

Governing Towards Responsibility in Research and Innovation - Dimensions, Options and Limitations

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Anticipation – the ambition

(Roberto Poli, Trento, 5 Nov. 2015)

- Move to a dynamic and processual understanding of the future as something that can be generated or consumed by our deeds
- **The future becomes a problem of modifying and eventually expanding our capacity to act**
- The future as a problem of **designing, implementing and testing new futures**

“Responsible Research and Innovation (RRI)” - a hot feature in recent R&I policy in Europe

- Responsible innovation initiatives in the United Kingdom, The Netherlands, Norway...
- Cross-cutting issue in EU Framework Programme Horizon 2020 (nearly €80 billion)
- EU Commission: SWAFS unit in DG Research promoting RRI
- Rome Declaration on RRI in Europe (2014)
“[...] *the conditions are now right for responsible research and innovation to underpin European research and innovation endeavour and therefore call on all stakeholders to work together for inclusive and sustainable solutions to our societal challenges.*”
- EIRMA (European Industrial Research Management Association): task force on Responsible Innovation

“Responsible Research and Innovation (RRI)”

- „RRI“: a combination of earlier concepts, e.g. CSR; Precautionary Principle; Ethical and Legal Aspects of innovation; (Constructive) Technology Assessment; Anticipatory Governance of Technology; ...
- Addressing questions which direction research and innovation should take
 - Grand Societal Challenges
 - anticipation of risks and taking ethical concerns into consideration
 - aligning technology and innovation with societal demands and values
- Suggestions how to perform and govern research and innovation *responsibly* include
 - involvement of stakeholders
 - encouragement of actors' responsiveness and forward-looking attitude

Governance towards 'Responsibilisation'

- The governance towards responsible R&I is **evolving**, (e.g. FP7 "**Res-AGorA** – Governance framework for Responsible Research and Innovation") (Wathout & Kuhlmann 2013).
- Towards a '**responsibilisation**' and **transformation** of research and innovation systems (Dorbeck-Jung & Shelley-Egan 2013)
- The Res-AGorA approach: try to constructively **build upon** '**RRI in the making**'
 - Learning from *de facto* governance of RRI
 - Constructing an overarching framework in consultation with 'stakeholders'
- **RRI Navigator**: a thinking tool decision-makers in research and innovation organisations



Res-AGorA: Key assumptions and vantage points

- Going for a normative & comprehensive framework that succeeds in a consistent and well-balanced application of the political aims vis-à-vis research and innovation
 - 'RRI' as a 'boundary object', allowing for multiple interpretations and political uses ('social licences')
 - Some general normative goals postulated by EU such as „excellent science, competitive industry and a better society“ may be less disputed
 - But: the concurrent realization while taking into account also sustainability, ethical acceptability and social desirability not self-evident
- **Application of normative anchor points will be contested.**

'Agora' | 'Αγορά (assembly square)

Concept aiming to "... to embrace the political arena and the market place, and to go beyond both. The 'agora' is the problem-generating and problem-solving environment in which the contextualisation of knowledge production takes place. It is populated not only by arrays of competing 'experts' (...) but also variously jostling 'publics'." (Nowotny et al. 2003)

Dispute
Contestation
Negotiation

Approach: Finding seeds of RRI governance

- Variety of responsibility governance seeds (various levels, application areas, modes of governance, ethical approaches ...)
- Normative design vs. research workbench level perception and implementation
- Understanding *de facto* governance of responsibility
- Understanding and tracing modes of 'responsibilisation'
- Pragmatic approach: explorative meta-cases

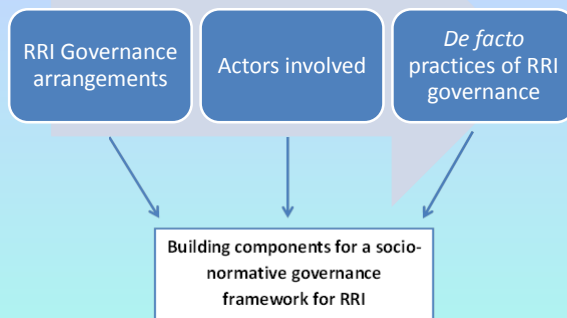
Res-AGorA in a nutshell

Conceptual work, ~ 40 case studies
and analyses

“Co-construction” with stakeholders
(workshop series)

