UNIVERSITY OF BERGEN

Centre for the Study of the Sciences and the Humanities

Striving for Reflexive Science

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Abstract of Abstract

- The "reflexivity" policy narrative: Scientists, scientific practices, the governance of science and indeed modern society should become more reflective/reflexive. This can be achieved by involving SSH, which are inherently reflexive.
- **Lesson 1:** the need to go beyond the simple policy narrative "SSH makes science more reflexive" and the many disappointments that it invariably produces.
- Lesson 2: the need to go beyond simple dichotomies between SSH research and scholarship on one hand and non-SSH research on the other in order to look for meaningful collaborations.



ELSI/ELSA and post-ELSI/ELSA 2.0

 An important aim of ELSA is creating societally robust bio-, nano- and neurotechnologies. The programme will work to explore central challenges for governance, risk, regulation, culture, and values connected to these technologies. The programme should contribute to increase reflexivity and promote learning among ELSA researchers as well as scientists.

https://www.forskningsradet.no/en/Funding/ELSA/1253954329471



- A 21st century view of science must not only embrace the wider societal context, but be prepared for the context to begin to talk back.
- Reliable knowledge will no longer suffice, at least in those cases, where the consensuality reached within the scientific community will fail to impress those outside.
- In a 21st century view of science, more will be demanded from science: a decisive shift towards a more extended notion of scientific knowledge, namely a shift towards socially robust or context-sensitive knowledge.

(Helga Nowotny 1999)





RRI: Responsible Research and Innovation

• [...] we are confronted with the Collingridge dilemma, implying that ethical issues could be easily addressed early on during technology design and development whereas in this initial stage the development of the technology is difficult to predict. Once the social and ethical consequences become clearer, the development of technology is often far advanced and its trajectory is difficult to change.

Towards Responsible Research and Innovation in the Information and Communication Technologies and Security Technologies Fields

SEARCH AND INNOVATION POLICY

René von Schomberg (2011). Towards Responsible Research and Innovation in the Information and Communication Technologies and Security Technologies Fields.



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Case of going beyond: H2020 MAGIC

Moving to Adaptive Governance In Complexity: Exploring the Nexus First Progress Meeting – Wageningen University – 8-10 May 2017

Overview of the Project: Where we are























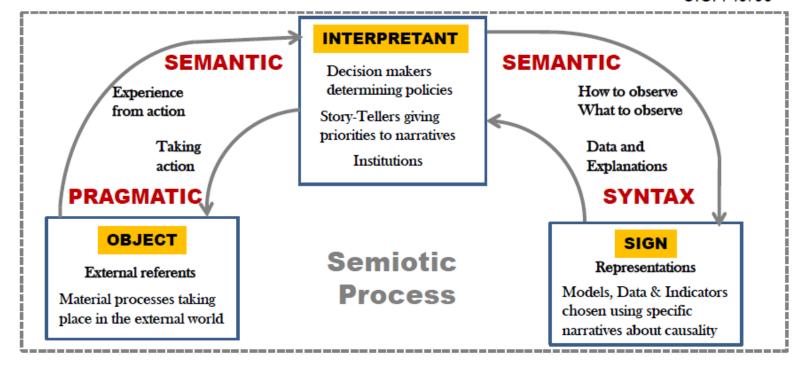


Case of going beyond: H2020 MAGIC

The framing of the semiotic process as developed by Pierce

Unavoidable presence of legitimate but contrasting values Unavoidable presence of large doses of uncertainty

C.S. Pierce



processes experienced simultaneously at multiple scales and in multiple dimensions generating entanglements in patterns REDUCTIONIST SCIENCE formal representations using a scale and a dimension at the time . . .

gaps

Knowledge

Case of going beyond: H2020 MAGIC

Autopoietic Process

Addressing the existence

of power asymmetries!

IDENTITY

APOLITICAL FRAMING NO NATIONAL BOUNDARIES

What we want to sustain?

PURPOSES

DANGEROUS BECAUSE OF "SEMANTIC APPROPRIATION"

Whose values count?

NEED OF TRANSPARENCY AVOID TECHNOCRATIC APPROACHES

Avoid externalization System Efficiency **GOVERNANCE** Integrating policy goals Sector efficiency TRANSDUCE Integrating policy fields Link to climate change Integrating Equity/Livelihood policies Food security, Coordination & Partnership Energy security Reducing trade-offs & Water security Technological **Building synergies** innovation APPLY & jobs Complex relationship **EXTERNAL WORLD Environment & Resources** Sectors, Systems, Flows Interwoven, Interrelated Interdependent, interacting

Interconnected, trade-offs

Inextricable links

BALANCE OF DIFFERENT GOALS AND INTERESTS

Different meanings associated with "THE NEXUS"

BUZZWORD?

Ambiguous meaning and strong normative resonance . . .

Management concept A way of thinking about the whole TRANSDUCE system Interaction over problems Conceptual Integrative framework imaginary Conceptual tool CONCERNS REPRESENT FACTS SCIENTIFIC INQUIRY

Transdisciplinarity vs conventional Different scales and dimensions Impossible to grasp within academia A largely disconnected knowledge base Unbounded definition & Uncertainty

Academia has lost its way

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