

Transnational infrastructures: Coping with scarcity and vulnerability

The vulnerability of infrastructure systems has aroused considerable attention all over the world in recent years, not least after the terrorist attacks in the USA, Madrid and London. In the debate, it is usually the vulnerability of national systems that has been at focus, but transnational systems are also subject to far-reaching vulnerabilities, so that a 'critical event' in an infrastructure in one country easily spreads to other countries. (UPDATED Workshop overview (25.45 kB), map of KTH campus). For papers, click here.

Download all papers at once in a ZIP here: Stockholm papers (13.62 MB)

{tab= Workshop overview}

International workshop

Stockholm, 21-24 May 2008

The vulnerability of infrastructure systems has aroused considerable attention all over the world in recent years, not least after the terrorist attacks in the USA, Madrid and London. In the debate, it is usually the vulnerability of national systems that has been at focus, but transnational systems are also subject to far-reaching vulnerabilities, so that a 'critical event' in an infrastructure in one country easily spreads to other countries. (Download overview (25.45 kB)) During the 20th century a growing number of infrastructural systems have been connected across national borders in Europe. This concerns energy systems such as electricity and natural gas, transport systems such as railways, highways and air traffic and communications systems such as telephony, radio and TV. This cross-border intertwinement has given many positive effects, but it has also contributed to the emergence of new types of problems, such as growing mutual interdependencies (although interdependencies have also been seen as positive in many ways) and in some cases an increasing scarcity of resources such as energy, land, space and wavelengths. In the proposed workshop we will explore how the intertwinement of different systems - both with each other (vertically) and across political borders (horizontally) - have created interdependencies and new types of vulnerabilities and scarcities. Further, we want to study how those actors which connected the systems have interpreted the new risks and how they have tried to handle these with the help of contracts, institutions, standards, etc. We also want to study 'critical events', for example, in the form of electricity blackouts, interrupted deliveries of natural gas, airplane crashes, etc., in order to analyze how actors in different countries have acted, partly while the events were happening, partly afterwards so as to prevent similar events from happening again. Our ambition is to investigate different parts of Europe, trying to determine the extent to and ways in which the cooperative patterns have looked different, for example, within the former Eastern bloc, on the Balkans and in Western Europe. But we also want to explore how 'Europe' as a whole manifests itself in - and how it can be understood through - critical events, processes of standardization, discourses etc. relating to transnational infrastructures. In doing so we want to contribute to a novel understanding of what Europe 'is'.

The purpose of the workshop is to gather around 30 researchers within the history of technology and related disciplines from a wide number of countries which study different types of transnational infrastructural cooperation. We will ask the participants to present papers of three kinds: first, papers that focus on case studies of critical events and how they have been handled; secondly, papers that raise more conceptual and theoretical aspects of vulnerability, interdependence and institutional forms for handling these; and thirdly, historical narratives of the emergence of critical infrastructures in Europe.

Format

The workshop will start with four keynote speeches and a subsequent panel debate. This will cover the first afternoon of the workshop. The second day and most of the third day will be devoted to discussion of workshop contributions, to be structured into three themes:

- (1) Critical events in transnational infrastructures - and the responses
- (2) Perceptions of scarcity and vulnerability
- (3) The emergence of critical infrastructures in Europe

In order to facilitate cross-fertilization of contributions and to encourage the search for common points, the papers are grouped into 'pairs'. A commentator will be assigned to each pair of papers and a final commentator to each theme. The focus will be on open discussions around each pair of papers, without any formal presentation of the paper by the author. Each pair of papers is introduced in brief (5-10 minutes) by the commentator, whose task is to summarize the main points in the contributions and open up for points for discussion. Particular points of interests are issues that cut across each pair of papers, so that the discussion focuses not only on each paper itself, but also on its relevance and value in relation to the other paper in its pair. Texts should be available two weeks before the workshop. It is expected that participants read all papers in advance.

The evening of the third day and the first half of the fourth day will be open to EUROCRIT partners only, and the workshop will here take the form of an internal CRP meeting.

Venue

Royal Institute of Technology. The first day of the workshop will take place at the Division of History of Science and Technology at the Royal Institute of Technology (KTH), Stockholm. KTH is the leading technical university in Sweden, and we would like to invite the workshop participants to the everyday environment of the coordinating EUROCRIT partner. See <http://www.kth.se> and <http://www.teknikhistoria.se>. A map of the campus with room 76 indicated is here.

Sigtunastiftelsen. The rest of the workshop will take place in Sigtuna, a small countryside town 40 km outside Stockholm and in direct vicinity of the airport. Workshop participants will be hosted at the combined hotel-conference facility here. See also <http://www.sigtunastiftelsen.se/english.asp/id/60>.

For papers, click here.

{tab= Programme}

Preliminary Programme

Wednesday, 21 May 2008

Location: KTH, Division of History of Science and Technology (address: Teknikringen 76), Room V2

13.00 Welcome and EUROCRIT project presentation, Professor Arne Kaijser, Royal Institute of Technology, Sweden.

13.30 On the vulnerability of technological culture, Professor Wiebe Bijker, University of Maastricht, the Netherlands

14.00 Vulnerability in practice I: The case of the 'Estonia' disaster in the Baltic Sea, 1994, Kent Hårstedt, Member of the Swedish Riksdag

14.30 Coffee

14.00 Vulnerable landscapes: Historicizing spatial features of risk, Professor Sverker Sörlin, Royal Institute of Technology, Sweden

15.30 Vulnerability in practice II: The case of the Tsunami disaster in Asia, 2004, Dr. Per Molander, Main Secretary of the Swedish Tsunami Commission

16.00 Linking theory, practice and history - a panel discussion moderated by Professor Eda Kranakis, University of Ottawa, Canada

Panelists: Anique Hommels (University of Maastricht, the Netherlands), Petter Wulff (Swedish Defence Research Agency), Lars Thue (Norwegian School of Management), Per Molander and Sverker Sörlin.

