

Comments to EPRS's analysis *“Future Shocks 2023: Anticipating and weathering the next storms”*

Authored by EPRS | European Parliamentary Research Service
Zsolt Pataki, Policy Foresight Unit, PE 747.460 – August 2023

Andrea Saltelli

Brussels March 6, 2024

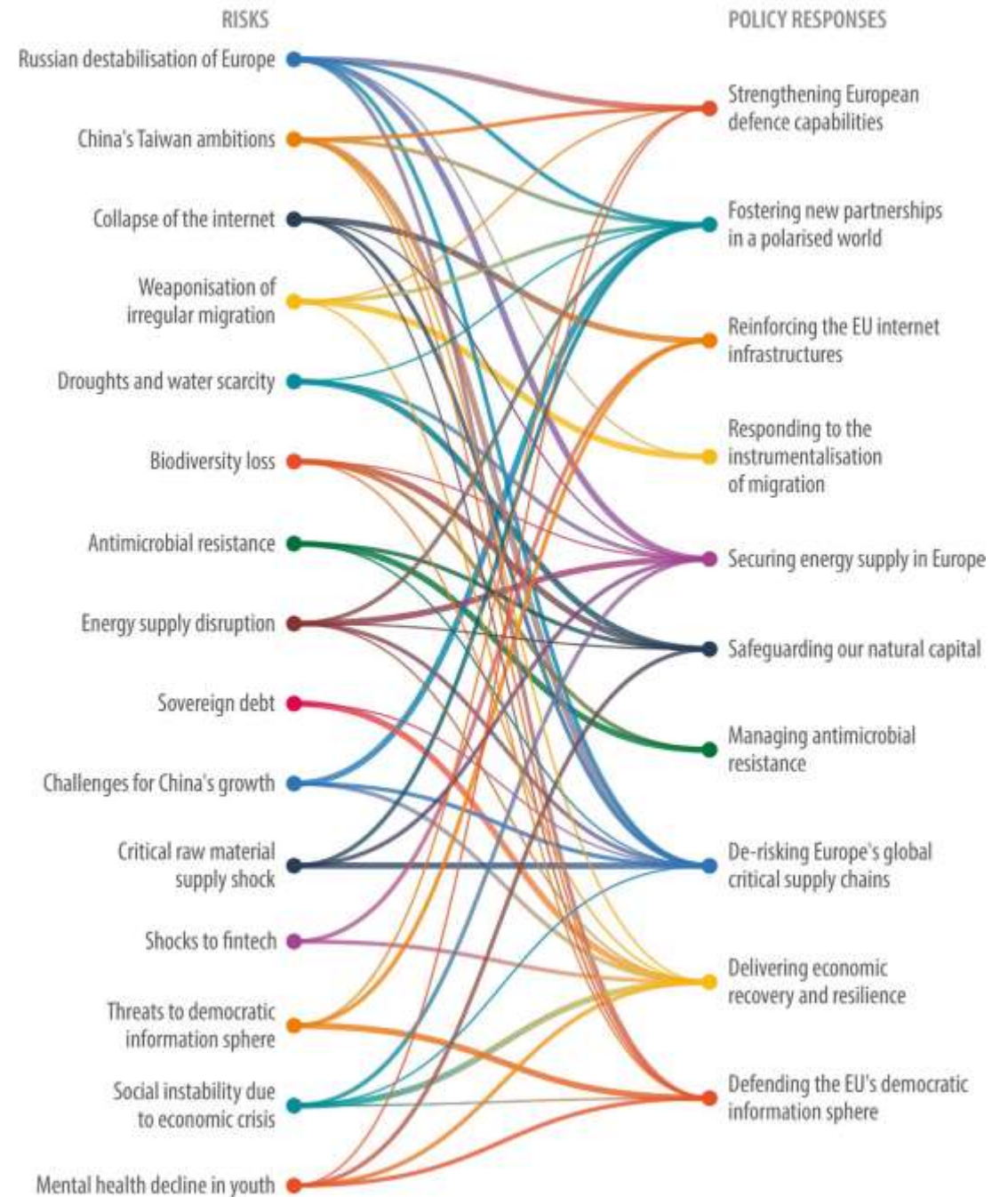
EU Parliament



Interlinkages,
permacrises,
polycrises ...

