

INDICI • CONTENTS  
RIASSUNTI • ABSTRACTS

ESTRATTO

da

PHYSIS

Rivista Internazionale di Storia della Scienza  
2023/2 ~ (LVIII)



Leo S. Olschki Editore  
Firenze

# physics

International Journal for the History of Science

LVIII

2-2023



# physis

International  
Journal for  
the History of  
Science

*pubblicata dalla*  
DOMUS GALILÆANA DI PISA

*in collaborazione con*  
SOCIETÀ ITALIANA DI STORIA DELLA SCIENZA  
SEMINARIO DI STORIA DELLA SCIENZA DELL'UNIVERSITÀ DI BARI

## DIREZIONE E REDAZIONE (EDITORS)

*Direttore responsabile (Senior Editor):* STEFANO CARRAI.

*Direttori (Editors):* FRANCESCO PAOLO DE CEGLIA, CARLA RITA PALMERINO, CLAUDIO POGLIANO.

*Comitato direttivo (Editorial Board):* MONICA AZZOLINI, MARCO BRESADOLA, MAURO CAPOCCI, GIOVANNI DI PASQUALE, RENATO FOSCHI, SERGIO GIUDICI, LUIGI INGALISO, SANDRA LINGUERRI, ERIKA LUCIANO, ELIO NENCI.

*Responsabili delle recensioni (Book Reviews Editors):* ANDREA CANDELA, GIULIA GIANNINI, MATTIA MANTOVANI.

*Redazione (Editorial Office):* DAVID CECCARELLI, LUCIA DE FRENZA.

## CONSIGLIO SCIENTIFICO (ADVISORY BOARD)

MAURO ANTONELLI, GIULIO BARSANTI, MARCO BERETTA, DOMENICO BERTOLONI MELI, PAOLA BERTUCCI, JANET BROWNE, ELENA CANADELLI, LUCA CIANCIO, MARCO CIARDI, GUIDO CIMINO, ANTONIO CLERICUZIO, MARIA CONFORTI, BARBARA CONTINENZA, VINCENZO DE RISI, FEDERICA FAVINO, PAULA FINDLEN, PAOLO GALLUZZI, PAOLA GOVONI, NICCOLÒ GUICCIARDINI, MICHAEL HAGNER, NICK HOPWOOD, MARIANNE KLEMUN, MATTEO MARTELLI, RENATO G. MAZZOLINI, MASSIMO MAZZOTTI, MARIA MONTSERRAT CABRÉ PAIRET, CARMELA MORABITO, STAFFAN MÜLLER-WILLE, GIULIANO PANCALDI, IRINA PODGORNÝ, GIANNA POMATA, TELMO PIEVANI, CLAUDIA PRINCIPE, PIETRO REDONDI, HANS-JÖRG RHEINBERGER, ANTONELLA ROMANO, PAOLO ROSSI, SOPHIE ROUX, DAGMAR SCHÄFER, EZIO VACCARI, STÉPHANE VAN DAMME.

E-MAIL: francescopaolo.deceglia@uniba.it

2024: ABBONAMENTO ANNUALE (2 fascicoli) – ANNUAL SUBSCRIPTION (2 issues)

Il listino prezzi e i servizi per le **Istituzioni** sono disponibili sul sito [www.olschki.it](http://www.olschki.it) alla pagina <https://www.olschki.it/acquisti/abbonamenti>

*Subscription rates and services for Institutions are available on*  
<https://en.olschki.it/> *at following page:*  
<https://en.olschki.it/acquisti/abbonamenti>

### PRIVATI

Italia € 117,00 (carta e on-line only)

### INDIVIDUALS

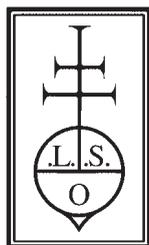
Foreign € 154,00 (print) • € 117,00 (on-line only)

# physics

International Journal for the History of Science

LVIII

2-2023



LEO S. OLSCHKI EDITORE  
FIRENZE

# physics

International  
Journal for  
the History of  
Science

*pubblicata dalla*  
DOMUS GALILÆANA DI PISA  
*in collaborazione con*  
SOCIETÀ ITALIANA DI STORIA DELLA SCIENZA  
SEMINARIO DI STORIA DELLA SCIENZA DELL'UNIVERSITÀ DI BARI

## DIREZIONE E REDAZIONE (EDITORS)

*Direttore responsabile (Senior Editor):* STEFANO CARRAI.

*Direttori (Editors):* FRANCESCO PAOLO DE CEGLIA, CARLA RITA PALMERINO, CLAUDIO POGLIANO.

*Comitato direttivo (Editorial Board):* MONICA AZZOLINI, MARCO BRESADOLA, MAURO CAPOCCI, GIOVANNI DI PASQUALE, RENATO FOSCHI, SERGIO GIUDICI, LUIGI INGALISO, SANDRA LINGUERRI, ERIKA LUCIANO, ELIO NENCI.

