / Historical Explanations in Modern Physics: The Lesson of Modern Quantum Mechanics	163
STEVE J. HEIMS / Fritz London and the Community of Quantum Physicists	177
VI: THEORY AS METHOD	
GERALD WICKLEIN / The Middle Ages: Darkness in the Sciences?	191
HANS-PETER KRÜGER / Introduction to the Basic Concepts of Communication-Oriented Science Studies	199
JOHN ERPENBECK / Philosophical Problems of Modern Psychology	209
VII: DISCIPLINE FORMATION OF PHILOSOPHY	
HANS-CHRISTOPH RAUH / Neo-Kantianism and Epistemology: On the Formation of a Philosophical Discipline in Nineteenth- Century Germany	223
REINHARDT PESTER / The Transformation of German Philosophy in the Context of Scientific Research in the Nineteenth Century	235
HARTWIG FRANK / Reform Efforts of Logic at Mid-Nineteenth Century in Germany	247

VIII: BIOLOGICAL EVOLUTION IN THE MIRROR OF THEORIES OF EVOLUTION

RALF-DIETMAR HEGEL / August Weismann: One of the First Synthetic Theorists of Evolutionary Biology	259
FREDERICK GREGORY / Darwin and the German Theologians	269
REINHARD MOCEK / Two Faces of Biologism: Some Reflections on a Difficult Period in the History of Biology in Germany	279
PETER BEURTON / What Keeps a Species Together?	293

IX: TEACHERS AND STUDENTS: CHEMISTRY LABORATORIES AND DISSERTATIONS

PAUL R. JONES / The Training in Germany of English-Speaking Chemists in the Nineteenth Century and its Profound Influence in America and Britain	299
MARK R. FINLAY / Science and Practice in German Agriculture: Justus von Liebig, Hermann von Liebig, and the Agricultural Experiment Stations	309
PETER OESPER / Things Are Seldom What They Seem: The Story of Non-Phosphorylating Glycolysis	321

X: NATURAL SCIENCE AND NATURPHILOSOPHIE

ERNST HAMM / Goethe's Morphology of Stones: Between Natural History and Historical Geology	329
ELKE HAHN / The Philosophy of Living Things: Schelling's <i>Naturphilosophie</i> as a Transition to the Philosophy of Identity	339
PETER NOLTE / A New Correspondence of the Philosopher F. W. J. Schelling	351
ILSE JAHN / The Influence of Jakob Friedrich Fries on Matthias Schleiden	357

XI: SCIENCE AND SOCIETY

ROBERT BRAIN / The Geographical Vision and the Popular Order of Disciplines, 1848–1870	367
ANDREAS KAHLOW / Knowledge Transfer in the Nineteenth Century: Young, Navier, Roebling, and the Brooklyn Bridge	377
ANNETTE VOGT / Soviet-German Scientific Relations before World War II: Fruitful Cooperation in Different Social Orders	387

**XII: THE SOCIAL CONSTRUCTION OF SCIENTIFIC
KNOWLEDGE**

HELGA SPRUNG / Bourgeois Berlin Salons: Meeting Places for Culture and the Sciences	401
WOLFGANG BEESE / Max Delbrück: A Physicist in Biology	415
FRIEDRICH KLEINHEMPEL / 'Nobody Can Become a Real Engineer Who Has Not Already Become a Whole Person'	423
SUMMER INSTITUTE PROGRAM, 1988	431
ABOUT THE AUTHORS	439
NAME INDEX	451
SUBJECT INDEX	457

PREFACE

The various efforts to develop a Marxist philosophy of science in the one-time 'socialist' countries were casualties of the Cold War. Even those who were in no way Marxists, and those who were undogmatic in their Marxisms, now confront a new world. All the more harsh is it for those who worked within the framework imposed upon professional philosophy by the official ideology. Here in this book, we are concerned with some 31 colleagues from the late German Democratic Republic, representative in their scholarship of the achievements of a curiously creative while dismayingly repressive period.