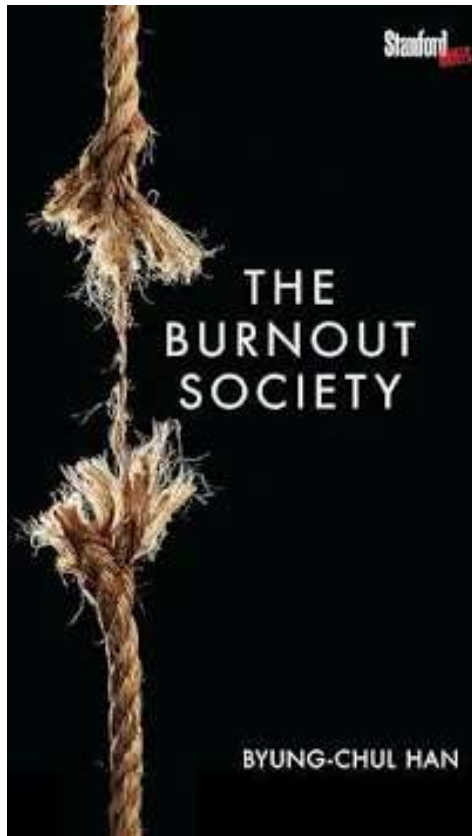
A good, thorough
analysis

What can be
added?



Comment 1: Prevalent ideology, its
sociotechnical imaginaries, and associated
risks

An ideology elevating efficiency to supreme good pays a price in fragilities of humans, their environment, their economies



<https://www.bbc.com/news/world-middle-east-56505413>

Toxicological Sciences

JOURNAL ARTICLE ACCEPTED MANUSCRIPT

Quantitation and identification of microplastics accumulation in human placental specimens using pyrolysis gas chromatography mass spectrometry

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Marcus A Garcia, Rui Liu, Alex Nihart, Eliane El Hayek, Eliseo Castillo, Enrico R Barrozo, Melissa A Suter, Barry Bleske, Justin Scott, Kyle Forsythe ... [Show more](#)

Toxicological Sciences, kfae021, <https://doi.org/10.1093/toxsci/kfae021>

Published: 17 February 2024

The Guardian

Microplastics found in every human placenta tested in study

Scientists express concern over health impacts, with another study finding particles in arteries

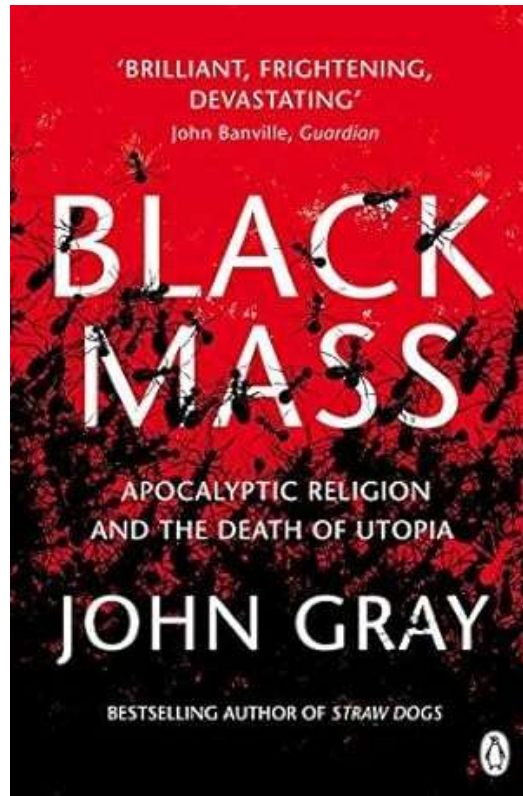
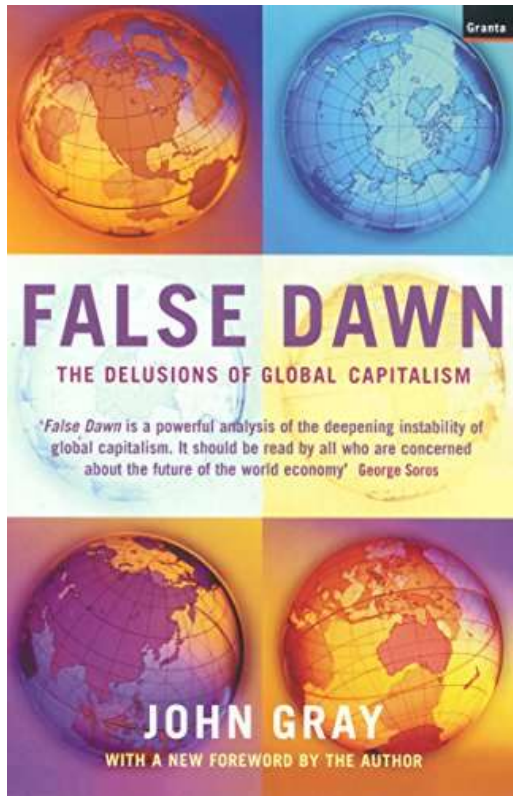


