

Prometheus and Clio challenged:
A History of Technology
for an Age of Global Challenges

ToE Athens Friday Plenary 2017

Erik vd Vleuten, Foundation for the History of Technology SHT



TU/e

Technische Universiteit
Eindhoven
University of Technology

Where innovation starts

Structure of the plenary

Aim: INVITE **YOU** TO CONTRIBUTE TO THE EMERGING **ToE RESEARCH AGENDA**

1. Ca. 16.30-17.15: Plenary introduction: *intro, keynote, working group pitches*
2. Ca. 17.15-18.15: Break-out groups: *Debate the research agenda*
3. Ca. 18.15-19.00: Roundtable: *Results & discussion*

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1. PLENARY INTRODUCTION: GENERAL INTRO

2015: Kick-off new ToE research program

- Tensions of Europe: association, network, research program
- 2015 ToE7 Stockholm: *Technology and the Making of Societal Challenges/Crises, ca. 1815-2015 (TENTATIVE TITLE!)*
- 2015-2017: What have we done so far?
- 2017-.....: Where to go from here?

1. PLENARY INTRODUCTION: GENERAL INTRO

European History & Technology: Big Societal Issues through the lens of technology

New critical narrative:
**A new European history
through the lens of technological
integration & fragmentation**

- Different actors/processes (experts, entrepreneurs, users, social groups...);
- temporality (1850-2000);
- Spatiality (int/fragmentation, global-local)



**1990s Big Issues:
“Globalisation”, “EUropeanization”**



2010s Big Issues:

“Crisis”, “Grand Challenges”

Multiple, interrelated crises (Beck 2009)

Migration, financial, security, ecology,
energy, mobility, health, ...



→ New critical narrative??

**The Tensions community has
important contributions to
make, because:....**

1. PLENARY INTRODUCTION: GENERAL INTRO
Global Crises & technology *TODAY* (PROMETHEUS Challenged)



Argument engineering academies today:

- *Technology has solved major challenges before*
- *Because technology was implicated in making our crises, it holds the key to the solution*

So: **technology and history matter!**

Build Your Dream



1. PLENARY INTRODUCTION: GENERAL INTRO
A New History: CLIO Challenged

New critical narrative:
A New European history through the lens of *technological integration & fragmentation*

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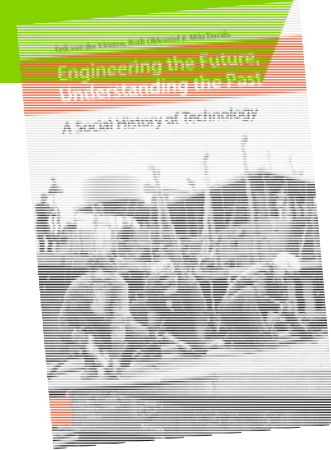
→ New critical narrative??
A New History of Global Challenges through the lens of *technology*?

- What do we see?
- What are the key questions?
- How to answer?

