

## Models of Cooperation and Competition in the Sciences

Both within a scientific field and society at large, scientists and research institutions compete for resources (money, time, personnel) as well as for influence and reputation. On the other hand, competition often takes place within cooperative structures – a lab, an institution or collaborative network – where materials, information or results are shared. Scientists also produce competing interpretations or explanations of phenomena, criticizing other approaches for being no so much wrong as inadequate – a situation that might be described as epistemic competition. Furthermore, we can speak of epistemic collaboration when different approaches are seen as complementing each other. Competition and cooperation thus seem to be always intertwined and their interaction generates the changing dynamic of scientific disciplines.

Models, material or conceptual, as well as images often play central roles in the social structures or material infrastructures in which scientists compete and collaborate. They often result from collaborative efforts, either because their production requires specialists from different fields, or because they are designed to collect information from different researchers or even fields of research.

Especially in situations of epistemic competition, where researchers have to convince third parties of the value of their approach over that of other groups, images or models in their evidential rhetoric play an important role. But also other representational devices or infrastructures such as nomenclatures, databases or journals shape the interaction of scientists. With respect to such structures we can speak of models for exchange between scientists. Meant to enable cooperation, debates surrounding their design reveal competing approaches to communication and interaction.

This workshop proceeds by bringing together different case studies from the perspectives of the history, philosophy and social studies of science. While much progress has been made in recent years in these fields with respect to the investigation of the various roles played by different types of models and images in science, this workshop takes a fresh look at this question by foregrounding the role they play in processes of competition and collaboration in science. On the other hand, investigating these two types of interactions as they are embodied in scientific representations or models for exchange allows understanding and comparing the conventions and mechanisms of competition and collaboration and their historical change in a particularly focussed way.

11:00 – 11:30 Arrival/Coffee  
11:30 – 12:00 Welcome Robert Meunier  
and Introduction by Kärin Nickelsen

Session 1  
Chair: Robert Meunier (LMU Munich)  
12:00 – 12:40 Reinhard Wandler (KHI Florence)  
The Performative Side of Models  
12:40 – 13:20 Nina Samuel (ZfL Berlin)  
The Case of the  
,Very Bright Spherical Objects':  
On Seeing and Discovering in  
Contemporary Microscopy  
13:20 – 15:00 Lunch

Session 2  
Chair: Mathias Grote (HU Berlin)  
15:00 – 15:40 Jenny Bangham (MPIWG Berlin)  
Writing, Printing, Speaking:  
Rhesus Blood-group Genetics and  
Nomenclatures in the  
Mid-twentieth Century  
15:40 – 16:20 Hallam Stevens (NTU Singapore)  
"Open science" as Model in Biology  
16:20 – 16:40 Coffee

Session 3  
Chair: Kärin Nickelsen (LMU Munich)  
16:40 – 17:20 Pierre-Luc Germain (IEO Milan)  
Models in Biomedicine  
17:20 – 18:00 Robert Meunier  
Final Comments and Discussion

**Kärin Nickelsen** is professor of the history of science in the Department of History at LMU Munich, and initiator, in collaboration with Deutsches Museum and Institut für Zeitgeschichte in Munich, of the research project "Cooperation and Competition in the Sciences".

**Reinhard Wendler** is researcher at the KHI, Florence (Max Planck Institute) in the project "Bilderfahrzeuge. Aby Warburg's Legacy and the Future of Iconology" of the Warburg Institute in London, and associated member of "Bild Wissen Gestaltung. Ein interdisziplinäres Labor" (Humboldt University Berlin).

**Nina Samuel** is research associate at the Center for Literary and Cultural Research (ZfL), Berlin, in the project "The Epistemic Reverse Side of Instrumental Images".

**Jenny Bangham** is research scholar at the Max Planck Institute for the History of Science, Berlin, in the research group "Twentieth Century Histories of Knowledge About Human Variation".

**Hallam Stevens** is assistant professor at Nanyang Technological University, Singapore (School of Humanities and Social Sciences, College of Humanities, Arts, & Social Sciences), and currently visiting scholar at the Max Planck Institute for the History of Science.

**Pierre-Luc Germain** is postdoctoral researcher in the Laboratory of Stem Cell Epigenetics at the IFOM-IEO-Campus, Milan, and associated with the University of Milan and the European School of Molecular Medicine's PhD programme "Life Sciences: foundations and ethics".

**Mathias Grote** is research associate at the Chair for the History of Science at the Department of History, Humboldt University Berlin.

**Robert Meunier** is research associate at the Chair of the History of Science, Department of History, LMU Munich, and former fellow at the ICI Berlin.

This workshop is organized in co-operation with the Chair of the History of Science at the Department of History, LMU Munich.

Workshop

12 December 2014  
11:00 – 20:00  
ICI Berlin

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Concept & Organization:  
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To attend the workshop please sign up  
until the 5 December 2014 to [presse@ici-berlin.org](mailto:presse@ici-berlin.org)



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