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Goethe-University Frankfurt am Main, Herder Institute for Historical Research on East Central Europe Marburg, 21-22 January 2016, International Graduate Centre for the Study of Culture (GCSC), Giessen

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Conference Report on "Lecture and Studientag: 'Science that Came in From the Cold' Epistemology, Rationality and Cold War Scientific Culture"

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Exploring the Languages and Sciences of/during the Cold War

In the midst of the German winter, a series of events brought the Cold War to the centre of heated academic discussions, thanks to a cooperation between the Herder Institute for Historical Research on East Central Europe Marburg, the International Graduate Centre for the Study of Culture (GCSC) in Giessen, and the History of Knowledge working group at Goethe-University Frankfurt am Main. Questions relating to Cold War-era science and scientific language were explored through interdisciplinary approaches covering topics ranging from the linguistic dominance of English to dam constructions and cyborgs.

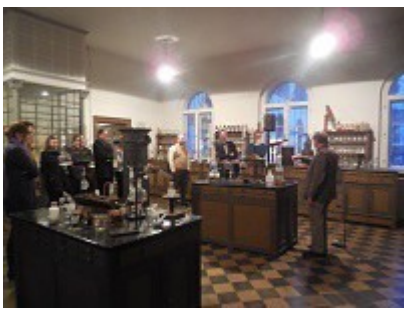
“The Russians Are Writing!” – Michael Gordin’s Keynote Lecture in Giessen

The events kicked off at the Justus Liebig Museum in Giessen. DIETMAR LINDER (Justus Liebig Museum, Giessen), archivist and member of the Justus Liebig Society, gave a tour of the museum, which was organized by the Museum Culture Working Group of the Giessener Graduiertenzentrum Kulturwissenschaften. He vividly brought to life the story of Justus Liebig, patron of the University of Giessen. Liebig, as the inventor of modern organic and experimental chemistry, successfully commercialized his research, developing useful products for modern daily life including beef extract. Linder combined theoretical explanations with explosive chemical experiments such as the ‘barking dog’, thus making the tour both informative and entertaining. He laid the ground for the following keynote lecture by a historian who is especially renowned for his work on the history of chemistry.

The keynote lecture was held in a truly inspiring venue: the nineteenth-century lecture hall used by Justus Liebig that now forms part of the museum. MICHAEL D. GORDIN, KULT Abb 3

onlinehistorian of science at Princeton University, presented his lecture The Russians are Writing! The Cold War Crisis of Scientific Language, drawing on his 2015 book Scientific Babel. Focussing on the natural sciences, he claimed that US scholars and politicians tried to meet the challenge of the growing dissemination of science in Russian. This set the stage for the rise of English as the scientific "vehicular language" in the second half of the 20th century. The period from 1940 to 1970 in particular saw an unprecedented boom of English usage in scientific publications. Against the backdrop of growing Cold War tensions, fears grew in the USA that scholars were missing out on work in Russian, as only few mastered the language. American, government-supported programmes to develop machine translations soon proved unsuccessful, while the translation of handpicked academic texts in Russian that were deemed "valuable" was met with critical suspicion. Yet Gordin identified a corporate endeavour that crucially catalysed the rise of English: the Cover-to-Cover Translation Programme initiated by entrepreneur Earl Coleman. In the "largest translation project in the history of science", entire Soviet scientific journals were translated into English, regardless of the perceived value of the individual issue or article. Thus, through translation, Russian research became linguistically accessible to Western scholarly communities, usually within six months of publication. This just added to the ever-increasing scholarship published in English.

Gordin concluded that the rise of English as the global language of science predated the rise of English as the global lingua franca for all aspects of daily life such as business or travel. It was catalyzed by a combination of both top-down programmes – such as the government-initiated translation projects – as well as bottom-up interests – i.e. scholars who wanted timely access to newly published research in foreign languages. Where scholarly discussions had for a long time taken place on paper, changes in the work practices within the scientific community led to more face-to-face meetings, e.g. at international conferences, since air travel became more widely available. As a consequence, the need for a common linguistic code provided another catalyst for the global rise of English.



