

**„Science, Environment, Infrastructure, and Technology“, History of Science in Central and Eastern Europe, Munich Spring School**

**Veranstalter:** Graduate School for East and Southeast European Studies, Ludwig Maximilian University of Munich / University of Regensburg

**Datum, Ort:** 23.04.2014–27.04.2014, Munich

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Currently, science and technology studies and environmental studies are rapidly developing fields. Based on interdisciplinary inquiry, they unite a large number of theories and subjects elaborated by historians, anthropologists, social scientists and other researchers. Not just experienced scholars, but an increasing number of graduate students and early-career academics are expressing interests in these fields, choosing history of science and technology or environmental history as the defining framework for their research. At the same time, not all the universities have introduced relevant study programmes yet. As a result, international research schools play a crucial role in helping young researchers and students share their ideas and research experience, while learning more about theory and new approaches in the fields.

The city of Munich, Germany, was the venue for a spring school on science, environment, infrastructure, and technology held from April 23rd to 27th, 2014. The choice of this green city, well known as a center for environmental and technological research, allowed students to be immersed in diverse fields of science, technology, and the environment. This was the first school organized by the *Graduate School for East and Southeast European Studies* at the Ludwig Maximilian University of Munich and the University of Regensburg, with supervision by Martin Schulze Wessel and Björn Felder. Organized in six sessions, the school successfully represented the full spectrum of disciplines by employing a format which combined introductory presentations (lectures, seminars, and master classes) and workshops held by

leading researchers in the field. An important educational component of the school was the suggested readings, which were circulated to participants beforehand as a basis for further inquiry. The combined format of lectures, workshops and readings enabled the school to show broad recent trends within the chosen fields, while also providing a space for discussion and exchange of ideas.

The school invited graduate students conducting research into science and technology and environmental history from Ukraine, Finland, Hungary, Germany, Slovakia, Italy, and Lithuania. The selection of several highly motivated graduate students with various backgrounds created a stimulating dialog and close atmosphere. Some participants noted that they applied to the school in order to find new perspectives for their research, while others aimed to learn more about the fields as well as to find answers to some specific research questions. Looking ahead at the report that follows, it is worth stating that the school assuredly met these expectations and requirements.

In his introducing speech at the Deutsches Museum BJÖRN FELDER (Munich) emphasized the importance of technology for human society and the interaction between science and society and gave an overview on research related to Eastern Europe. The first session opened with a fascinating introductory presentation on the history of technology given by HELMUTH TRISCHLER (Munich). In his talk he considered historiographical trends and raised the issue of defining technology. He stressed that technology does not deal with pure technical innovation only, but it always concerns co-construction, meaning that technological history is closely connected with factors ranging from the social to the environmental. The discussion that followed raised the question of how technological history (and history in general) can be transformed into applied knowledge and what role it plays for the public. Another question addressed the role of individuals in the development of technology, as well as to what were centers of producing technology in the Middle Ages and other periods of history.

These questions were considered further within the workshop on technological history

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that followed the introduction, where participants discussed the volume „Building Europe on Expertise,” which argues that modern Europe is founded on the work of experts.<sup>1</sup> As a concluding part of the first day, Trischler held a guided tour in the Deutsches Museum where he spoke about the institution’s history, as well as presenting several expositions, including a unique collection of aviation and space artifacts, a nanotechnology hall, and an opened laboratory, among many others.

A morning session of the second day was devoted to environmental history, and was held in Collegium Carolinum, which serves as a center for research on the Bohemian Lands with a focus on environmental and infrastructure history, cultural memory, and other issues. CHRISTOF MAUCH (Munich), the director of the Rachel Carson Center in Munich, opened the day with an introduction to the field by questioning if nature can be an actor. He emphasized that in environmental history nature is not a stage or backdrop, but rather performer which shapes humans. The task of the historian is to investigate mutual influence and ways humans and nature shape each other, including invisible changes and influences nature has on societies. The outstanding talk by Mauch provoked an intensive discussion on environmental movements and cultural ecology as well as possible scenarios of future development of the field.

This discussion was continued by a workshop held by ANGELIKA MÖLLER (Munich) who asked the participants to make short presentations on various aspects of environmental history of East and Southeast Europe. Among other topics, the students presented case studies on Croatian forests in the 19th century, the decline of rivers in Kazakhstan, and the pulp and paper industry in the Soviet Union. These talks enabled the participants to raise the problems of regulating natural resource use, destroying nature, and agricultural development.