Damian Carrington
Environment editor

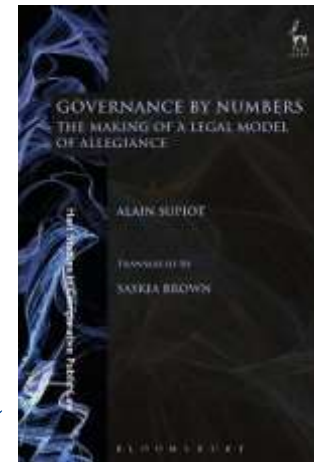
[@dpcarrington](#)

Tue 27 Feb 2024 12:00 CET

According to some, the ideology of liberalism and free market globalization have produced irreversible damages



Salais' a-
democracy



Supiot's re-
feudalization

Gray on the failure of neoliberal utopia

Comment 2: The risks of climatism

despite the ongoing Russian war on Ukraine, **climate change was the most stringent**, and that the main risks in the next five to 10 years relate to geopolitical tensions, cybersecurity and energy. Furthermore, AXA identified an imminent inter-relation – a nexus of risks – between climate change, geopolitics and energy. **Climate change indeed ranks first as a fundamental risk multiplier**, by fuelling energy, food, feed and health risks, which all threaten to set back our progress on economic and human development.



WIKIPEDIA
The Free Encyclopedia

Climate Change Isn't Everything: Liberating Climate Politics from Alarmism

[Article](#) [Talk](#)



Climate change cannot be the lens through which to look at the world's problems. The war in Syria is not a result of climate change

Rejecting climatic determinism is not a refutation of climate change but of its instrumental use