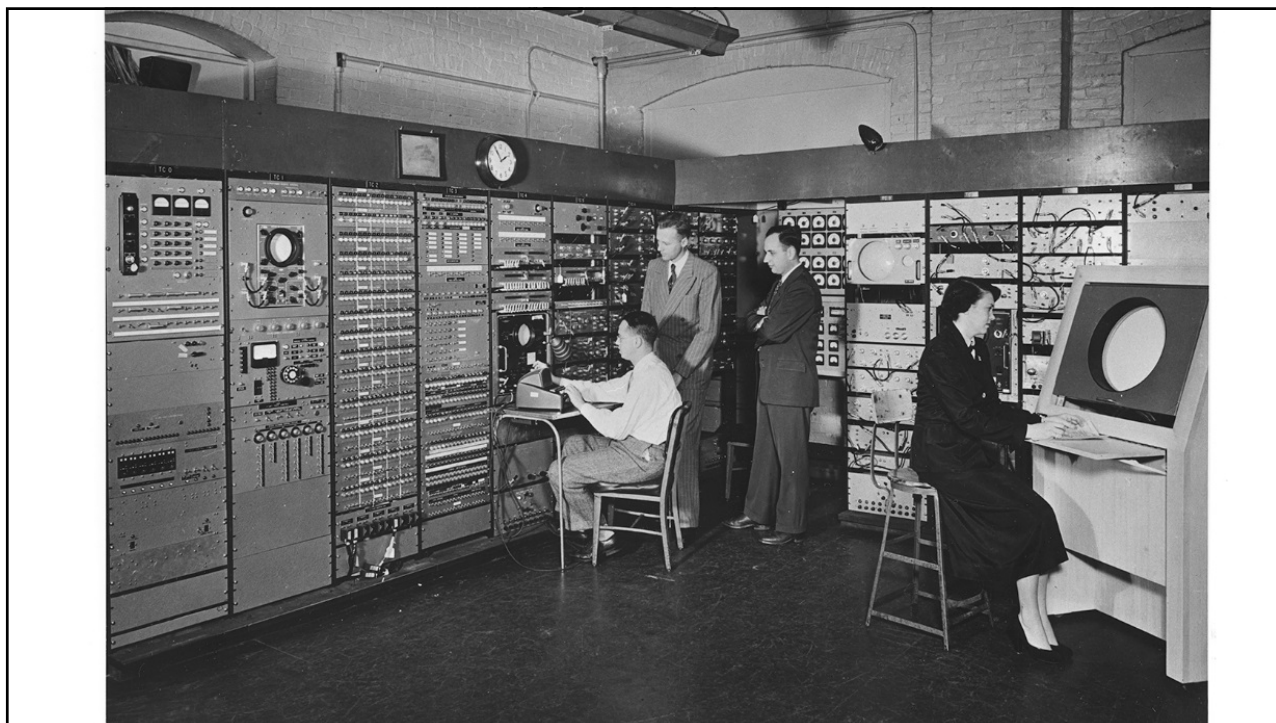
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2015-2017: What have we done so far?

- **Develop the basic argument for students/ stakeholders:** Textbook project
- **ToE thematic work groups** build new research networks & research agenda's
- **Think about generic 'Big Questions'**