The literature published in the GDR was blossoming, certainly in the final decade, but it developed within a totalitarian regime where personal careers either advanced or faltered through the private protection or denunciation of mentors. We will never know how many good minds did not enter the field of philosophy in the first place due to their prudent judgments that there was a virtual requirement that the candidate join the Socialist Unity (i.e. Communist) Party. Among those who started careers and were sidetracked, the record is now beginning to be revealed; and for the rest, the price of 'doing philosophy' was mostly silence in the face of harassments the likes of which make academic politics in the West seem child's play.

In view of this devastation, how can we dare to present a serious book containing the work of Marxist philosophers of science, historians of science, and advocates of sciences studies in their sociological, psychological and policy aspects? Are these contributions not the plainly contaminated, ideologically distorted, works of the very establishment types who are being *Abgewickelt*, that is (may we say it) 'deconstructed' in 1991?

We North Americans might say that ours was an ethnographic study. We went to live with our hosts in a different culture, so to speak, for 19 days, during June 17th to July 6th, 1988. Some of us stayed far longer, before and since then. Our hosts treated us to cultural feasts in Erfurt, Leipzig, Jena, Potsdam, Berlin. We made new acquaintance, met new fellow-investigators, and we listened closely to what they had to say. To our surprise, they knew much that we did not ... about Schelling, Boltzmann, Weismann, Haeckel, Fascist mathematics, 19th century

women's intellectual salons, communication theory, Soviet-German scientific relations, the history of quantum mechanics, and more. They, for their part, listened to our well-documented archival studies and our sometimes penetrating and always individual approaches with equal fascination. They were amused by the humble dress of some of our graduate students, perhaps expecting every Western scholar to be dressed by Madison Avenue. Further, they were often taken aback that our graduate students, not professors, often dominated discussions.

I leave it to our readers to decide whether the 31 East German essays in this book are tainted by prejudice and dogma, or indeed whether they are drastically uninformed. By translating this material from a cross-section of both younger and older scholars, our intent was to demonstrate what we surmised would be a lively field of study on both sides of that rusty Iron Curtain. I thought, too, that the liberalization of scholarship in the GDR was really coming to pass, slowly but markedly, within Marxist language but also through the conceptual languages of other world-views. We could not guess that we were providing the final, lively, platform for an academic culture before its society was overtaken by the West, and with the realistic acquiescence of Moscow.

We suppose that some critics may call us American supporters of a Stalinist state, or at least GDR-friendly innocents, pejorative terms indeed. Yet we invite you to take seriously the evidence gathered here of how some actually went about scholarship within a totalitarian regime. Would we have acted differently? Professor Woodward's Introduction suggests how younger scholars were harassed from within. This the East Germans could understand. What now occurs at the hands of their West German colleagues is more complicated. After losing a decade (or much more for older scholars) in their careers due to deficient education, unaffordable or forbidden professional literature, and political intrigue, most scholars now face total invalidation, and the formal loss of their jobs, through that anonymous way of 'deconstruction' (*Abwicklung*) of entire departments. They may, it is true, compete for their positions again, in the open market; but to an external observer it seems that a harsh and drastic changing of the guard is underway. We have documented what we know about the situation of our colleagues in the section 'About the Authors'.

But now to our book, to be judged for its science, its historical and philosophical scholarship, for the cogency of interpretations. Not for its politics. That is all.

OPENING ADDRESS TO THE FIRST INTERNATIONAL
SUMMER INSTITUTE IN THE GDR:
PHILOSOPHY AND HISTORY OF THE SCIENCES,
June 17, 1988, Berlin **

Ladies and Gentlemen,

You who have come in part from far away countries, mainly from the United States, to take part in the First International Summer Institute for historians and philosophers of mathematics, technology, and science, in the name of the program committee and organizing staff and on behalf of the administration of the Humboldt University of Berlin, I want to extend to you a hearty welcome.