*Responsabili delle recensioni (Book Reviews Editors):* ANDREA CANDELA, GIULIA GIANNINI, MATTIA MANTOVANI.

*Redazione (Editorial Office):* DAVID CECCARELLI, LUCIA DE FRENZA.

## CONSIGLIO SCIENTIFICO (ADVISORY BOARD)

MAURO ANTONELLI, GIULIO BARSANTI, MARCO BERETTA, DOMENICO BERTOLONI MELI, PAOLA BERTUCCI, JANET BROWNE, ELENA CANADELLI, LUCA CIANCIO, MARCO CIARDI, GUIDO CIMINO, ANTONIO CLERICUZIO, MARIA CONFORTI, BARBARA CONTINENZA, VINCENZO DE RISI, FEDERICA FAVINO, PAULA FINDLEN, PAOLO GALLUZZI, PAOLA GOVONI, NICCOLÒ GUICCIARDINI, MICHAEL HAGNER, NICK HOPWOOD, MARIANNE KLEMUN, MATTEO MARTELLI, RENATO G. MAZZOLINI, MASSIMO MAZZOTTI, MARIA MONTSERRAT CABRÉ PAIRET, CARMELA MORABITO, STAFFAN MÜLLER-WILLE, GIULIANO PANCALDI, IRINA PODGORNÝ, GIANNA POMATA, TELMO PIEVANI, CLAUDIA PRINCIPE, PIETRO REDONDI, HANS-JÖRG RHEINBERGER, ANTONELLA ROMANO, PAOLO ROSSI, SOPHIE ROUX, DAGMAR SCHÄFER, EZIO VACCARI, STÉPHANE VAN DAMME.

E-MAIL: francescopaolo.deceglia@uniba.it

Ogni articolo è sottoposto alla valutazione anonima di due esperti.  
Each article is submitted to a double-blind scholarly peer review.

# PHYSIS

INTERNATIONAL JOURNAL FOR THE HISTORY OF SCIENCE

VOL. LVIII (2023)

FASC. 2

## TABLE OF CONTENTS

G. IENNA, Introduction. Science Goes Radical: Towards a History of Social Movements . . . . .	pag. 281
OMPRASAD, From 'State' Science to 'Peoples' Science: Science Movements in Post-Colonial India (1947-1980) . . . . .	» 291
R. DEBAILLY, Challenging Science's Autonomy. The "critique des sciences" in France. . . . .	» 313
S. DOETZ, The Socialist Patient Collective, The Printing Press, And Anti-Psychiatry in Heidelberg in the 1970s . . . . .	» 335
P. LOUČOVÁ, "An Attempt to Look out of the Ecological Depression:" Samizdat and Alternative Ecological Journalism in Communist Czechoslovakia, 1969-1989. . . . .	» 361
D. COZZOLI, The Visible Technician: Scientists, Technicians, and the Neutrality of Science in 1960s and 1970s Italy . . . . .	» 397
G. IENNA, The Social and Political Roots of the Institutionalization of the History of Physics in Italy . . . . .	» 427
F. LUSITO, The <i>Scientia</i> Case: Scientific Censorship and Ideological Struggles, 1973-1975. . . . .	» 461
G. SANVITALE, "Science Gave us Nothing." Women and Technology in Italian Feminism as a Radical Science Movement (1970s-1980s) . . . . .	» 489
<i>Essay Reviews</i>	
Il Galileo di Giorgio Stabile (M. Camerota) – Medicine as a Political Art (F.A. Sulpizio) – Florenskij's Double-Gazed Window (C. Bartocci) . . . . .	» 517

OMPRASAD

## FROM 'STATE' SCIENCE TO 'PEOPLES' SCIENCE: SCIENCE MOVEMENTS IN POST-COLONIAL INDIA (1947-1980)

The Association of Scientific Workers of India (ASWI) was established in 1947, by Indian scientists known to leftist scientists like John D. Bernal and Frédéric Joliot Curie. Rather than being looked upon as a Soviet front, the ASWI was very closely tied to the state in post-colonial India. Members of the ASWI as they became part of the science-policy establishment brought in ideas that were distinctly associated with leftist imaginations of science. However, a change in the landscape of science movements occurred in the 1970s when a crisis of legitimacy of science surfaced in India. This was rooted in questioning the role of science and technology in development and put a big question mark over the approach adopted about science in India. One response to this crisis was the 'Peoples Science' movement. This was different from the radical science movements that emerged in the 'West' in the 1960s. Not all of them shared radical imaginations of science but they differed from the ASWI. While the members of the ASWI were predominantly based in the industrial research laboratories, the scientists associated with the people's science movement came from a variety of disciplines including nuclear physics, engineering sciences, and science education pointing to a widening of the base of science movements in India. In my paper, I will chart out the trajectory of India's science movements from the ASWI to the peoples' science movement. I will argue that the shift in their nature must be understood in the changing contexts surrounding the relationship between science and development. I will conclude the paper by arguing that there is a need to rethink some of the historiographic assumptions about science movements to understand their features in the 'non-West.'