Possible questions to be discussed include:

- Is it possible to discern any 'national styles' in coping with vulnerability? If so, is this a problem in connection to transnational cooperation?
- Which European countries have the best - and worst - historical track records in coping with vulnerability and scarcity?
- How has deregulation and privatization of infrastructures affected vulnerabilities?
- Is 'interdependence' due to intertwinement of infrastructures more positive than negative when it comes to strengthening European integration?
- What does the increasing complexity of infrastructures mean in terms of vulnerability?
- Can infrastructures be made more robust towards natural hazards and human attacks?
- Are there genuinely new types of vulnerabilities in infrastructures nowadays?

17.00 Reception at Division of History of Science and Technology, KTH

19.00 Bus transfer to Sigtuna, 40 km north of Stockholm

Thursday, 22 May 2008

Location: Sigtunastiftelsen (address: Manfred Björkquists Allé 2-4, Sigtuna)

Session 1: Critical events in transnational infrastructures - and the responses

09.00 Transnational Energy Flows and Blackout Risks in a Balkan European Context (Yiannis Garyfallos, Stathis Arapostathis & Aristotle Tympas) (1.19 MB)

An anatomy of transnational vulnerability: The 2006 European blackout in historical perspective (Vincent Lagendijk & Erik van der Vleuten) (536.79 kB)

Commentator: Nil Disco

10.00 Coffee

10.30 Eurocontrol: Facilitating Transnational Air Transportation in Europe, 1960-1981 (Lars Heide) (38.67 kB)

Security in the "space of flows": The problem of air-hijacking in Europe, 1945-1980 (Eda Kranakis) (2.68 MB)

Commentator: Per Østby

11.30 Negotiating risk: The Swedish & Danish natural gas deal (Anna Åberg) (669.87 kB)

"If it keeps on rainin' the levee's gonna break". Drainage systems as critical infrastructures (Nil Disco) (169.56 kB)
Illustrations (1.03 MB)

Commentator: Andreas Kunz

12.30 Lunch

13.30 Depths of vulnerability: The interplay between national and international telecommunications in the Express Samina tragedy in the Aegean Sea (Katerina Vlantoni & Aristotelis Tympas) (297.04 kB)

Emergency services: Two case studies of transnational collaboration between the Netherlands, Germany and Belgium (Anique Hommels & Eefje Cleophas) (683.85 kB)

Commentator: Gerard Alberts

14.30 Summing up session 1

Introduction: David Nye

15.15 Coffee

Session 2: Perceptions of scarcity and vulnerability

15.45 The cultural construction of criticality: the case of Soviet-designed nuclear power in Finland (Kalle Michelsen) (270.92 kB)

Nuclear electricity networks in Eastern Europe. Political, social, and technological development. The case of the Bulgarian nuclear program. 1957-1986 (Hristov) (268.53 kB)

Commentator: Thomas P. Hughes

16.45 Vulnerability, criticality and border: a comparative review of English, Finnish and Russian concepts used in studies of infrastructures (Tuija Mikkonen) (124.34 kB)

Blackouts in cultural perspective (David Nye) (260.17 kB)

Commentator: Andreas Fickers

19.00 Dinner

Friday 23 May

Location: Sigtunastiftelsen (address: Manfred Björkquists Allé 2-4, Sigtuna)

09.00 Summing up session 2

Introduction: Thomas Kaiserfeld

Session 3: The emergence of critical infrastructures in Europe

09.45 From Large Technical Systems to Technological Complexes: The case of the electric power industry (Lars Thue)

The Criticality of the Software Crisis (Gerard Alberts)

Commentator: Aristotle Tympas

10.45 Coffee

11.15 Critical nodes in the European transport infrastructure (Andreas Kunz) (270.92 kB)

Building the Norwegian Cold Chain (Terje Finstad) (155.56 kB)

Commentator: Erik van der Vleuten

12.15 Lunch

13.15 Broadcasting as a critical European infrastructure (Andreas Fickers) (4.82 MB)

Trusting the enemy: Natural gas relations in Cold War Europe (Per Högselius) (161.81 kB)

Commentator: Eda Kranakis

14.15 Summing up session 3

Introduction: Thomas P. Hughes

15.00 Coffee

15.30 Final discussion

General conclusions? Similarities and contrasts?

- Representatives of other Inventing Europe CRPs comment on possible links and possible points for future collaboration with EUROCRIT

- How can workshop results contribute to the planned Inventing Europe book series?

Moderator: Arne Kaijser

17.00 End of open workshop

19.00 Dinner

20.00 The 7 IPs and APs report on their progress and problems

Saturday 24 May

Location: Sigtuna

9.00 Group work: What lessons from open workshop are to be incorporated into EUROCRIT research agenda?

10.00 Discussion

11.00 Planning

- Future workshops: Lisbon meeting, collaboration with other CRPs etc.

- Project website

12.30 Lunch

13.30 End of workshop

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