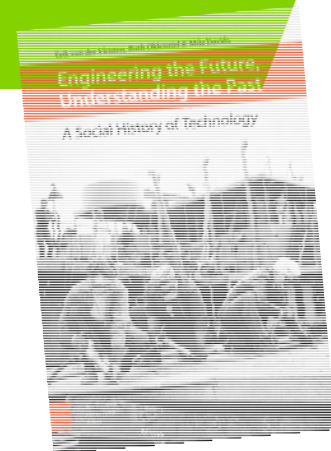


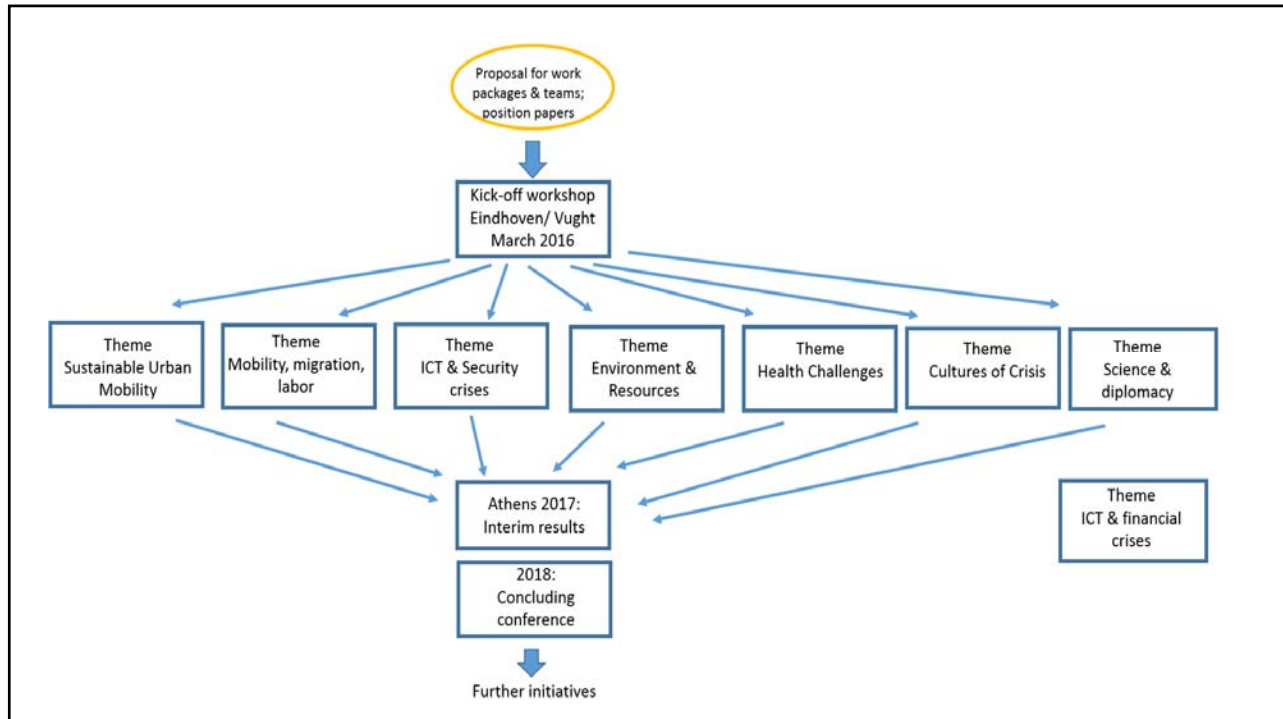


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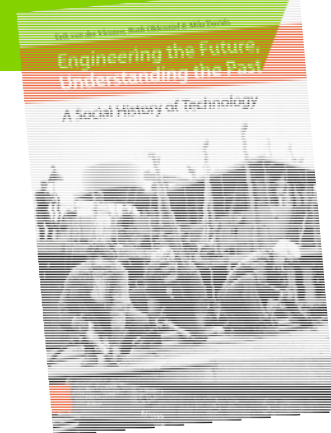




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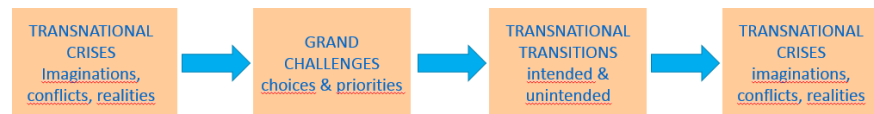
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CHALLENGING CLIO:

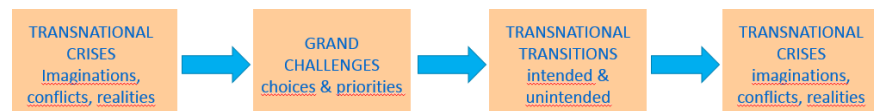
1. Challenging history: Relevant and good history?
2. Challenges across time: How transcend chrono-centrism?
3. Challenges across space: How transcend euro-centrism?
4. Challenges across domains: How transcend 'domain-centrism'?