“Thinking tool” supporting navigation
towards responsibility in R&I

Research model



Dimensions of “Well-doing” (actors’ view)

	Constructive (input requirements)	Productive (transformation)
Responsible- bilisation	<ul style="list-style-type: none"> ▪ Actor inclusion ▪ Robustness of the knowledge base ▪ Capacities for learning ▪ Embedding of responsibility 	<ul style="list-style-type: none"> ▪ Actors change behavior / attitude in line with new understandings of responsibility ▪ Building of RRI governance related improved/new capacity (procedures, knowledge, institutions)
Managing contestation	<ul style="list-style-type: none"> ▪ Procedures and ‘rules of the game’ ▪ Transparency ▪ Trust in the de facto governance process 	<ul style="list-style-type: none"> ▪ Governance arrangements align with or are changed towards input requirements (constructive)

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Case Studies of de facto governance of RRI

Authors	Title	Focus
FhG 1.	'Public deliberation and RRI'	Critical analysis of contrastive cases of public deliberation in Germany
U Twente 1	'Practicing RRI in NanoNextNL'	RRI programme in NL
TEKNO	'Setting research and innovation priorities for a desirable future'	Process of setting R&I national funding priorities in DK.
IHS 1	'Fracking in Austria and the UK – A comparative study'	Comparison to Pilot case
Padua 1	Anchoring research and technology transfer. The EC CoC and normative anchor points in laboratory practices in Italy	EU Nano-code in-use in toxicology lab in Italy.
U Twente 2	User-initiated or grassroots innovation'	Understanding users role in RRI
IFRIS 1.	The responsabilisation and regulation of garage innovation	'Under the radar' garage innovation
MIOIR 1	Following the micro-processes of changing governance arrangements: pursuing 'responsible' biofuels in the USA	Micro-level process focus to complement historical transformation account of Pilot study.
FhG 2	Integration of RRI in policy advice. A review of the UK synbio Roadmap	Focus on Syn-bio roadmap in UK to complement range of Syn-Bio Technical Assessments of Pilot study
IFRIS 2.	Linking responsible research and innovation on the farm: The case of Participatory Guarantee Systems	Like-type comparative cases of PGS to draw transversal generic lessons on alternative value-chains governance
IHS 2	Xenotransplantation	Extension of Pilot to understand 're-opening' of a quiet case.
IHS 3.	Bio-Ethics Committees in Austria and Germany	Supplementing pilots – different governance : Ethics Committees.
MIOIR IFRIS 1	'Voices': Institutionalisation , Institutional Entrepreneurs and de-facto responsible research and innovation	Key-actors Voices : pluralities of Voices & correspondences of strategy, action, and future states of de-facto responsible research and innovation.
IFRIS/MIOIR R 2	What does the 'responsible research' and 'responsible innovation' label stand for? A Scientometric analysis .	Cortex/Bibliometrics text-analysis to produce an account of historical emergence and socio-semantic structural maps of RRI actors.
IFRIS 3.	Unhinged public deliberation	Critical case on public deliberation.
MIOIR, IFRIS, UTwente, FhG	Critical Organisation-types, capacity-building, Institutional Entrepreneurs and responsible research and innovation The 'Good University' , Multinational Corporations, Professional Assns & Charitable Foundations.	Building on the 'Good University' Pilot of Arizona State University. 2-3 contrastive university cases

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Tentative and Meta-governance

- Tentative governance, including a *meta-governance* dimension (Jessop 2002)
- Meta-governance ('governance of governance') is visible in emerging modes of 'social technologies'
 - Facilitating and framing articulation,
 - Allowing for contestation and negotiation of competing views,
 - Hence, helping to cope with diverging politics.
- Functioning working as a '**crash barrier**' guiding the ongoing politics and the 'making' of governance across the various domains of society and policy effectively
- Facilitating 'boundary work', coping with politics, along the evolution and transformation of R&I systems.

