Oslo Summer School in Comparative Social Science Studies 2009

Studying Research Work, Innovations and Innovation Policy
Lecturer: Professor Reijo Miettinen,
Center for Activity Theory and Developmental Work Research,
University of Helsinki, Finland

Main disciplines: Innovation Studies, Sociology, STS, Policy Studies

Dates: 3 - 7 August 2009

Course Credits: 10 pts (ECTS)
Limitation: 30 participants

Introduction
The objective of the course is to compare the contribution and methods of three broad theoretical traditions in the study of technical change, innovations and innovation policy. They are 1) Evolutionary economics of innovations (and the National innovation approach based on it), 2) Science and technology studies (STS) (especially actor network theory) as well as 3) two theories of practice: Cultural-historical activity theory and Deweyan pragmatism. In addition to these traditions the rhetorical analysis of technology policy language is discussed. Each of these traditions also use different and complementary methodological approaches: quantitative and comparative institutional (evolutionary economics), qualitative/ethnographical (STS) and qualitative change-oriented or interventionist approaches (practice theories). In each lecture, both a substantial and theoretical issue related to innovations and innovation policy as well as a methodological theme related to qualitative (case) research will be discussed. Also the relevance of qualitative studies for policymaking will be discussed. Six first lectures deals with qualitative studies of scientific work and innovations. Four last lections deals with the foundations of innovation policy and the contribution of different approaches to this policy.
Essential readings:


LECTURE OUTLINE

In addition to the core reading recommended, complementary readings are listed for each lecture. Complementary reading have been commented in core readings and will be discussed during the lectures. They also supply alternative and complementary viewpoints to those of the core readings. Complementary readings not available in the internet will be supplied to the students beforehand.

Lecture 1: The functions of case studies in science, technology and innovation studies

The different functions case studies have played in Science and technology studies and innovation studies will be analyzed. Cambrosio and Keating’s study on Monoclonal antibody revolution is used to illustrate the versatility of possibilities. The problem of novelty and change – immanent to the concept of innovation is discusses as a problem faced by qualitative studies.


Complementary readings:

Lecture 2: **Comparing and evaluating theories through an empirical study/case**  
How the different theories of invention manage to make sense and explain the emergence of an industrial innovation?


Complementary readings:


Lecture 3: **Comparing theories in the construction a frame for qualitative study 2: Activity theory and Actor network theory as approaches of studying innovations**  
The similarities, differences, strengths and weaknesses of two theories are discussed to form a framework for studying an innovation processes.


Complementary readings:


Lecture 4. **Studying dynamics of change in research work (1): networking and strategy in an aerosol research group**


Complementary readings:

Lecture 5: **Studying dynamics of change (2) Producer-user interaction in innovations: developing a diagnostic method**
How a high-technology small enterprise took into account the needs of the users? The core reading supplies an example of an intervention of the social scientists in an innovation process and the consequences of this intervention.


Complementary readings:

• Miettinen 2009 Chapter 8.5 (‘An outline for a bottleneck: technology-driven development and the failure to learn from users’).

Lecture 6: **Studying dynamics of change (3). Social innovations and organizational change**
The problem of social innovations and development of work. A study on the transformation and development of occupational health and safety inspection work.


Complementary reading:


Lecture :. **Emergence of the National Innovation System (NIS) approach in innovation policy and its adoption in Finland**

• Miettinen 2009, Chapters 2 (‘NIS in innovation research and policy making’) and 5 (‘Adoption of NIS in Finland’s technology policy’).
Complementary readings:


**Lecture 8: NIS policy and the explanations of success of the Finnish ICT sector in the 1990s.**

- Miettinen 2009, Subchapters 6.2 (Did the NIS policy contribute to the rise of the Finnish ICT industry in the 1990s?), 6.3 (‘The Finnish educational system as an explanation of success’) and 6.4 (‘The governance of school: From a culture of control to culture of trust.’)

Complementary reading:


**Lecture 9: Regionality in a small country**
How empirical case studies of Finnish firms are used to argue about regionality.

- Miettinen 1999, Subchapters 7.4. (‘Limits of regionality in a small country’) and 7.5 (‘Regional or transregional networks’).

Complementary readings:

Lecture 10. **Information technological revolution, democracy and innovation policy**

The challenges of innovation policy in the deployment period of information technological revolution. The relationship between innovation policy and democracy. How the different approaches can contribute to the sensemaking of and meeting the challenges of innovation policy?

- Miettinen 1999, Chapter 10 (‘Information technological revolution, democracy and innovation policy’).

**Complementary readings:**


**The Lecturer**

**Reijo Miettinen** is Professor of Adult Education at the University of Helsinki. Before coming to the academia he worked as an educational planner in charge of in house training of the research scientists at the Technical Research Center of Finland (VTT). In 1990 he joined as a researcher to the newly established VTT group for Technology Studies. In 1995 he removed to the University of Helsinki and acted as a Vice director of the Center for Activity Theory and Developmental Work Research in the Department of Education. He has directed since 1995 a research group that studied the work of research groups, learning in innovation processes, innovation networks and producer-user interaction in innovations. Lately the group has also studied free/open source development model (FOSS) in software development as well as other forms of internet-mediated distributed knowledge production. He is interested in theories of learning and creativity and as well as in the comparison of the philosophical and sociological theories of human practice and thought. He acted for five years as the scientific director of the Finnish National Graduate School for Science and Technology studies. He has co-edited the book *Perspectives on Activity Theory* (1999) and written a book on the uses of the concept National innovation system: *National Innovation System – Scientific Concept or Political Rhetoric* (2002). He is finalizing an enlarged and updated version of the latter book. For his recent publications see his Internet page: [http://www.edu.helsinki.fi/activity/people/remietti/](http://www.edu.helsinki.fi/activity/people/remietti/).

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