7 Grand Challenges to the History of Technology

(continued)

5. Challenges and solutions: How transcend innovation-centrism?
6. Challenges: imagined and real
7. Challenges: history—engagement—ethics



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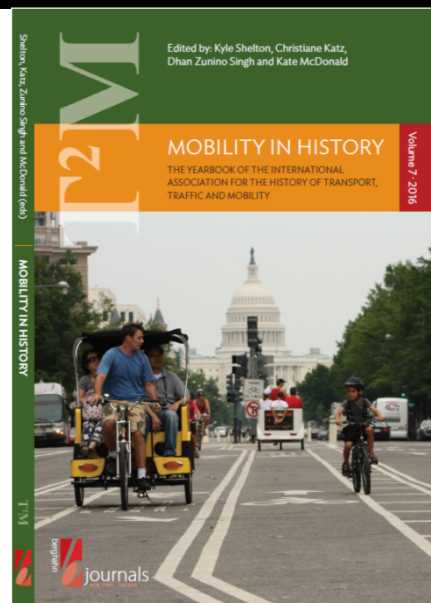
The History & Policy Challenge

Tensions of Europe Plenary Session, 8th ToE,
Athens 2017

Per Lundin, per.lundin@chalmers.se

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Per Lundin, “Making History Matter: The Historian as Expert”, *Mobility in History* 7 (2016).



Thinking with History

- "the employment of the materials of the past and the configurations in which we organize and comprehend them to orient ourselves in the living present" (Schorske 1998)
- A seasoned policy-maker who falls back on context-dependent knowledge gathered from a long experience demonstrates a capacity to think with history
- If history is a key element of policy
 - Shouldn't historians contribute?

Historians and Policy

- How can historians take a more active role in policy issues?
- Address Grand Challenges?
- Make history that matters?

Making History Matter

- **Historians will need to retool, i.e.**
 - leave the "comfort zone" of narrow topic specialization, solitary existence, and well-defined empirical problems of manageable size
 - take part in big projects with experts, policy makers and scientists
- **Historians will need to reflect upon**
 - what form their particular expertise should take
 - how it can be used
 - how it can be communicated
- **They will need to take on a role as *expert historians***

Historians and Social Commitment

A complicated relationship

- **A general lack of interest in reaching outside the academy**
- **Historians (in the main) hesitate because they are**
 - 1) **Afraid to compromise their scholarship**
 - 2) **Uncertain of what they can contribute to that other cannot**

The Rankean Paradigm

- The professionalization of history
- Scientific objectivity, impartiality and disinterestedness
- Good scholarship = apolitical scholarship
- Social role limited to keeping mythmaking and propaganda under control
- The strength of this critique is *negative* (Hobsbawm 1994)
- Can historians offer a *positive* critique?

How Can Historians Contribute?

- Lacking awareness of the epistemological qualities history possess (Gaddis 2002)
- History may appear epistemologically weak
 - Cf. the cumulative and predictive natural sciences
- Should historians begin produce context-independent theory (i.e. models) like many social scientists?
- *Phronesis* – practical knowledge and ethics (Flyvbjerg 2001)
 - Analysis of values as a point of departure for action
 - Requires consideration, judgment and choice, and *experience*

Strong Social Sciences – Weak Natural Sciences

Flyvbjerg (2001)

just as social sciences have not contributed much to explanatory and predictive theory,

neither have the natural sciences contributed to the reflexive analysis and discussion of values and interests,

which are the prerequisite for an enlightened political, economic and cultural development in any society

Flyvbjerg's value-rational questions

- 1) **Where are we going?**
- 2) **Who gains and who loses?**
- 3) **Is this desirable?**
- 4) **What should be done?**

In addition, we must also ask

- 0) **How did we get here?**

The History and Policy Challenge

Three concepts to consider, criticize and discuss

- **Thinking with history**
- **The expert historian**
- **Practical historicism**



CHALMERS

BREAK-OUT SESSIONS: ROOMS

See you back here at 18.00

TECHNOLOGY, ENVIRONMENT & RESOURCES	ROOM A
WORK AND MIGRATION	ROOM B
GOVERNING TECHNOLOGY	BOOK ROOM
SUSTAINABLE URBAN MOBILITY	ROOM C
CULTURES OF CRISIS	ROOM D
ENERGY CHALLENGES	ROOM OUTSIDE LOBBY I (COFFEE ZONE)
ICT & FINANCIAL CRISES	ROOM OUTSIDE LOBBY II (REGISTRATION ZONE)

(OTHER WORKING GROUPS BEING ESTABLISHED: GLOBAL HEALTH CHALLENGES; SECURITY; WASTE; ...??)