Papers here



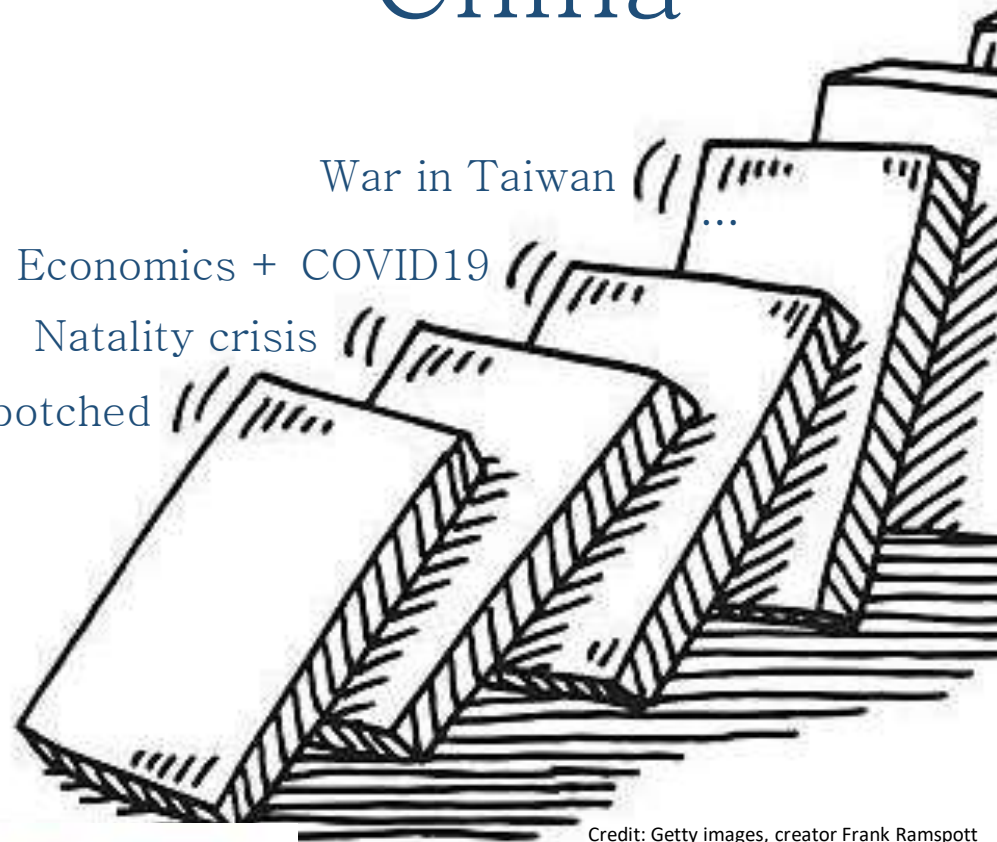
Comment 3: Domino effects

Europe

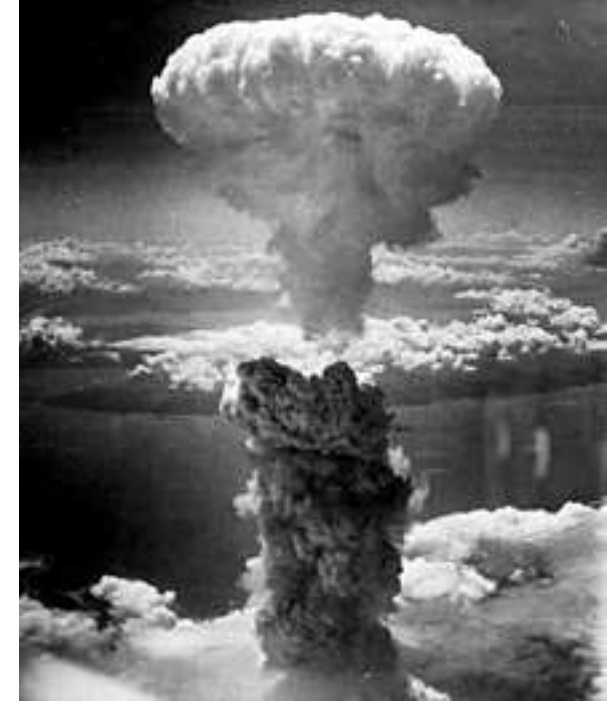


Source: Wikipedia Commons

China



Credit: Getty images, creator Frank Ramspott



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By [Liyun Qi](#) [Follow](#)
Feb. 12, 2024 12:01 am ET

THE WALL STREET JOURNAL.

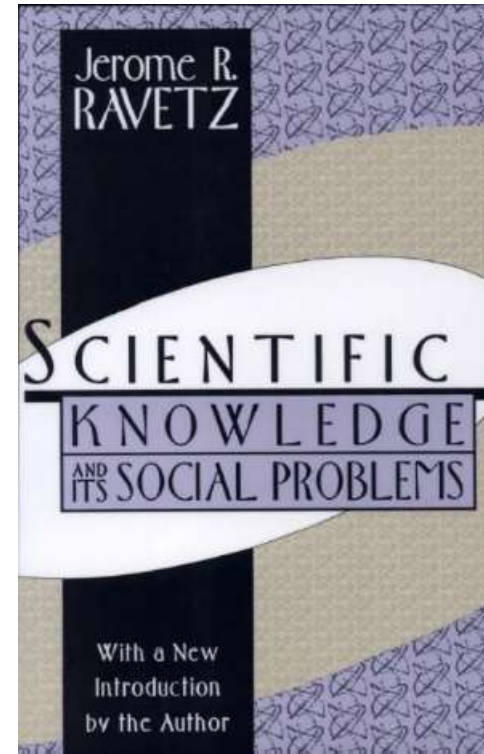
How China Miscalculated Its Way to a Baby Bust

A missile scientist used mathematical models to push the nation's one-child policy. Its legacy is proving hard to shake.

Comment 4: Science-generated domino effects

A prophetic work describing science as a potential peril in its transformation from little to big and mega

- shoddy science,
- entrepreneurial science,
- reckless science,
- dirty science



Jerome R.
Ravetz

Ravetz, J., 1971, Scientific Knowledge and its Social Problems, Oxford University Press.

Shoddy science → science reproducibility crisis

He Hunts Sloppy Scientists. He's Finding Lots of Prey.

Meet Sholto David, whose error-spotting has raised a question: If researchers aren't getting the little things right, what else might be wrong?



By **Matt Richtel**

The New York Times

Published Feb. 2, 2024 Updated Feb. 5, 2024

Denied for two decades, science's many disfunctions (publishing, peer reviews, grants system...) have become today the new normal in media and academia

nature

[nature](#) > [news](#) > article

By [Katharine Sanderson](#)

NEWS | 19 January 2024

Science's fake-paper problem: high-profile effort will tackle paper mills



EXCLUSIVE: Poor-quality studies are polluting the literature – a group will study the businesses that produce them to stem the flow of bogus research.

