

Misconduct?

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&

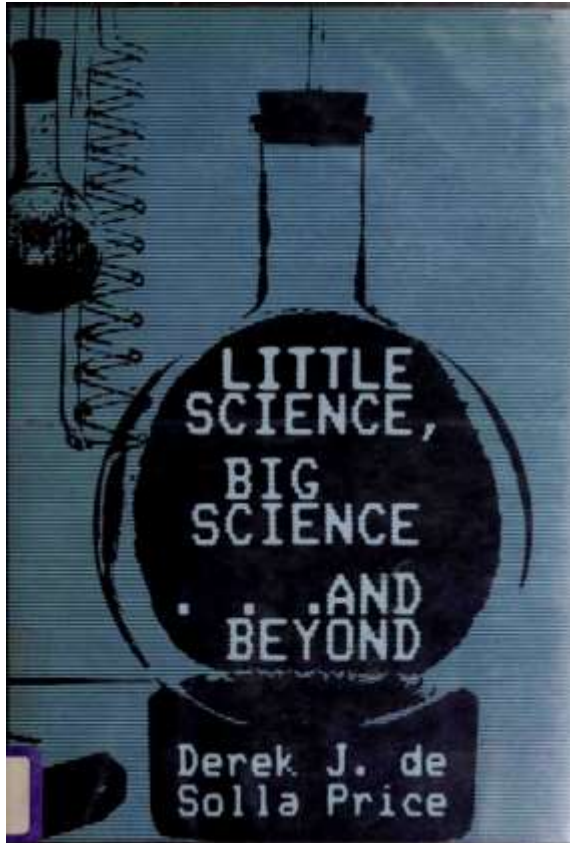
Institut de Ciència i Tecnologia Ambientals (ICTA) –
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Integrity & Quality in Science :
The Societal Costs of
Research Misconduct, 1st International
Workshop of the DEFORM project,
Paris, 30–31 January 2017

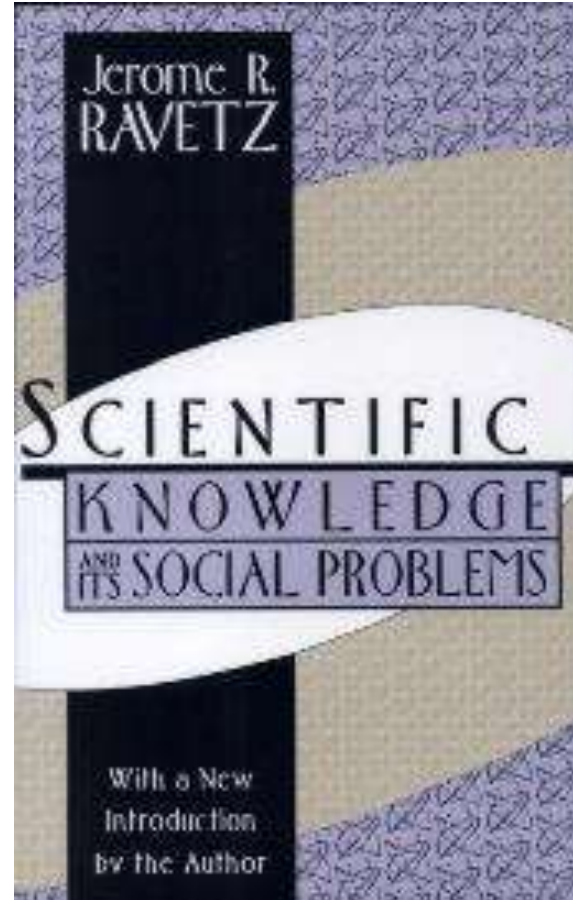
The argument in five theses

1. Misconduct? Science is in a deep existential crisis which has ethical, epistemological, methodological and even metaphysical dimensions
2. Likewise democracy which has with science a legitimacy arrangement
3. Science and its institutions are committed to the status quo & attempt to evade a critical reflection
4. Solutions aren't forthcoming anytime soon
5. There are yet few areas of 'Reformation' where science and society work together

First thesis: Science is in a deep existential crisis which has ethical, epistemological, methodological and even metaphysical dimensions. This was neatly predicted by E. de Solla Price, Jerome R. Ravetz and others five decades ago.



Derek J. de Solla
Price



Jerome R.
Ravetz

de Solla Price, D.J., 1963, Little science big science, Columbia University Press.

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



Summary Points

- Currently, many published research findings are false or exaggerated, and an estimated 85% of research resources are wasted.

Ioannidis, J. P. (2014). How to Make More Published Research True. PLoS medicine, 11(10), e1001747

For Lancet (2015) an estimated US\$200 billion were wasted in the US in 2010.