Tensions of Europe – Grand Challenges theme: Technology, Environment, and Resources

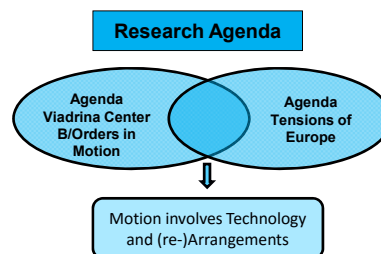
- Why resources matter?
- How is Europe prepared for future challenges?
- What has been done so far in the research group?

3 potential major themes:

- Globalized resource cycles and environmental transformation
- Managing crisis: technologies and politics of natural resources
- Perception and construction of resources, resource crises and resource futures

ROOM A

Research Group: "European Challenges.
Technological Change and Re-arrangements of
Migration and Work"



ROOM B

Technology-Arrangement Nexus

Technology is conceived in a broad sense as technological systems, consisting of artefacts, organizations, scientific and legal components, resources, people, etc. In order to avoid determinism, the approach applies the concept of (re-)Arrangement. The nexus of technology and arrangements is pivotal for understanding societal transformations.

Challenge: Bringing Sustainability into Urban Mobility History



Towards a Joint Research Effort

A. SUM RESEARCH PROGRAM

- **PhD Program Technical University of Eindhoven**
- **Exchange Programs**
- **International CPSUM Network:**
 - Netherlands: Oldenziel (PI), Albert de la Bruhèze, Davids, Mom, Smits, Schipper, Veraart
 - Sweden: Emanuel, Lundin, Normark
 - France: Flonneau, Huré, Passalacqua
 - Germany: Gundler, Steinbeck, Tóth, Trischler
 - Finland: Männistö-Funk
 - Portugal: Pereira, Sousa
 - United Kingdom: Divall, Pooley
 - United States: Norton
 - China: Pan, Xu

B. SUM OUTREACH PROGRAM

- **Tool 1** **Building Long-Term Standardized Urban Mobility Indicators**
in collaboration with HIRODS & SUSTAIN
- **Tool 2** **Book Publications: Your City Next?**
- **Tool 3** **Building Research-Based Web Platform Accessible-for-All**
- **Tool 4** **Creating Teaching Modules: Biography of a Street Corner**

Interested?

- Come join us in ROOM C!



CULTURES OF CRISIS

Sanne Aagaard Jensen
 Karena Kalmbach
 Andreas Marklund
 Ginevra Sanvitale
 Anna Åberg



Crisis imaginings in relation to technology

How have narratives and developments of technology interacted with narratives and developments of crises in modern European history (c. 1800+)?

ROOM D

Governing technology in an age of grand challenges



Questions / Aim of research strand

- European & global dimension:
 - Historicizing EURO crisis 2008
 - problematizing relationship between ITC and media infrastructures in co-shaping of financial crisis
 - reflecting on transnational and global nature of ICT/News Media nexus as actor of socio-economic development

- Reaching out to other disciplines:
 - Economics & finance studies: challenging the technological determinism of algorithmic trading and real-time speculation
 - Risk management & regulation: institutional & technical mechanisms to deal with uncertainty & speculation
 - Media history / media studies: merge of ICT and news media: co-construction of “market reality” as “appresentation” (Knorr-Centina)

- Theoretical & Methodological dimension:
 - Studying the different time regimes financialized capitalism
 - Understanding the technologically mediated reflexivity of financial panics / crisis
 - Deconstructing “market reality” as a conglomerate of invested interests of financial, media and political sector

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