

René von Schomberg,
Andoni Ibarra and
Käte Hamburger Kolleg:
Culture of Research (c:o/re)
RWTH Aachen University

c:o/re workshop: Open Scholarship, Responsible Innovation and Anticipatory Governance (29./30. June 2022)

Location: RWTH, Theaterstr. 75 (Stadtpalais) & online

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Program:

WED., 29.06.	<u>Towards Open Research and Scholarship</u>
10:00-10:15	<i>Welcome address</i> Andoni Ibarra, René von Schomberg, Stefan Bösch (c:o/re)
10:15-10:30	<i>Introduction to the first day</i> René von Schomberg
10:30-11:30	<i>Opening up science: a means for responsibility?</i> Clare Shelley-Egan (Technical University of Denmark (DTU))
11:30-12:30	<i>Missions? Quite Possibly! The legacies of RRI and RRI in tackling global and local societal challenges</i> Douglas Robinson (Université Gustave Eiffel, France and CNRS)
12.30	LUNCH BREAK

14:00-15:00	<i>Interpretive multiplicity in Anticipatory Governance. Evidence from 12 countries</i> Mario Pansera (Universidade de Vigo)
15:00-16:00	<i>Quadruple Helix Collaborations, the ethics of stakeholder engagement, and the future of responsible innovation</i> Vincent Blok (Wageningen University)
16:15-17:00	<i>Roundtable Discussion on lead questions</i>
17: 00 -19.00	Keynote: <i>Transition to Open Science, Why and How</i> Frank Miedema (Vice Rector for Research at Utrecht University and chair of the Utrecht University Open Science Programme)
THUR., 30.06.	<u>Anticipatory Governance</u>
10:00-10:15	<i>Introduction to the second day</i> Andoni Ibarra
10:15-11:15	<i>The missing component of anticipatory governance</i> Roberto Poli (University of Trento)
11:15-12:15	<i>Framing RRI in health research domain: the case of MULTI-ACT participatory and anticipatory governance model</i> Paola Zaratina (Director of Scientific Research, Italian MS Society-Italian MS Foundation, Genoa, Italy)
12:15-12:30	Roundup discussion
12.30	LUNCH BREAK

14:00-15:00	<i>Foresight on additive manufacturing in order to support RRI</i> Marianne Hoerlesberger (Austrian Institute of Technology)
15:00-16:00	Round table on lead questions
16:05	END

Rationale of the Workshop:

Day 1: Towards Open Research and Scholarship

Science is regaining something that has gone lost since the origins of modern science in the 17th century: having science as a truly collaborative endeavour to increase our understanding of the world and addressing the societal challenges of our time. Scientists frustrated by the pressure on them to publish in high-impact journals, and lack of sufficient access to data and publications, turn to “facebook for scientists” type of online fora, to share knowledge and data and to engage in collaborative networked-research. Online Research tools make it now possible to establish a global scholarly science commons, allowing access to scientific discoveries in real time, scientific outreach and research assessment. The event of Covid-19, has led public authorities to incentivise scientists to open up their work and share data and knowledge early in the research process and prior to the (too slow) publication process.



A full cycle of open research and scholarship (Von Schomberg, 2019) starts with open research, set through the mutual openness of knowledge actors (towards each other) in

defining the research agenda following the input of the issue-relevant open knowledge inputs. These reflect the phases of the usual research cycle of research agenda setting and the corresponding process of research discovery and analysis. So, the left half of the cycle represents the open research and scholarship inputs (s. diagram), both in terms of knowledge actors and knowledge sources. The right half of the cycle represents Open Research and Scholarship outputs, both in terms of knowledge outputs (publication, data etc.) and actual outputs of coalitions of knowledge actors. These come about as the results and validated output from open review and assessment, equally resulting in effective knowledge coalitions collaborating in outreach and knowledge dissemination. Open knowledge sharing is an element present at all stages of the research process, from agenda setting to the dissemination of (validated) knowledge

Open research and scholarship can be defined as: ‘sharing knowledge and data as early as possible in the research process in open collaboration with all relevant knowledge actors’.(Von Schomberg, 2019)

During the workshop we want to discuss some ‘Lead questions’ at an open round table discussion, whether open scholarship can make science:

- *More reliable* (as it allows early, and better and more effective data-verification)
- more efficient, as it can prevent planned, useless duplication of similar research efforts elsewhere on the globe and extend collaboration to a broader range of collaborators
- more *responsive* to the societal demands of citizens, as science could become more transparent and open as before
- more *credible*, as issues of scientific integrity could be better tackled in an open and transparent context.
- more *inclusive* in the incorporation of a broader range of scientific knowledge producers beyond the academic context and including, for example, citizen scientists and scientists with limited financial support.
- *facilitate* globally organised mission-oriented research, having scientists sharing knowledge and data prior to publication and thus advancing science at a faster pace. (Human genome project which included a moratorium on publishing, was an early example, Covid-19 research a recent one).

Eventually:

- Does open scholarship does lead to a better scientific practice?
- How should Open Scholarship be incentivised?
- Do the current trends in open science contribute to a Knowledge Commons or paradoxically further a more ‘commodified’ knowledge provision to knowledge actors who can ‘pay’ the access to knowledge resources?

Day 2: Anticipatory Governance

The desirability of open scholarship may be motivated by achieving better scientific practices. However, RRI is more ambitious and represents an effort to drive research and innovation towards socially desirable outcomes. We, therefore, must raise the question how we can define these outcomes as well as how to anticipate them. This part and parcel of Anticipatory Governance. The employment of foresight is possibly one of the few tools we have at our disposal, e.g. anticipation defined as an activity

characterised by use of the future (or futures) to guide and orient decision making in the present.

Roughly speaking, Anticipation can be interpreted in two ways. The first interpretation is Anticipation as a *closed* form of anticipation which is grounded in the desirability and plausibility of pre-defined alternative futures for the purpose of assessing its positive or negative impacts. The second interpretation is an *open* form of anticipation employing a democratic, collective deliberation of alternative futures as a guidance for initiating actions in the present.

The *open* concept of anticipation enables societal actors to intervene intentionally and reflexively on the current state of affairs. Open anticipatory governance is necessary for achieving RRI by allowing for a plurality of social visions informed by equally pluralistic epistemic approaches in science. Open Anticipatory Governance could thus be considered as a socio-epistemic activity which can contribute to a more dynamic governance of R&I.

Mission-oriented research can be seen as part of Anticipatory Governance, since those missions will need to be guided by foresight to orient and re-orient research and innovations towards socially desirable outputs while the science evolves, and societies may wish to re-adjust what is socially desirable.

The following issues will be used as lead questions during the round table discussion on the second day.

- How do we conceptualize 'anticipation' in such a way that it leads to open anticipatory governance?
- What is the significance of anticipatory governance for Open Science and Responsible Research and Innovation?
- What are the narratives of open anticipatory governance in different institutional and organizational settings?
- How can we assess Anticipatory Governance?
- How can mission-oriented research be best practiced as part of facilitating anticipatory governance?