R. DEBAILLY

## CHALLENGING SCIENCE'S AUTONOMY. THE "CRITIQUE DES SCIENCES" IN FRANCE

This article examines the emergence, development, and demise of the 'critique des sciences' in France in the aftermath of May 1968. Initially, the critique of science in France was inspired and influenced by other radical science movements abroad. The critique of science and technology led to counter-expertise and the questioning of hierarchies and inequalities in the scientific institution. Ephemeral political journals appeared during this period, in which scientists, engineers and technicians published articles about ecology, feminism, and the power of 'Mandarins' in the scientific laboratory, for example. In France, the movement evolved in a singular way during the 1970s and 1980s since it disappeared slowly. The French critique of science was pursued in the 1980s in the field of popularization and expertise. Considerations about the role of science in society also converged with the renewal of the study of science in academic disciplines. I suggest that the understanding of the critique of science in France requires that we consider the political context of the 1970s, and the relationships between the critique of science and the disciplines dedicated to the analysis of science and technology.

S. DOETZ

THE SOCIALIST PATIENT COLLECTIVE, THE PRINTING PRESS,  
AND ANTI-PSYCHIATRY  
IN HEIDELBERG IN THE 1970S

To question psychiatry was part of the bigger 'fight against repression' of the New Social Movements and the alternative milieu in West Germany from the late 1960s until the 1980s. In this paper, I focus on the media production of the Socialist Patient Collective (Sozialistisches Patientenkollektiv, SPK) in Heidelberg, which challenged hegemonic concepts of 'normality' and 'insanity' and instead sought to generate its own episteme at the start of the 1970s. I argue that the SPK's media production, which was in the hands of the group itself, enabled the collective to react very quickly and independently to current events and that it was thus an important element in the escalating conflicts between the group and its opponents. In addition, the SPK succeeded in building up a (counter-) public, which even reached beyond West Germany and connected the SPK to psychiatry-critical groups in France, the Netherlands, and Italy. Moreover, writing, typing and printing leaflets had also a group-building and empowering effect.

P. LOUČOVÁ

"AN ATTEMPT TO LOOK OUT OF THE ECOLOGICAL  
DEPRESSION:" SAMIZDAT AND ALTERNATIVE ECOLOGICAL  
JOURNALISM IN COMMUNIST CZECHOSLOVAKIA, 1969-1989

The aim of this joint contribution is the analysis of ecological samizdat and grey zone ecological journals in Czechoslovakia in the 1970s and 1980s. On one hand, samizdat journalism dealing with ecological issues expressed people's frustration with the devastation of nature; on the other hand, it criticised the inaction of the state apparatus. Ecological samizdat journalism was a response to the communist government and its censorship of environmental data which were very often considered top-secret, even though they were provided e.g. as part of international monitoring of air pollution or collected as part of global environmental programmes. The paper will describe the role of the alternative publishing spheres as the important communication channels and sources of expertise and data, also testifying to the different forms and plurality of Czechoslovak environmentalism and the ecological movement (from conservationists to "green underground"), their mutual crossovers and interactions, as well as their transnational connections.

D. COZZOLI

## THE VISIBLE TECHNICIAN: SCIENTIST, TECHNICIANS, AND THE NEUTRALITY OF SCIENCE IN 1960S AND 1970S ITALY

The end of the 1960s and the first half of the following decade was a period of intense political and social tensions in Italy. The social struggles involved the world of research too. Non-tenured scientists and technicians often went on strike. Between 1968 and 1970 all the major Italian scientific institutions were at some point occupied by young non-tenured scientists and technicians. Their protests tended to converge with those of factory workers and technicians. Industrial workers not only asked for better work conditions and higher salaries: they contested the hierarchical organization of production and they criticized the role of science and technology in contemporary productive processes. Likewise, non-tenured scientists and technicians criticized the hierarchical nature of scientific research organization, which – they argued – was rooted in the alleged neutrality of science. They also stood against the military use of scientific research. Most senior scientists were disconcerted. On being accused of authoritarianism, some heads of laboratories even resigned. Through the analysis of archival documents and publications, this paper explores the social, cultural, and political reflections produced by technicians and young scientists. It analyses how the conflict between senior scientists and junior scientists and technicians spread across Italian society. The paper shows how non-tenured scientists and technicians were often acute observers of contemporary scientific research and Italian society. It explains how they appropriated and elaborated the reflections of Thomas Kuhn and produced an original collective discourse, which echoed some of the themes that STS scholars and historians of science would tackle in the late 1970s.

