Feature: Cyberinfrastructure Travels: Sharing & Shaping Time, Space and Data
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The picture of the nomad drawn by Deleuze and Guattari makes an important point: The life of the nomad is the in-between, but he/she has a territory. The nomad seems to fit perfectly, at first glance, as a representation of the life of today's scientist: hopping from one conference to another, from one (not always funded) project to the next, moving from one city/country/continent to the next locus... BUT: What is the "territory" of a scientist, what paths do exist and what paths do we follow?

"The nomad has a territory; he follows customary paths; he goes from one point to another; he is not ignorant of points (water points, dwelling points, assembly points, etc.). But the question is what in nomad life is a principle and what is only a consequence. To begin with, although the points determine paths, they are strictly subordinated to the paths they determine, the reverse happens with the sedentary. The water point is reached only in order to be left behind; every point is a relay and exists only as a relay. A path is always between two points, but the in-between has taken on all the consistency and enjoys both an autonomy and a direction of its own. The life of the nomad is the intermezzo."(Deleuze and Guattari 1987: 380)

A scientists life today seems to have much in common with the floating data-streams which are produced in an increasing way. Floating people – floating data? I have no answer. But sharing data, time and space (beyond "hand-shaking events") seem to be conditions of possibilities for following scientific paths that prevent ending up with a nervous breakdown in an uncomfortable hotelroom somewhere on this planet – somehow lost in space and time.

This month (June 2009) I have/had the great opportunity to take the time to visit US colleagues who are working on/in scientific cyberinfrastructures. I started with a visit with Geoffrey C. Bowker and Susan Leigh Star (authors of "Sorting Things Out: Classification and Its Consequences") at the Center for Science Technology and Society in Santa Clara. Now I have the exciting chance to stay a few days at Scripps Institution of Oceanography meeting Karen Baker and her Ocean Informatics team in San Diego. I also will go to UCLA for one day and my last stop will be the School of Information in Ann Arbor meeting with Paul N. Edwards and other colleagues.

So what am I doing?I work on e-infrastructure (cyberinfrastructure) developments in Germany.Sidenote: to say "in Germay" as I did it above, of course does not mean that the ongoing scientific and technological developments just stop at a countries border. Transnational as well as national growing cyberinfrastructures require more collaborative and comparative work: we are confronted with international, european and national e-infrastructure developments. What are the challenges and problems of such parallel and seperated but also overlapping endeavors which cannot be localised in national contexts? This is also a methodological question: how to follow these developments?

For one and a half year I've been in contact with the the German High Performance Computing Centre for Climate- and Earth System Research (DKRZ) in Hamburg/Germany. I conducted an initial participant observation at this Center in March, collected empirical materials (documents) and had several meetings with individuals in Germany (mainly at the DKRZ) who are involved in national and transnational cyberinfrastructure-projects (C3Grid, IS-ENES, EGEE). As you see, my interest is to get a better picture on the micro-level of the daily practices in working with technologies which are going on in science. How does a new e-infrastructure grow and possibly change scientific culture?I carry out document analysis as well as participant observation and interviews. Related to the research design, a further important question is how to „engage" in growing e-infrastructures as a social scientist: what could engagement mean dealing with both becoming part of ones object of study (e.g. the e-infrastructure for climate research) and maintaining a critical distance?

What is C3Grid?C3Grid is a "Collaborative Climate Community Data and Processing Grid" on the national level. The aim of the C3Grid is to create a grid-based working environment for earth system research. This is a subproject of the D-Grid Initiative (www.d-grid.de) for the german earth system research "community" and has been running since 2005. Like the D-Grid, this project is supported by the German Federal Ministry of Education and Research

(BMBF).For more information look at www.c3grid.de/index.php?id=44&L=1As you can imagine, in this short time C3Grid is more a prototype than a well established infrastructure for climate research. The project ended officially recently. Like a lot of such short term funded infrastructure-projects, the C3Grid is applying for a second phase of funding.Otherwise on the European level the FP7-project IS-ENES (Infrastructure for the European Network for Earth System Modeling) was launched a few month ago in France. So IS-ENES is an infrastructure for the European Network for Earth System Modelling (ENES).For more information visit www.enes.org/IS-ENES.429.0.html*** How to build up a sustainable (transnational) infrastructure with short term (national) funding?

When I started study on a micro-level at e-infrastructure in climate research by visiting the German High Performance Computing Centre for Climate- and Earth System Research, I "stumbled across" the history of the Center. It was built up 1987 as a "service unit" for German climate research/modeling. It provides not only a fascinating story about the becoming of complex models and the related growing amount of data in research. It is also a story about the shaping and re-shaping of climate research in relation to technological innovations and about the extremely problematic division between "service" and "science". And of course it is also a story about an upcoming national climate policy in the 1980 in Germany.You may think that it is only interesting to collect and archive scientific data – but from a historical perspective (and also from a social science point of view), it is incredibly important to archive the institutional, organizational and social history of such institutions/projects.This is what I hope to carry out this year: a little history of the German High Performance Computing Centre for Climate- and Earth System Research in Hamburg.

My view is that this work would be valuable if carried out as part of a larger project on e-infrastructure in science. Currently I applied for a grant from the German Federal Ministry of Education and Research (BMBF).Research project: "Governance von Wissenschaft durch E-Infrastruktur. Fachspezifische Governance-Funktionen von E-Infrastrukturen und ihre Effekte/ Governance of science through (cyber)infrastructure".The intended project will look at two growing e-infrastuctures in different scientific cultures: the climate science and the humanities. This study should lead to a comparative analysis of these two cases.

What is my theoretical interest? My assumption is that e-infrastructure must be understood as a new "instrument of governance" for science. Governance – in a broad meaning – are all arranging-practices which create social order. Taking the notion of governance (which is mainly used for non-scientific and non-technological loci) and applying it to e-infrastructure, I strive to connect Political

Science and Science and Technology Studies (STS). I try to make a shift from a study of the governance of science (e.g. through funding programmes) to a study of a governance of science through new (cyber)infrastructures. My main research questions are threefold:(1) What instruments of governance are delegated to e-infrastructure (and thereby become invisible)?(2) How does this happen?(3) What are the effects on scientific work and their objects?

These questions may seem at first to be outside the realm of information management. But they seem to me, at least, to be related to the question of the role information managers play in scientific cyberinfrastructures. In fact, I am not familiar with this role in the US context. In the case I am studying, the role of an information manager is not defined as part of the whole project. But the work must be done. So, that means the work has to be done by someone, this work that seems to be mostly invisible and thereby unacknowledged. These situations are often related to institutional framings; and indeed the power of institutions in destributing work and defining work roles should not be underestimated.

Short Curriculum Vitae

2003: Diploma at the Otto Suhr Institute for Political Science, Freie Universität Berlin.

2005-2007: PhD Student, DFG Research Training Group „Gender as a Category of Knowledge" at Humboldt Universität zu Berlin.Dissertation „Gen-Passagen. Eine Studie zu molekularbiologischen und medizinischen Praktiken im Gefüge der Brustkrebs-Gene", Otto Suhr Institute for Political Science, Freie Universität.

Since October 2008: Postdoctoral Researcher, DFG Research Training Group „Topology of Technology" at Technische Universität Darmstadt.Research Interests: Science, Technology and Society, Gene-Technology and Predictive Medicine, Scientific E-Infrastructures, Interdisciplinary and Comparative Approaches and Qualitative Research Methodologies