

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)

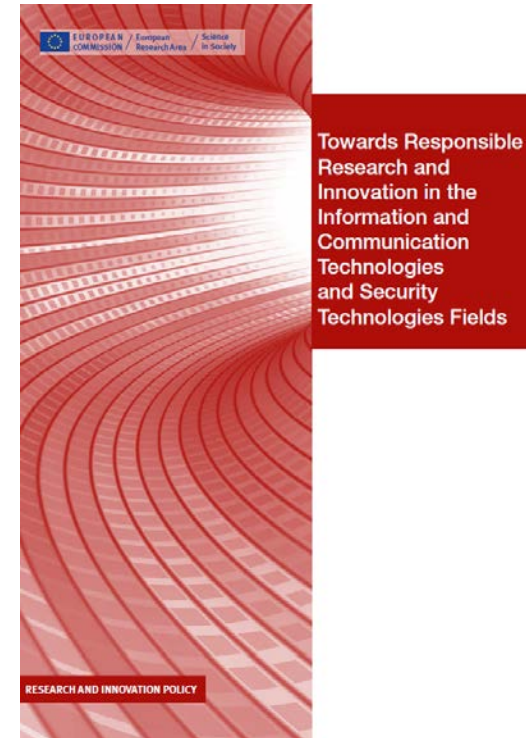


Photo <http://ec.europa.eu/research/eurab/cvnowotny.html>

# 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.*

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

Slides: Mario Giampietro, UAB

**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

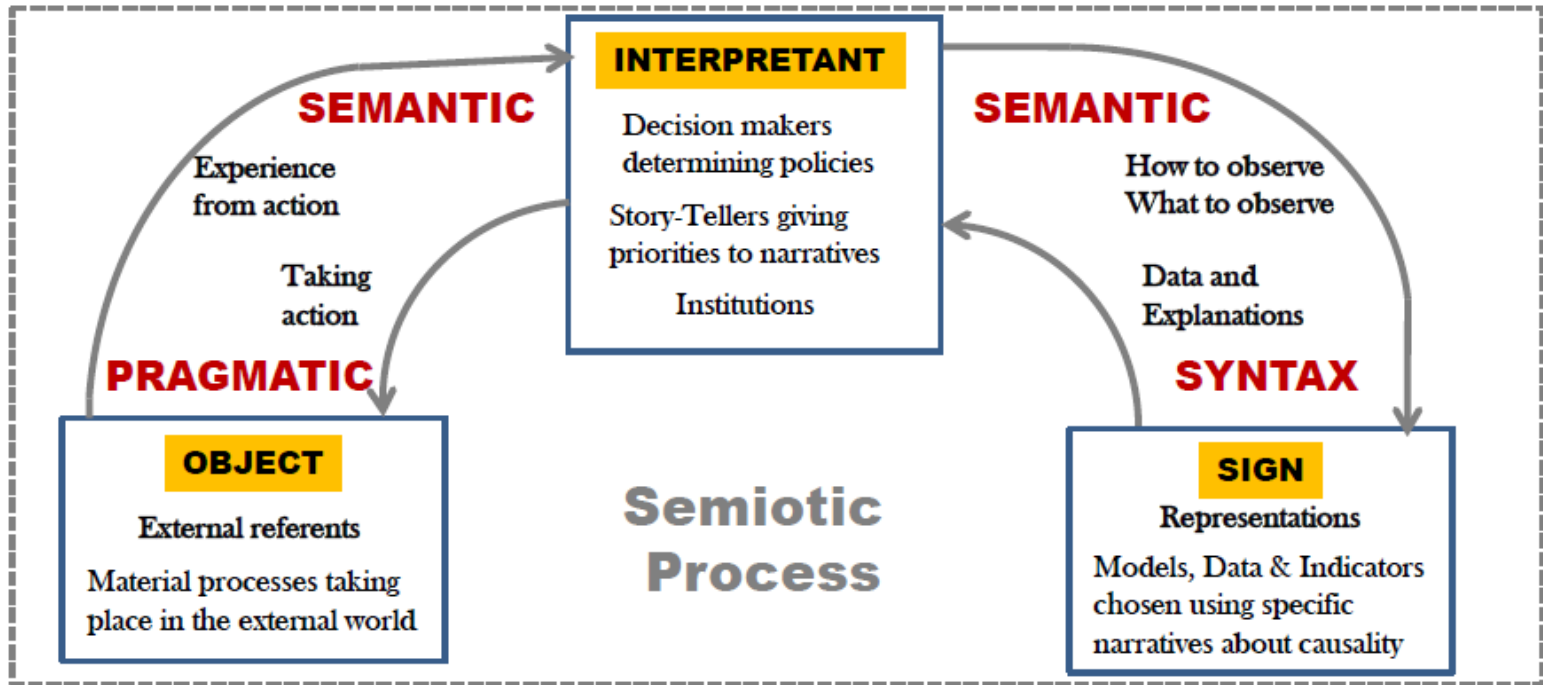
Slides: Mario Giampietro, UAB

