

Exploring challenges for New Big Science: The realization of ESS and MAX IV in Lund

Seminar series spring 2015

Place: Second Floor, Pufendorf Institute, Lund (Biskopsgatan 3)

20 January, kl. 13.00 - 15.00

Setting Intent Into \$500 million of Concrete: Desire, Bureaucracy, and Innovation In The New Big Science

Catherine Westfall, Visiting Associate Professor, Michigan State University, U.S

The talk will begin with a description of how the New Big Science came to the U.S. national labs, then focus on the resulting consequences and challenges to knowledge production as illustrated by the case of a nuclear physics laboratory in Virginia, Jefferson Laboratory (or JLab). Along the way I will explain how JLab experimental equipment was planned, built, and used in this new era, showing how desire and innovation were cast into concrete. I will end the talk with reflections on what is new about the New Big Science in the U.S. and consider what I would like to explore to understand how the U.S. case fits with European accelerator laboratories, particularly in Sweden.

12 February, kl. 13.00 - 15.00

Writing the History of the Life Sciences with Experimental Systems

**Hans-Jörg Rheinberger, Emeritus Scientific Member,
Max Planck Institute for the History of Science, Berlin, Germany**

It is generally accepted that the development of the modern sciences is rooted in experiment. Yet for a long time, experimentation did not occupy a prominent role, neither in philosophy nor in history of science. With the ‚practical turn‘ in studying the sciences and their history, the situation has changed. This paper is concerned with experimental systems and the cultures they form. In the first part of the paper, I look at the forms of historical and structural coherence that characterizes the experimental approach to epistemic objects. In the second part, I briefly expose a particular experimental culture in the life sciences.

10 March, kl. 13.00 - 15.00

Institutions as enablers and obstacles in the emergence of a new science-based industry: Human spare parts industry as an illustrative case

Markku Sotarauta, Professor, University of Tampere, School of Management, Finland.

The main research questions addressed in this paper are: (a) how does a new science-based and multidisciplinary concentration of innovation become institutionalized in an innovation system, (b) how are new beliefs, practices, and activities institutionalized in a system, and (c) who are the key actors in these efforts and what do they do to change the system. A case in point is the emerging human spare parts industry.

14 April, kl. 13.00 - 15.00

The good economy: life sciences and the little tools of valuation

**Kristin Asdal, Professor, TIK, Centre for Technology, Innovation and Culture,
University of Oslo, Norway**

Today, the emerging bioeconomies are supposed to not only produce straightforward economic value but also help enact values in other ways; to enable sustainability, to secure welfare to humans as well as to non-humans, and take care so that the economy acts within limits. In this lecture I present EU- and national strategies to realize what I suggest to label "the good economy". I will attend to how the life sciences are invited and demanded to take part in such efforts and how scientists reflects upon such demands. How do such large transformations happen in practice, and by which means? How do they take part in transforming science? I argue that if we are to understand such major transformations it is fruitful to study what I name "little tools", that is, material-semiotic entities that carefully modify and work upon science, markets and bodies.