In a venue steeped in the history of nineteenth-century scientific discovery, we learned from Prof. Gordin a great deal about the emergence of the communicative paradigms of twentieth-century science. In his both thought-provoking and entertaining presentation, he also visualized some of the problems at stake, e.g. retaining Cyrillic letters on some slides or using Interlingua – an attempt to invent a universal language, less famous than Esperanto. The concluding discussion was then extended to the restaurant Justus at Hessischer Hof and our guest from the USA could explore some Hessian culinary delights.

"Science that Came in From the Cold": Studientag in Frankfurt

The following morning, the one-day research symposium, or Studientag, Science that Came in from the Cold: Epistemology, Rationality and Cold War Scientific Culture, opened at IG Farbenhaus at Goethe University Frankfurt. Five doctoral projects were presented and then commented upon by the group, including the discussants PETER HASLINGER (Herder Institute, Marburg) and Michael Gordin. The third invited discussant PHILIPP SARASIN (Center "History of Knowledge", Zurich) unfortunately could not join due to illness.

The introduction by JAN SURMAN (Herder Institute, Marburg) and FABIAN LINK (History of Knowledge Working Group, Frankfurt am Main) framed the event, characterising the Cold War as a period that saw unprecedented growth of scientific institutions both within academia and beyond it. Governments invested heavily in research to generate policy-relevant knowledge. A certain prevailing "Cold War rationality" (cf. Erickson, Gordin et al. How reason almost lost its mind, 2013) identified humans as the weakest link in the chain preventing the world from nuclear annihilation. Attempts were made to replace, or at least modify, human reason with rationalized, mathematized, and automatized ways of reasoning for political decision-making. An expansion of both the natural and social sciences induced an explosion of knowledge. The symposium approached this knowledge, asking what scientific knowledge(s) could be operationalized specifically within the ideological framework of the Cold War. What were the boundaries of Cold War rationality? Was it only a Western concept or could such rationality also be observed e.g. in the socialist East or the Global South? What knowledge was shaped by bipolarity and what knowledge was detached from ideology but happened to occur in the Cold War-era?

CORINNE GEERING (GCSC, Giessen) presented the first paper entitled Steel and Chemicals for the Carpenter's Master-piece: Renegotiating Authenticity for the Conservation of Wooden Architecture in the Cold War. She explored whether Cold War rationality could also be applied to Soviet history. Her paper investigated the potential for writing a Cold War history focused not so much on antagonisms but on cooper-ation and standardization. She approached these questions through the epistemic category of authenticity and its practical application in the conservation of old buildings. This was illustrated by the theoretical discussions at international conferences and conservationist practises surrounding the preservation attempts of the Church of the Transfiguration on the island of Kizhi in the Soviet Union. She thus demonstrated how restoration practices were a discursive field that transcended the bipolar antagonism, while also showing that other divides, such as the critique of Eurocentrism, were formative for the later Cold War period.

SIMON OTTERSBACH (GCSC, Giessen) followed, with his paper Knowledge that Came in from the Cold: Radio Free Europe's Production and (Transatlantic) Circulation of Cold War

Knowledge (1950 – 1971). He focussed on the role of the Munich based US propaganda radio as a producer of knowledge rather than as just a broadcaster. Radio Free Europe (RFE) broadcasted programmes behind the Iron Curtain to Central and Eastern Europe. But lacking physical access to the communist sphere, a large-scale information-gathering operation provided the institution with data and information on the target area. RFE researchers further processed this material and compiled an extensive corpus of research and knowledge on Central and Eastern Europe, which then likewise entered into and shaped Western academic and public discourses. RFE both actively produced and also reproduced the figurative Iron Curtain, Ottersbach argued.