G. IENNA

## THE SOCIAL AND POLITICAL ROOTS OF THE INSTITUTIONALIZATION OF THE HISTORY OF PHYSICS IN ITALY

This article reconstructs the socio-political preconditions behind the emergence of Italian physicists' interest in the history of physics. I focus on the most important events in the field of Italian physics during the 10 years preceding the first two editions of the 1981 Pavia conference on the history of physics. In particular, I draw a line of continuity between the summer schools of Varenna in 1970 and 1972, the conference organized by SIF "Science in a Capitalist Society," the birth of radical science movements in Italy, and the querelles that occurred between Italian historians and philosophers of science such as Ludovico Geymonat and Paolo Rossi, with a new generation of physicists interested in the historical, social, and political dimensions of their discipline. These preconditions seem to be the essential reasons through which the "history of physics" was institutionalized as an autonomous discipline in Italy, as opposed to the history of science practiced in the departments of philosophy and human sciences.

F. LUSITO

## THE *SCIENTIA* CASE: SCIENTIFIC CENSORSHIP AND IDEOLOGICAL STRUGGLES, 1973-1975

In the 1970s, in Italy, the discussion around the neutrality of science reached its peak, involving scientists, intellectuals of different backgrounds, historians and philosophers. Several occasions gave rise to polemics and ideological contrasts, which were mostly consumed between Marxists. The *Scientia* case, which arose with the editorial on the theme "Science, Culture and Society" in 1973, originated a small 'war,' which was followed by an episode of political-ideological censorship that extended until 1975. The episode, which also involved the journal *Sapere* and several historians and scientists, turned into a symbolic battle for freedom of speech: The discussion concerned not only the protracted reflection on the neutrality of science, but also the contrast between methodological, epistemological and historiographical approaches. The opposition between dialectical materialism and historical materialism consequently took on the features of a generational clash, and a battle between veteran-communist dogmatism and the innovative instances of authors close to extra-parliamentary movements: this was the origin of the 'clash' between Geymonat's Milanese school and the post-Sixties generation of historians of science. Thanks to unpublished documents, it has been possible to reconstruct an unexplored but crucial episode of the "Italian science wars," fundamental to understanding the dynamics that inflamed these wars from then on.

G. SANVITALE

## "SCIENCE GAVE US NOTHING." WOMEN AND TECHNOLOGY IN ITALIAN FEMINISM AS A RADICAL SCIENCE MOVEMENT (1970S -1980S)

This article investigates historical intersections between feminism and technology by framing feminism (1970s-1980s) as a Radical Science Movement. This proposition aims to overcome the notion that feminist movements did not significantly engage with science and technology, by showing how they shared several perspectives with Radical Science Movements. Drawing from Wacjman (1991) and from original research on Italian feminist collectives and groups, based on sources like magazines, manifestos, books etc., the article investigates eight dimensions in which Radical Science Movements and feminism brought forward similar critical discourses and practices: feminist critiques of science and technology; technologies of production; reproductive technologies; domestic technologies; built environment technologies; technology as a masculine culture; communication technologies; technology and the natural environment.

Direttore responsabile: prof. Stefano Carrai

Registrazione del Tribunale di Firenze n. 4026 del 6 novembre 1990

ISSN 0031-9414

---

FINITO DI STAMPARE  
PER CONTO DI LEO S. OLSCHKI EDITORE  
PRESSO ABC TIPOGRAFIA • CALENZANO (FI)  
NEL MESE DI DICEMBRE 2023

## TABLE OF CONTENTS

G. IENNA, Introduction. Science Goes Radical: Towards a History of Social Movements

OMPASAD, From 'State' Science to 'Peoples' Science: Science Movements in Post-Colonial India (1947-1980)

R. DEBAILLY, Challenging Science's Autonomy. The "critique des sciences" in France

S. DOETZ, The Socialist Patient Collective, The Printing Press, And Anti-Psychiatry in Heidelberg in the 1970s

P. LOUČOVÁ, "An Attempt to Look out of the Ecological Depression." Samizdat and Alternative Ecological Journalism in Communist Czechoslovakia, 1969-1989

D. COZZOLI, The Visible Technician: Scientists, Technicians, and the Neutrality of Science in 1960s and 1970s Italy

G. IENNA, The Social and Political Roots of the Institutionalization of the History of Physics in Italy

F. LUSITO, The *Scientia* Case: Scientific Censorship and Ideological Struggles, 1973-1975

G. SANVITALE, "Science Gave us Nothing." Women and Technology in Italian Feminism as a Radical Science Movement (1970s-1980s)

### ESSAY REVIEWS

Il Galileo di Giorgio Stabile (M. Camerota) – Medicine as a Political Art (F.A. Sulpizio) – Florenskij's Double-Gazed Window (C. Bartocci)