The framing of the semiotic process as developed by Pierce



C.S. Pierce

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

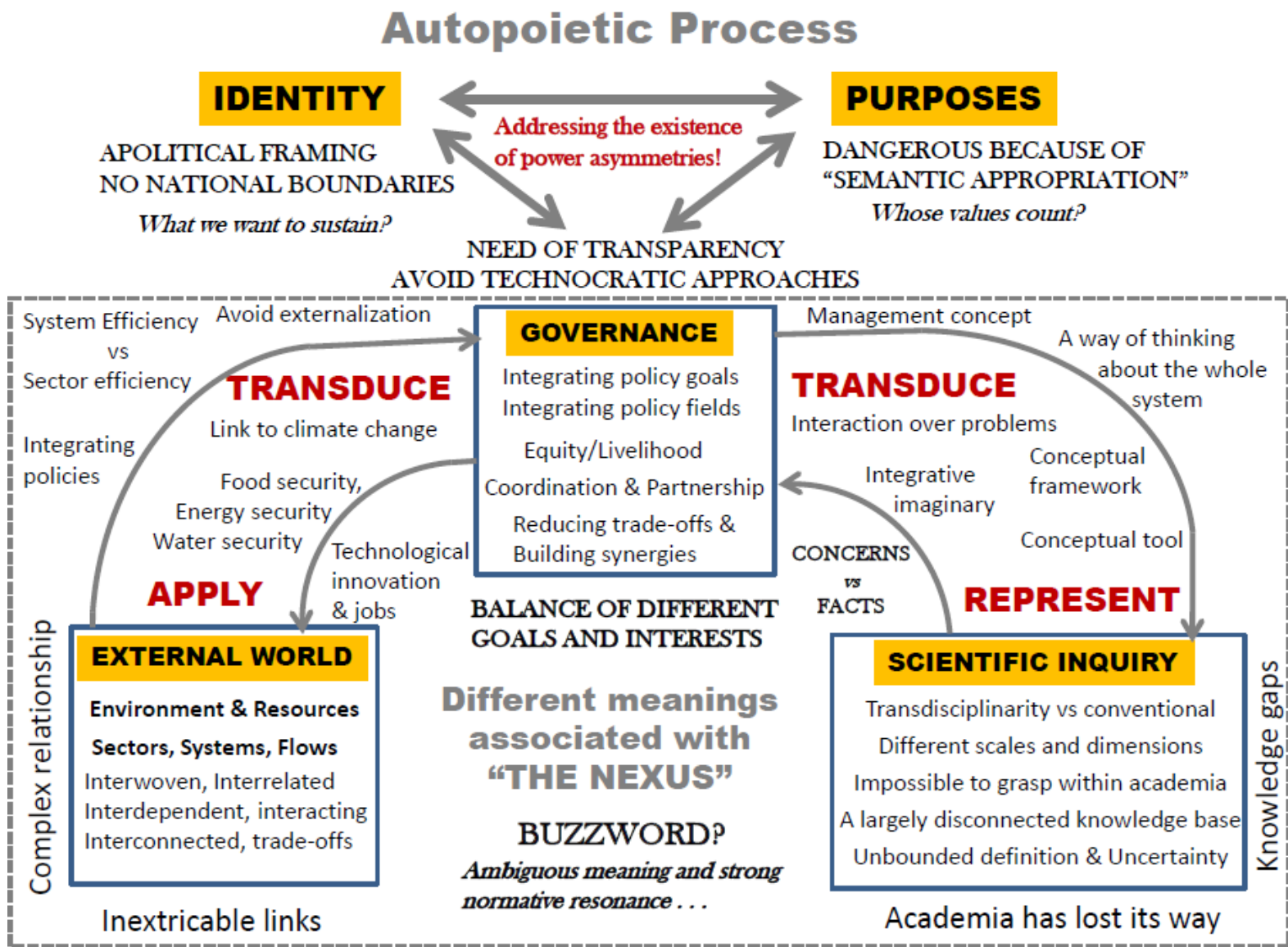


processes experienced simultaneously  
 at multiple scales and in multiple dimensions  
 generating entanglements in patterns

**REDUCTIONIST SCIENCE**  
 formal representations using a scale  
 and a dimension at the time . . .

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