Responsibility Navigator

- R&I need to be done and result in more 'responsible' processes and outcomes (e.g. 'RRI').
 - What is responsible will always be defined differently by different actor groups in R&I and society.
 - The **Responsibility Navigator** (Res-AGorA) helps decision-makers to govern towards more conscious responsibility.
 - It facilitates related contestation, debate, negotiation and learning in a constructive and productive way.
 - It supports identification, development and implementation of procedures **transforming** R&I in a way that responsibility becomes an institutionalized and anticipatory ambition.
- **Meta-governance approach to 'puzzling and powering'** (Hoppe 2011)

Responsibility Navigator: Ensuring quality of interaction

1. **Inclusion:** navigation towards responsabilisation is more likely to be transformative if it takes into account the diversity of actors relevant to the problem or project in a way that engages them directly and effectively in debate or joint activities, where both their material interests and core values are considered and if they perceive the processes of sense and decision making as legitimate, transparent and trustworthy.
2. **Moderation:** organizational modes appropriate to build up trust, collect data and organize dialogue are needed in the form of 'fora', that is, institutionalized places or procedures for interaction and for 'bridging' different perspectives between contesting actors, after which some alignment of goals and procedures is expected.
3. **Deliberation:** sense-making and decision-making among actors with different knowledge claims and positions, not only between organisational actors, but also faced by individuals, require confronting different perspectives coming perhaps from various 'knowledges' to find synthesis and eventually compromise.

Responsibility Navigator: Positioning & Orchestrating

4. **Modularity and flexibility:** legitimate and effective governance rest on carefully combining 'hard' and 'soft' regulatory mechanisms, allowing for self-regulation and organisation, as well as external control and accountability structures (e.g. supervision), where flexibility of governance arrangements should not lead to arbitrariness.
5. **Subsidiarity:** complementary to the self-governance and the self-control expected from the alignment of mutual understanding of responsibility-related values and commitment, some level of hierarchical command-and-control process may be necessary in certain circumstances, performed mainly by independent actors, capable to oversee and enforce
6. **Adaptability:** governance towards responsabilisation should be able to reflect different historical development of R&I systems and changing conditions. Therefore, such calibration requires assessing whether governance arrangements still effectively and legitimately serve responsibility goals, where both goals and costs and consequences of governance instruments and arrangements may also change over time.

Responsibility Navigator: Supportive Environments

7. **Capabilities:** fostering responsabilisation crucially depends on reflexive individuals capable of recognizing, anticipating, deliberating, communicating, and pursuing in a collective manner societally desired processes and outcomes of research and innovation activities and their evaluation. This process requires a certain level of 'governance literacy.'
8. **Capacities:** for capabilities to unfold, they need a supportive organisational and network infrastructure, such as access to information and resources for participation. This requires the availability of spaces for reflection, interaction and negotiation, appropriate incentive structures and an open knowledge base.
9. **Institutional entrepreneurship:** leadership is needed, top-level and continuous support, vision and strategy, lobby work and the rewarding of institutional improvement in order to facilitate change towards responsabilisation.
10. **Culture of transparency, tolerance and rule of law:** only basic democratic principles such as rule of law and freedom of speech, would make responsibility-related governance effective and sustained overtime.

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www.res-agora.eu

ResAGoRA
Governance Framework
for Responsible Research
and Innovation

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In Search of a Governance Framework for Responsible Research and Innovation

Published October 16, 2014

The European research project Res-AGoRA aims to develop a governance framework for Responsible Research and Innovation (RRI). This paper presents the analysis behind our approach. While the various existing RRI governance arrangements do call for a comprehensive framework, the heterogeneity of R&I does not allow to impose a one-size-fits-all approach. Instead, to design a governance framework which can be applied effectively, we propose to actively build on "RRI in the making". This is a constructive feature of our approach, enabling anticipatory responses in RRI governance. It needs reflection on an overarching level, which is conceptualised as a 'meta-governance' approach that guides the governance of RRI.

Authors: Bart Walhout and Stefan Kuhlmann, University of Twente
Paper presented at the IEEE & ICE conference, The Hague, June 24 - 26, 2013

Related Files

Walhout_Kuhlmann2013

Video Introduction

The Res-AGoRA project is building a governance framework for responsible research and innovation. Want to know more? Watch this 3 minute video

RRITrends

Browse the monitoring data on RRI in 16 European countries at RRI Trends

Upcoming Events

November:

09. European Conference: Engaging Society in Responsible Research and Innovation: What's Next?
Bjorn Bedsted of the Res-AGoRA project will discuss engagement strategies for RRI in the panel on Mainstreaming public engagement in R&I. Find out more at engage2020.eu.

January:

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