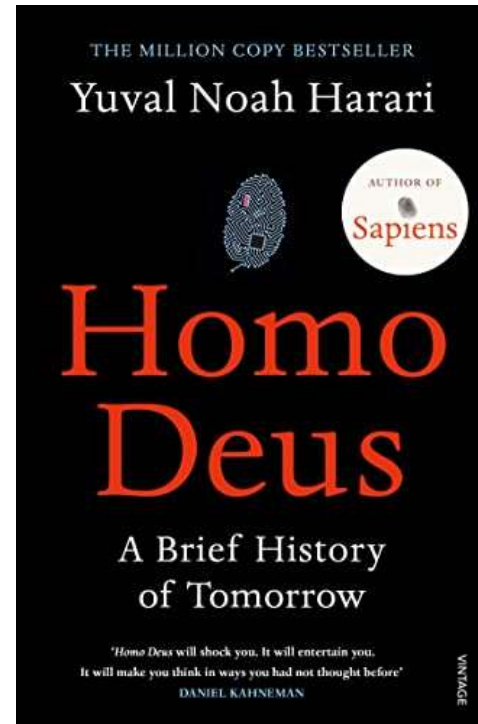
Works on science's reproducibility, science's integrity, ...



Entrepreneurial science → Elon Musk, Silicon Valley's transhumanism, corporate threats to health and the environment, regulatory capture, colonization of science ...



Denounces the use of science in regulatory capture



In praise of transhumanism

Works on these topics here



Reckless science (1) → COVID19 and Lableaks

“What did COVID-19 really teach us about science, evidence and society?”

WILEY Online Library



COMMENTARY Open Access

What did COVID-19 really teach us about science, evidence and society?

Andrea Saltelli Joachim P. Sturmborg, Daniel Sarewitz, John P. A. Ioannidis

First published: 06 June 2023 | <https://doi.org/10.1111/jep.13876> | Citations: 2

Daniel Sarewitz



John P.A. Ioannidis



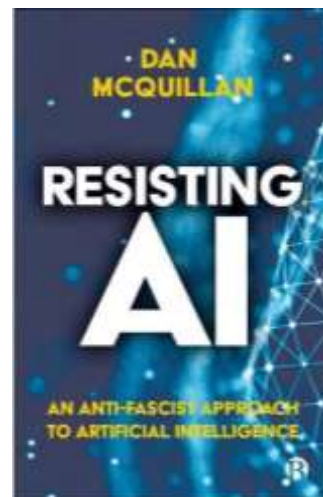
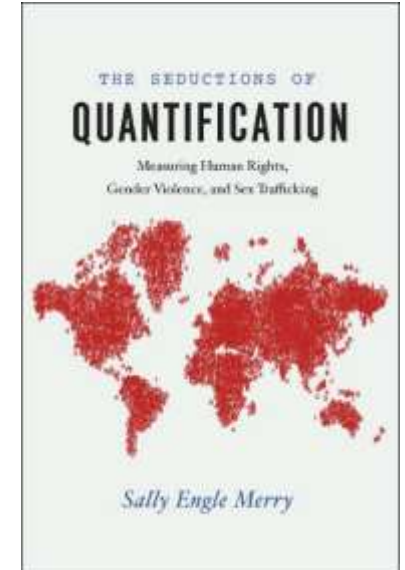
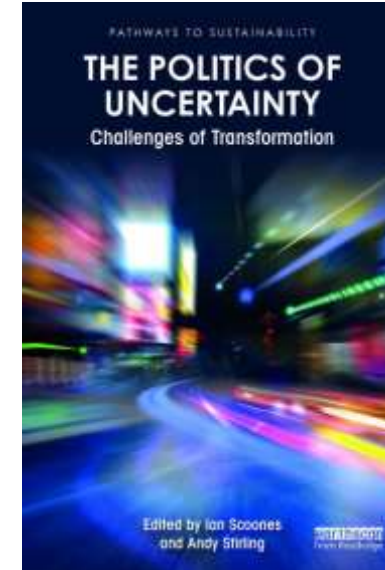
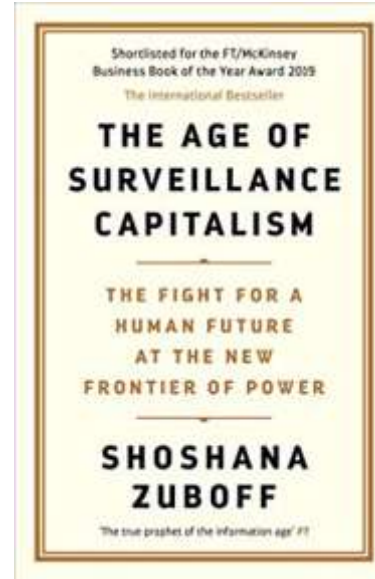
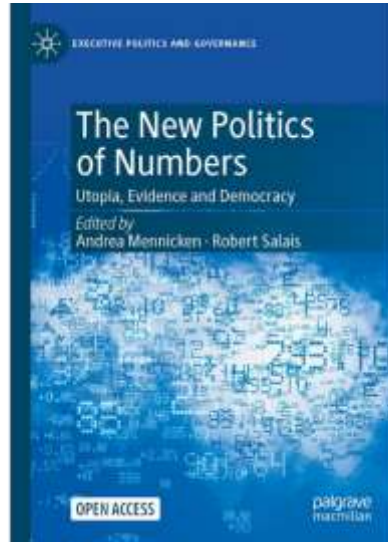
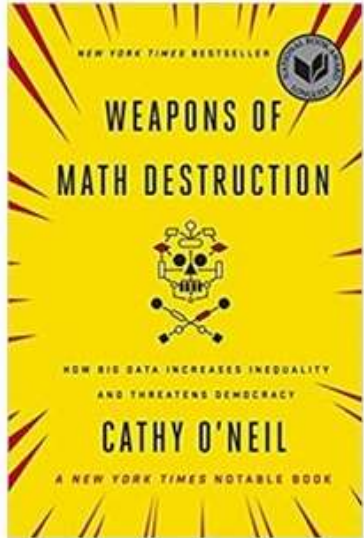
Joachim P. Sturmborg