We do hope and trust that you will have a very pleasant stay. We intend to share and discuss our findings. This will be our main task, but we do not want to forget that scholarly exchange of ideas will take place in a German land that is rich in traditions. We are going to show you how in the G.D.R. these traditions are cherished and protected. For that reason, visits to our historical sites are a part of our program. To mention here the most important places, we shall travel not only to Berlin but to Potsdam, Erfurt, Weimar, Eisenach, Gotha, and Leipzig too. We hope that such loci will deepen and stimulate our communication. Historical sites are only significant for us to such a degree as we are able to discover sources of our thinking, of our development, again and again, and to gain stimulation by means of ever new views of our history.

In a very extensive program of scholarship, we shall not only explain the results of research but also introduce you directly and indirectly to methods and methodological principles, drawing comparisons between them. To understand one another means first to know better the differences in operative styles, in cognitive and methodological standpoints. Communication presupposes the clearest possible knowledge of differences that might arise – where these cannot be brought into agreement, mutual understanding and acceptance of the opinion of the other while emphasizing difference is also an important result, perhaps a provisional one from the perspective of a new standpoint that is distinct from both preceding ones.

History in any case is the coagulated action of persons and societies; the factuality of history is uncontested. Not uncontested, however, is how we bring this factuality into experience. One difficulty consists in the fact that, in regard to the object of knowledge – I mean here the factuality of history – it is in the same way as endless as the future. What we select, emphasize, get to know, and revalue or devalue, depends upon the quality of the symmetry of the past and future that we are capable of bringing into our theoretical schemes. Nothing changes thereby in the factuality of history, but our means, our insights, and even our intentions do change, and they do not change at the same time and in the same way.

But precisely this is the reason for our meeting. If we have the opportunity to get nearer to this factual basis through action and to mutually challenge one another in the knowledge of it, we can learn from one another. None of us gathered here, however, will deny it but we all will have to look for a way in which, besides the obvious point of view, we can reach our aim more quickly, being more successful together.

Historians and philosophers of science who lacked knowledge of this history would be without orientation, but they could make quite a decisive contribution to the understanding of the evolution of science, of thought in general, even to the understanding of the evolution of the relationship of humans to nature. Thus they could help to increase our sovereign mastery of our present actions.

Moreover, and this seems to me very important, the complexity of a more and more unified process of the production of knowledge will become evident through the history of science. Scientific knowledge has been produced and developed for the most part first at one place and at a certain moment, yet later it belongs contemporaneously to the whole world. The entire planet has the responsibility for this history; to undertake this responsibility is one of our common objectives. Let us help one another to create as good conditions as possible during and after this Summer Institute.

We have already gained a lot if we organize our meetings – and there will be many of them in the coming weeks – in such a manner that their consequences become irreversible. The integration of our efforts, the efforts of the historians and philosophers of science in the United States, Canada, Great Britain, and the German Democratic Republic, must play an essential part in the strategy of science.

Ladies and gentlemen, allow me please to add one thought. We know all too well that our present times are subject to various dangers and

problems that very often, as is characteristic of our epoch, force themselves into our field of view. Let me describe our present time in the words of the famous Soviet scholar, V. I. Vernadsky in 1942. He wrote:

We are living in a wonderful geological period in the history of our planet – in the anthropogenic era – as humankind has become in the course of millions of years spontaneously but permanently, and during the last centuries more and more quickly, a geological force that will change the face of our planet. It is up to us to alter the spontaneous process into a conscious one, and the sphere of life – the biosphere – into a realm of common sense – the noosphere (Anonymous, 1988, p. 43).

Yes, this ought to be the basis of a justified epistemological optimism. And precisely because we are living in such a history-laden world we ought to turn against anything that contradicts reason. We do not want to overestimate ourselves, but the question may be allowed whether we do not accomplish something with this Summer Institute together that demands mutual understanding, making us and others aware how wonderful our epoch really can be if peace becomes the description of a condition that no longer contains the possibility of war. If war has no future any more and it becomes the task of historians to describe war to allow future generations to recognize the value of peace, then we shall be able to deal with the “anthropogenic aspect” of our planet more profoundly, more reasonably, and more effectively.