MANUEL KAISER (Center "History of Knowledge", Zurich) presented his doctoral project on 'Taming the Weather': Scientific and Public Weather Modification Discourses during the Cold War. He focused on transatlantic discourses and experimental practices in the science of weather modification from the 1950s to the 1970s, reading them as an angst-ridden discursive field specific to the Cold War. He showed that attempts were made to manipulate natural precipitation, particularly by means of cloud seeding, i.e. the insertion of silver-iodide into clouds. This could have resulted in "weather warfare" by, for example, causing droughts or floods on the enemy's side. Yet many of these experiments had proved unsuccessful by 1977 when weather warfare was finally banned.

BENJAMIN BRENDEL (GCSC, Giessen) in his paper Dams – Cumulated Constructions of the Cold War read large-technological-systems such as dam constructions as a field of science and engineering that countered the bipolarity of the Cold War. Drawing on the example of visits by dam engineers from the USA to Bratsk and Krasnoyarsk in the Soviet Union in 1975, he showed that dams were not a specific intra-systemic construction. Instead, they depended on cooperation and exchange between the two blocs. However, this did not completely overcome competitive elements, as a "dam race" emerged, characterized by engineers' quest to build the largest, most impressive, and most efficient dam. Brendel illustrated that when it came to engineering, certain groups of dam constructors formed thought collectives (Denkkollektive; drawing on the concept by Ludwik Fleck) that transcended the Iron Curtain.

Departing from such earthly geo-engineering, the last paper of the Studientag defied the rules of gravity and elevated the participants into outer space. In his paper Cyborg, Space Medicine, and the Cold War Struggle over Human Nature during the 1960s, PATRICK KILIAN (Center "History of Knowledge", Zurich) showed the origins of space medicine. Drawing both from Nazi personnel and research in aviation medicine, clandestine space medicine programmes were instituted in the USA at the start of the Cold War and extensively expanded after the Sputnik shock. Their goal was to prepare the human body for explorations in outer space, as humans were identified as the weakest component in space travel endeavours. It was not only technology that had to be adapted to meet human needs, but also human nature had to be changed to meet the demands of zero gravity. Cyborgs were not just the imagination of science fiction authors but were indeed perceived as realistic scientific programmes that would eventually provide victory in the Cold Star War.

In the concluding discussion, Jan Surman and Fabian Link highlighted the need for awareness of the difference between "Cold War Knowledge" – i.e. knowledge that was specifically influenced by the Cold War – and knowledge that "happened" during the Cold War as a period. They also observed a discrepancy between Cold War Knowledge and post-Second World War-knowledge, a term that stresses the longitudinal continuities that impact science regardless of whatever perceived or real caesurae. Science in the Cold War-era was typified as both competitive, as could be seen for example in the weather modification discourses, as well as cooperative, as illustrated by the dams or conservation practices. Not only in relation to science and scholarship but for the historiography on the Cold War in general, terminological and conceptual precision is vital for avoiding the trap of thinking that everything that happened during the Cold War as a period was inevitably also shaped by Cold War bipolarity. The field of Cold War(-era) science remains an under-researched field in Cold War studies and therefore the projects discussed in Frankfurt and framed by Prof. Gordin's lecture in Giessen will add new pieces to the mosaic of the history of the Cold War period.

Invited Discussants: Michael D. Gordin (Rosengarten Professor of Modern and Contemporary History, Princeton University), Peter Haslinger (Herder Institute for Historical Research on East Central Europe, Marburg), Philipp Sarasin (Forschungsstelle für Sozial- und Wirtschaftsgeschichte, University Zurich) – absent.

Organized by:

Herder-Institute for Historical Research on Eastern Europe – Institute of the Leibniz Association, Marburg

International Graduate Centre for the Study of Culture (GCSC), Justus Liebig University, Giessen – Research Area 8: Cultures of Knowledge, Research, and Education

Working Group History of Science, Goethe-University, Frankfurt am Main.

Organizers: Fabian Link (Goethe-University, Frankfurt am Main), Jan Surman (Herder-Institute for Historical Research on Eastern Europe, Marburg), Corinne Geering (GCSC, Justus-Liebig-University Giessen), Paul Vickers (GCSC, Justus-Liebig-University Giessen), Jill Grinager (GCSC, Justus-Liebig-University Giessen)