More on lessons from COVID19

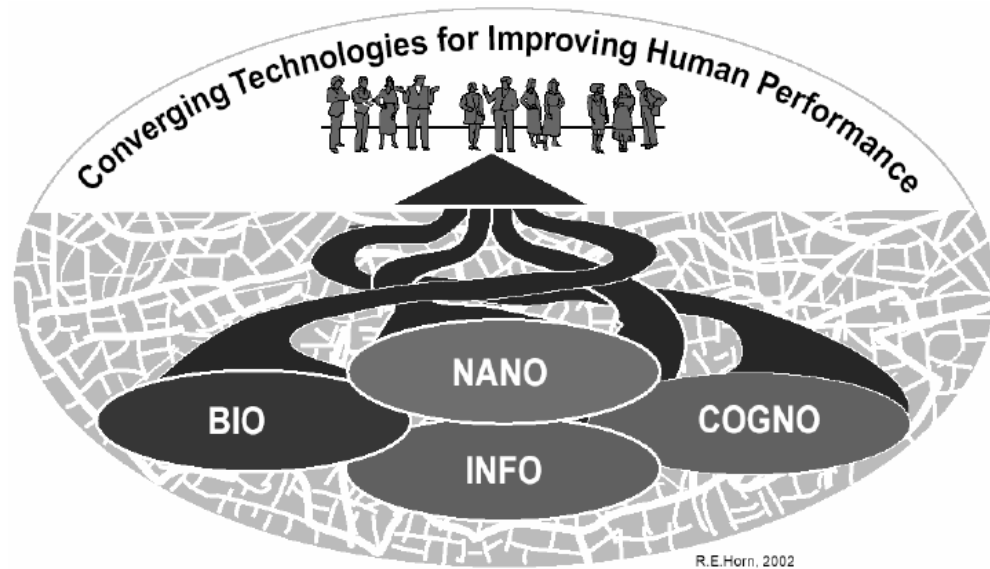


Reckless science (2) → Runaway digital technologies



Our production of visible and invisible numbers has everything to do with policy

Dirty science → Use of convergent technologies (Bio-Nano-AI- Cognitive Science) in warfare



Roco, M.C., and Bainbridge, W.S. (eds) (2002) Converging technologies for improving human performance, NSF-DOC Report, Kluwer, 2003.



Black Mirror (Hated in the Nation)

What should be done?



Futures

Volume 91, August 2017, Pages 5-11



What is science's crisis really about?