At any rate I do believe that all of us can look optimistically to the future. The latest meeting between Gorbachev and Reagan in Moscow helped to strengthen this optimism. The German Democratic Republic has often expressed its love and its capacity for peace through its representatives. We do hope that we can invigorate this policy of peace by our hospitality.

It is a fine beginning that we have assembled here on the occasion of the opening of the first Summer Institute for historians and philosophers of the natural sciences. We will see in the weeks to come to what extent we succeed together in collecting new experiences. I wish you all, and all of us, joyful days, success in scholarship, various new incentives, even perhaps excitement, a fascinating experience. May these days of our “being together” become lasting, satisfying memories.

NOTES

* Prof. Dr. Karl-Friedrich Wessel directs the *Interdisziplinäres Institut für Wissenschaftsphilosophie und Humanontogenese* at the Humboldt University of

Berlin. This was formerly the *Bereich Philosophische Probleme der Naturwissenschaften* of the *Sektion Philosophie*.

** I would like to especially thank three former graduate students for their extraordinary service in organizing and administrating the summer institute: Dr. Irene Eckardt, Dr. Sigrid Sander, and Heike Schone, soon to be a Dr. We are also indebted to Dr. Fritz Kleinhempel for his extraordinary service in guiding the album with abstracts and pictures (*Gedächtnisband*) to completion during the summer event.

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FOREWORD

Marxist-Leninist philosophy investigates the dialectic of nature, history, and the material and spiritual life of society. Thereby, it emphasizes that the nature of materialistic dialectic consists in the philosophical explanation of objective developmental processes (*Entwicklungsprozesse*). Development is conceived as a tendency toward higher growth that asserts itself via stagnations and regressions as well as the formation of all the elements of a phase of development. The object of the materialist dialectic as science (*Wissenschaft*) is *objective dialectic*, i.e., the structure, change, and development in nature and society, *subjective dialectic*, i.e., structure, change, and development of concepts and theories, and the *dialectic of the process of cognition* (*Erkenntnisprozess*), i.e., the structure, change, and development of the system of ways of cognition.

The sciences convey insights into these objects. Marxist-Leninist philosophy must support itself therefore upon the knowledge of all the scientific disciplines so as to become methodologically effective as a way of thinking and as a theory of method and a critique of method. Especially the natural sciences have provided extensive material to make philosophical statements precise, e.g., investigations of the relation of the biotic and the social, new aspects of the person-environment relation with the ecology discussion, research on the laws of mental processes, and much else. The essential thing in all this is new tendencies of scientific development that demand intensified dialectical thought in new dimensions. To them belong global problems of human development, growing complexity of scientific tasks and societal relevance, and the origin of new theories and methods.

Global problems of human development extend from the most elementary interests of humans to live and nourish themselves, through the maintenance of the natural conditions of human existence, on up to the conquest of the cosmos. Natural scientific research is closely connected with global problems. It is therefore important to philosophically analyze the natural conditions that affect human existence and the development of humans themselves. Materialistic dialectic must prove itself ever anew as world view, epistemological, and methodological

foundation of all natural scientific research work. Dialectic can therefore never be conceived as a mere schema. Already Karl Marx emphasized that it

includes in its comprehension an affirmative recognition of the existing state of things, at the same time also, the recognition of the negation of that state, of its inevitable breaking up; because it regards every historically developed social form as in fluid movement, and therefore takes into account its transient nature not less than its momentary existence; because it lets nothing impose upon it, and is in its essence critical and revolutionary (Marx, 1962, 1859; from the Afterword to the second German edition, 1873).

The Department of Philosophy of the Humboldt University of Berlin sets for itself the task of further working out the materialistic dialectic in a productive manner. With the following contributions by scholars of the Department and their guests, a feast for discussion is spread out. The points of departure are various, but they serve a single goal: to bring newly-won ideas into the contest of opinion among philosophers and between philosophers and natural scientists.

NOTE

* Professor Dr. Helga E. Hörz was director of the Institut für marxistisch-leninistische Philosophie at the Humboldt-Universität Berlin until 1990.

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