The concluding session of the day’s intensive schedule was held by ARNOŠT ŠTANZEL (Munich) who gave an introduction and workshop on the history of infrastructure. Organized in a question-and-answer format, his talk stimulated debates on the meanings of infrastructure and the meanings

created by infrastructure. In particular, the participants discussed the issue of physical and invisible borders, using technological expertise in political intensions, controlling nature and the role of technology in projects of modernity, the relationship between infrastructure and spatiality, and infrastructure as symbols and signs of ideology. Alongside with this debate, Štanzel suggested a discussion of the role of technology in the European integration and an idea of „hidden integration” on the basis of proposed reading.<sup>2</sup>

The third day of the school was devoted to the history of science, and organized around a workshop on science in the Cold War with an emphasis on Russia/Soviet Union. KÄRIN NICKELSEN (Munich) made an exciting presentation on Russian science in the 19th century. She built her talk around the challenging question of how the history of science and the history of Eastern Europe meet each other. She showed the role of scientific research in creating a new type of individual with an original culture, one that held a strong belief in science. The role of scientific expertise in later periods was covered by CHRISTIAN JOAS (Munich) and ELENA ARONOVA (Berlin) who started their workshop by outlining key dates of the Cold War to show visually that to a large extent this period introduced many significant scientific and technical achievements. This led the participants of the workshop to ask if it was the Cold War that shaped science or vice versa. A short propaganda film created in the mid-XX century on SAGE (Semi-Automatic Ground Environment) showed by the organizers of the workshop as well as a paper by the historian of technology Slava Gerovitch were used during the discussion as places for participants to begin thinking about possible answers.<sup>3</sup> Both the film and article stimulated

<sup>1</sup> Martin Kohlrausch / Helmuth Trischler, *Building Europe on Expertise: Innovators, Organizers, Networkers*, London 2013.

<sup>2</sup> Thomas Misa / Johan Schot, „Inventing Europe: Technology and the Hidden Integration of Europe,” in *History and Technology*, Vol. 21, No. 1, March 2005, pp. 1-19.

<sup>3</sup> Slava Gerovitch, „‘Mathematical Machines’ of the Cold War: Soviet Computing, American Cybernetics and Ideological Disputes in the Early 1950s,” in *Social Studies of Science*, Vol. 31, No. 2, April 2001, pp. 253-287.

debates about the role of propaganda, the development of computing in the Cold War, as well as secrecy and openness of science, among others.

The final day of the school was devoted to social history of medicine and history of race and eugenics, as well as to discussion of a prominent piece by Michael Foucault.<sup>4</sup> The organizer of the introductory seminar and workshop BJÖRN FELDER (Munich) stressed that the social history of medicine appeared to be a field that would connect the study of medicine and society. One of the outcomes of this development was an interest in eugenics, which originally comprised various disciplines from statistics to genetics. In order to show the ways that eugenics developed, Felder made a presentation on his research related to eugenics in the Baltic States. He also showed some historical examples of biologizing the social and the evolution of bio-politics. A crucial part of his topic included a discussion of Foucault's concepts of bio-politics and bio-power, which emphasizes the will of modern state to stretch its control over societies and bodies.

Overall, the participants in the school expressed that the breadth of research topics covered by the school as well as a combined format of activities provided a very productive experience. The school provided an educational programme that gave the participants – graduate students and young researchers, not all of whom came to the field with formal training from related programmes – first understanding on the fundamental ideas of the presented historical categories. Moreover, the school offered exceptionally productive discussions and opportunities for sharing ideas and questions, enabling the participants to explore new aspects of their own research. Last but not least, the school played a positive role in establishing contacts among students coming from various countries and institutions. The school closed with the hope that such an event will be organized next year.

#### **Conference Overview:**

##### *Section: History of Technology*

Björn Felder (Munich), History of Science and Eastern Europe

Helmuth Trischler (Munich), Introduction History of Technology

Helmuth Trischler (Munich), Workshop: History of Technology

##### *Section: Environmental History*

Christof Mauch (Munich), Introduction Environmental History

Angelika Möller (Munich), Workshop: Environmental History

##### *Section: History of Infrastructure*

Arnošt Štanzel (Munich), Introduction History of Infrastructure / Workshop: History of Infrastructure

##### *Section: History of Science*

Kärin Nickelsen (Munich), Introduction History of Science

Christian Joas (Munich) /Elena Aronova (Berlin), Workshop: History of science /Cold War Studies

##### *Section: Social History of Medicine*

Björn Felder (Munich), Social History of Medicine / Workshop: History of Race and Eugenics

##### *Final Discussion*

Chair: Björn Felder

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<sup>4</sup>Michael Foucault, *The Will to Knowledge. The History of Sexuality*. Vol. 1, London 1998.