Andrea Saltelli ^{a, b, c, d, e}, Silvio Funtowicz ^a

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Environmental Science & Policy

Volume 106, April 2020, Pages 87-98



The technique is never neutral. How methodological choices condition the generation of narratives for sustainability

Andrea Saltelli ^{a, b, c, d, e}, Lorenzo Benini ^c, Silvio Funtowicz ^a, Mario Giampietro ^{d, e}, Matthias Kaiser ^a, Erik Reinert ^{a, f}, Jeroen P. van der Sluijs ^{a, g, h}

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The more things change, the more they stay the same: promises of bioeconomy and the economy of promises

Special Feature Editorial Promises of Bioeconomy: Change as a Strategy for Avoiding Socio-ecological Transformation | Open Access Published: 23 March 2023

Volume 18, pages 117–144, (2023) | [10.1007/s11625-023-10020-9](#)

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Futures

Volume 104, December 2018, Pages 85-90



Why science's crisis should not become a political battling ground

Andrea Saltelli



Futures

Volume 115, January 2020, 102491



Technoscience, policy and the new media. Nexus or vortex?

Andrea Saltelli ^{a, b, c, d, e}, Paul-Marie Boulanger ^{c, d, e}



Environmental Science & Policy

Volume 142, April 2023, Pages 99-111



Impact assessment culture in the European Union. Time for something new?

Andrea Saltelli ^{a, b} , Marta Kuc-Czarnecka ^c , Samuele Lo Piano ^d , Máté János Lőrincz ^d , Magdalena Olczyk ^c , Arnald Puy ^e , Erik Reinert ^{f, g} , Stéfán Thor Smith ^d , Jeroen P. van der Sluijs ^{b, h}

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COMMENT | 24 June 2020

Five ways to ensure that models serve society: a manifesto

Pandemic politics highlight how predictions need to be transparent and humble to invite insight, not blame.

By Andrea Saltelli , Gabriele Barbone, Isabelle Bruno, Ezra Chertok, Monica Di Florio, Emmanuel Distan, Wendy Hutton, Eusebio Jato, May Phelix J., Tommaso Portakari, Theodoros M. Porter, Arnald Puy, Jansel Rábalo, Jerome R. Bayart, Erik Reinert, Daniel Semerari, Philip B. Stark, & Vanni



Futures

Volume 135, January 2022, 102860



Science, the endless frontier of regulatory capture

Andrea Saltelli ^{a, b, c, d, e}, Dorothy J. Dankel ^{b, c}, Monica Di Florio ^d, Nina Holland ^e, Martin Pigeon ^e

Home > Minerva > Article

The Challenge of Quantification: An Interdisciplinary Reading

Open access | Published: 21 December 2022

Volume 61, pages 33–70, (2023) | [10.1007/s11023-022-10020-9](#)

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Impact assessment culture in the European Union. Time for something new?

[Andrea Saltelli](#)^{a b}  , [Marta Kuc-Czarnecka](#)^c , [Samuele Lo Piano](#)^d ,
[Máté János Lőrincz](#)^d , [Magdalena Olczyk](#)^c , [Arnald Puy](#)^e , [Erik Reinert](#)^{f g} ,
[Stefán Thor Smith](#)^d , [Jeroen P. van der Sluijs](#)^{b h} 

