

# TENTATIVE GOVERNANCE IN EMERGING SCIENCE AND TECHNOLOGY – *Introduction*

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Conference "Tentative  
Governance in Emerging  
Science and Technology -  
Actor Constellations,  
Institutional Arrangements  
and Strategies",  
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UNIVERSITY OF TWENTE.



## EMERGING S/T – A PRESSING ISSUE

- § Promises, expectations, hopes, fears  
– depending on actors' perspectives and interests
- § Attempts to stimulate, prioritize, promote,  
control, shape, i.e. governance  
– mostly attuned to established S/T
- § Coping with emerging S/T – not so new an issue



## GOVERNANCE OF EMERGING S/T – DILEMMA(S)

- § Collingridge Dilemma (1980): A methodological quandary in which efforts to control technology development face a double-bind problem:
  - § An information problem: impacts cannot be easily predicted until the technology is extensively developed and widely used (first horn)
  - § A power problem: control or change is difficult when the technology has become irreversibly entrenched (second horn)
- § Third horn: In which direction should one go? (Rip 2002)  
How to cope with polyvalence of emerging S/T?  
(Nowotny & Testa 2009)
- § Layered and nested dilemmas/trilemmas



## WHICH 'GOVERNANCE' ?

- § Need to understand '*de facto* governance' (actors, interests, power, arenas) as a condition of targeted shaping
- § Tentative governance neither a desirable or worrisome approach, but rather an empirical phenomenon.



## 'TENTATIVE' GOVERNANCE !

- § At least two concepts of “tentative”:
- § Sheila Jasanoff, “Technologies of Humility” (2003, 227):
  - § Governance structures of high modernity with methods acknowledging the limits of prediction and control.
  - § Need for different expert capabilities and forms of engagement between experts, decision-makers, and the public.
  - § Not only formal mechanisms of participation but also intellectual environment in which citizens are encouraged.
- § Experimentation and Learning in the practice of emerging S/T: Creating spaces of openness, probing and learning instead of trying to limit options for actors, institutions and processes



## 'TENTATIVE' GOVERNANCE !

- § Analysing, testing and advancing innovative modes of governance concepts and perspectives under headings such as
  - § ‘Constructive Technology Assessment (CTA)’
  - § ‘Real-Time Technology Assessment’
  - § ‘Reflexive governance’
  - § ‘Ethical, Legal and Societal Issues (ELSI) Studies’
  - § ‘Transition management’
  - § ....
- § Inevitably: A collection of clothes-pins ...





## TOPICS ADDRESSED

- § Governance of Innovation Networks and Systems
- § Governance of Science and Research Organizations
- § Regulatory Governance
- § Governance of Promises and Risks
- § Governance Approaches to Emerging S/T in long-term perspective
- § Methods, Measures, and Data for the Analysis of Governance Issues
- § Reflection on Concepts



## ORGANISATION

- § **International Programme Committee:**  
Bärbel Dorbeck-Jung, Jürgen Enders, Stefan Kuhlmann, Arie Rip (U Twente), Andrea Bonaccorsi (U Pisa); Susana Borrás (CBS); Susan Cozzens (GaTech, Atlanta), Charles Edquist (U Lund) and Philippe Larédo (U Paris-Est, U Manchester).
- § **Conference Organization Board:**  
Stefan Kuhlmann; Paul Benneworth; Bärbel Dorbeck-Jung; Kornelia Konrad; Roel Nahuis; Peter Stegmaier.
- § Student assistants





## THE CONFERENCE IN CONTEXT

The conference has been sponsored and facilitated by

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§ Eu-SPRI Forum, the European Forum for Studies of Policies for Research and Innovation (first bi-annual conference)



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