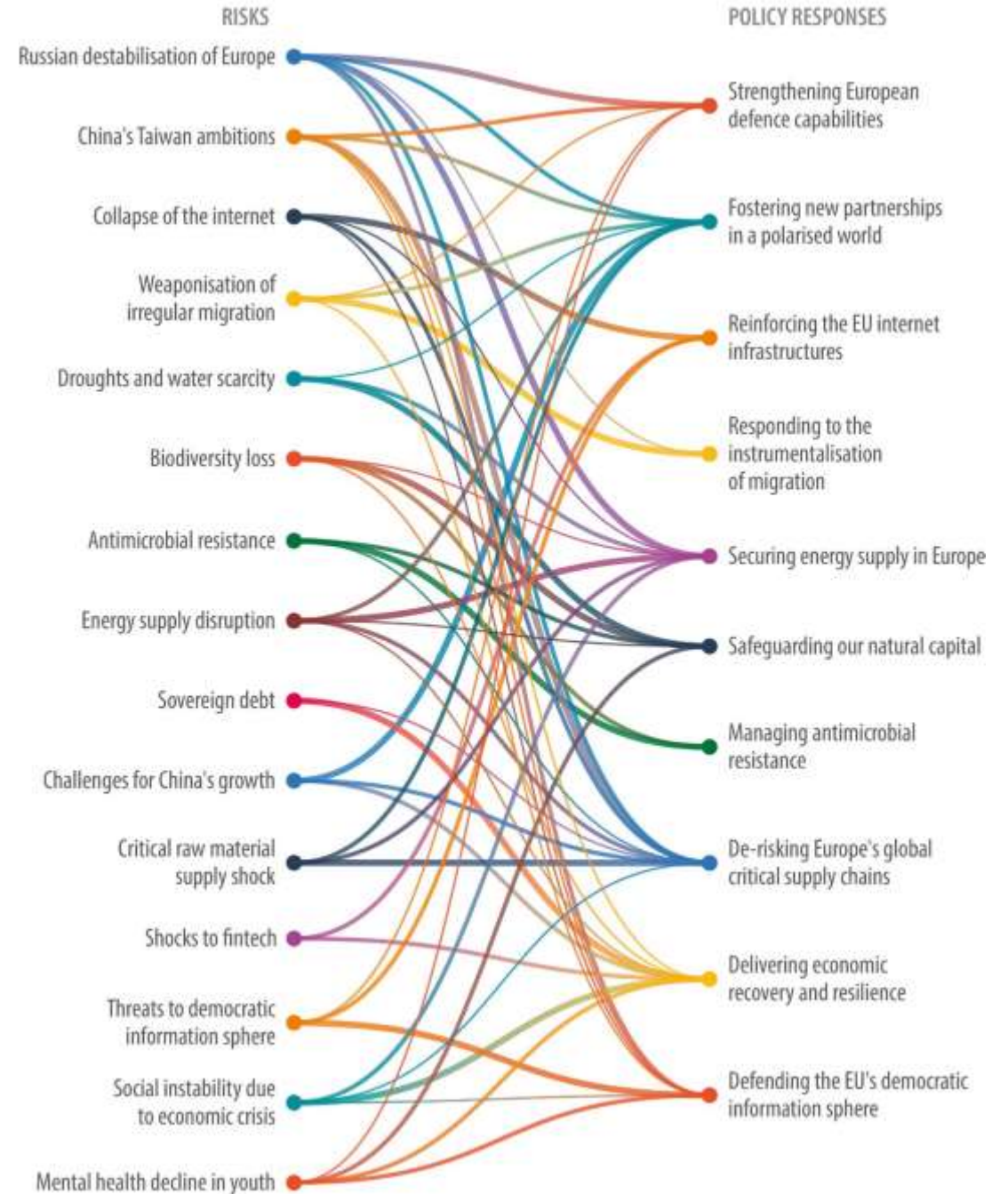
- Current impact assessments in the field of environmental policies suffer from lack of diversity in economic thought.
- A standard neoclassic economic toolbox appears to dominate methodological choices.
- Non-Ricardian economics and bioeconomics can provide some diversity as well as robustness.
- Also useful would be a set of qualitative-quantitative methods derived from post-normal science.
- These new lenses are tested on four different relevant test cases in a European Union context.

Conclusions

Broaden the spectrum of perspective allowed

Domino effects?

Reflect on fragilities generated by framings



Next:

BRIEFING



The use of strategic foresight in Commission impact assessments

Existing practices and the way forward

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August 25 2023: The politics of modelling is out!



**the politics
of modelling**
numbers between
science and policy

edited by
Andrea Saltelli
& Monica Di Fiore

OXFORD

Praise for the volume

"A long awaited examination of the role —and obligation —of modeling."

Nassim Nicholas Taleb, Distinguished Professor of Risk Engineering, NYU Tandon School of Engineering. Author, of the 5 -volume series *Incerto*.

"A breath of fresh air and a much needed cautionary view of the ever-widening dependence on mathematical modeling."

Orrin H. Pilkey, Professor at Duke University's Nicholas School of the Environment, co-author with Linda Pilkey-Jarvis of *Useless Arithmetic: Why Environmental Scientists Can't Predict the Future*, Columbia University Press 2009.

Mastodon Toots by

@AndreaSaltelli



AndreaSaltelli

2024/2/16 16:38

Are you interested in sensitivity analysis? Here a short story of it.

Open access, online in draft form:

[sciencedirect.com/science/arti](https://www.sciencedirect.com/science/arti)

Andrea



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