Lancet, Editorial, 2015, Rewarding true inquiry and diligence in research, 385, p. 2121.
Ioannidis JPA, 2016, Why Most Clinical Research Is Not Useful, PLoS Med 13(6): e1002049.
doi:10.1371/journal.pmed.1002049



John P. A.
Ioannides



THE RIGHTFUL
PLACE OF SCIENCE:

SCIENCE ON THE VERGE

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A crisis looms over the scientific enterprise. Not a day passes without news of retractions, failed replications, fraudulent peer reviews, or misinformed science-based policies

The Rightful Place of Science: Science on the Verge

Paperback – 20 Feb 2016

by [Andrea Saltelli](#) (Author), [Alice Benessia](#) (Author), & 7 more

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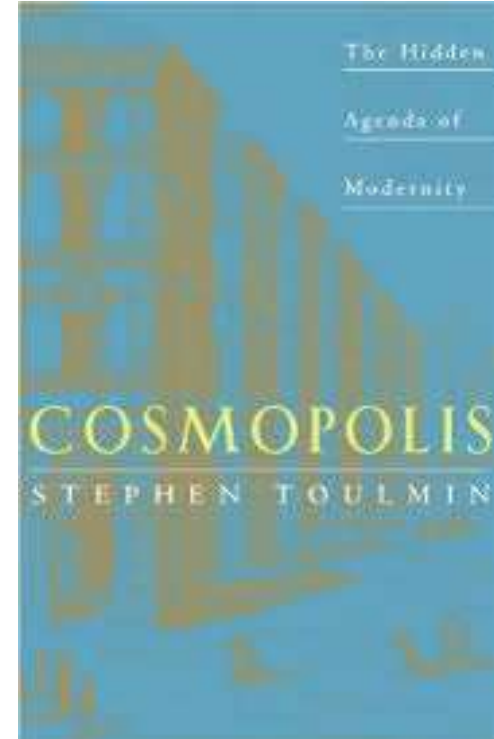
Thesis 2: Likewise in crisis is democracy which has with science a legitimacy arrangement



Michael Polanyi



Jean-François
Lyotard



Stephen Toulmin

→ today post-BREXIT, post-Trump, post-truth brouhaha, the demise of expertise ...

Thesis 3: Science and its institutions are committed to the status quo & attempt to evade a critical reflection with:

Denial

Dismissal

Diversion

Displacement

Economy and Society Volume 41 Number 1 February 2012: 107–125

**Uncomfortable knowledge:
the social construction of
ignorance in science and
environmental policy
discourses**

Steve Rayner

Denial

OECD publishing

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<http://dx.doi.org/10.1787/5js3311jcpwb-en>



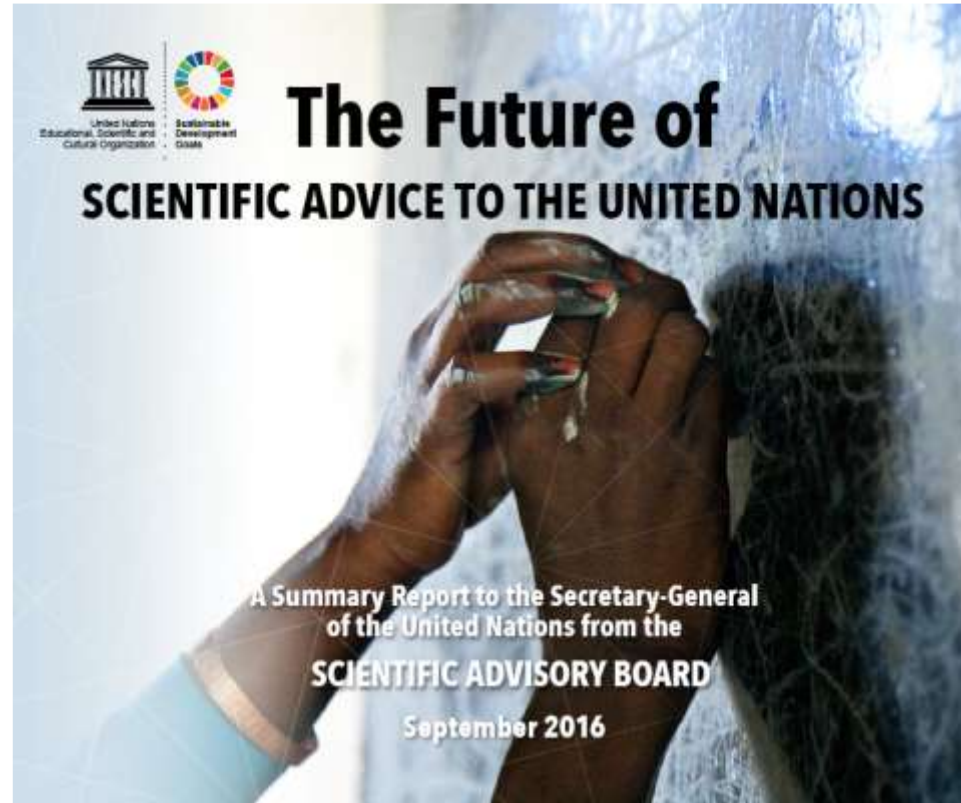
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A manifesto for reproducible science

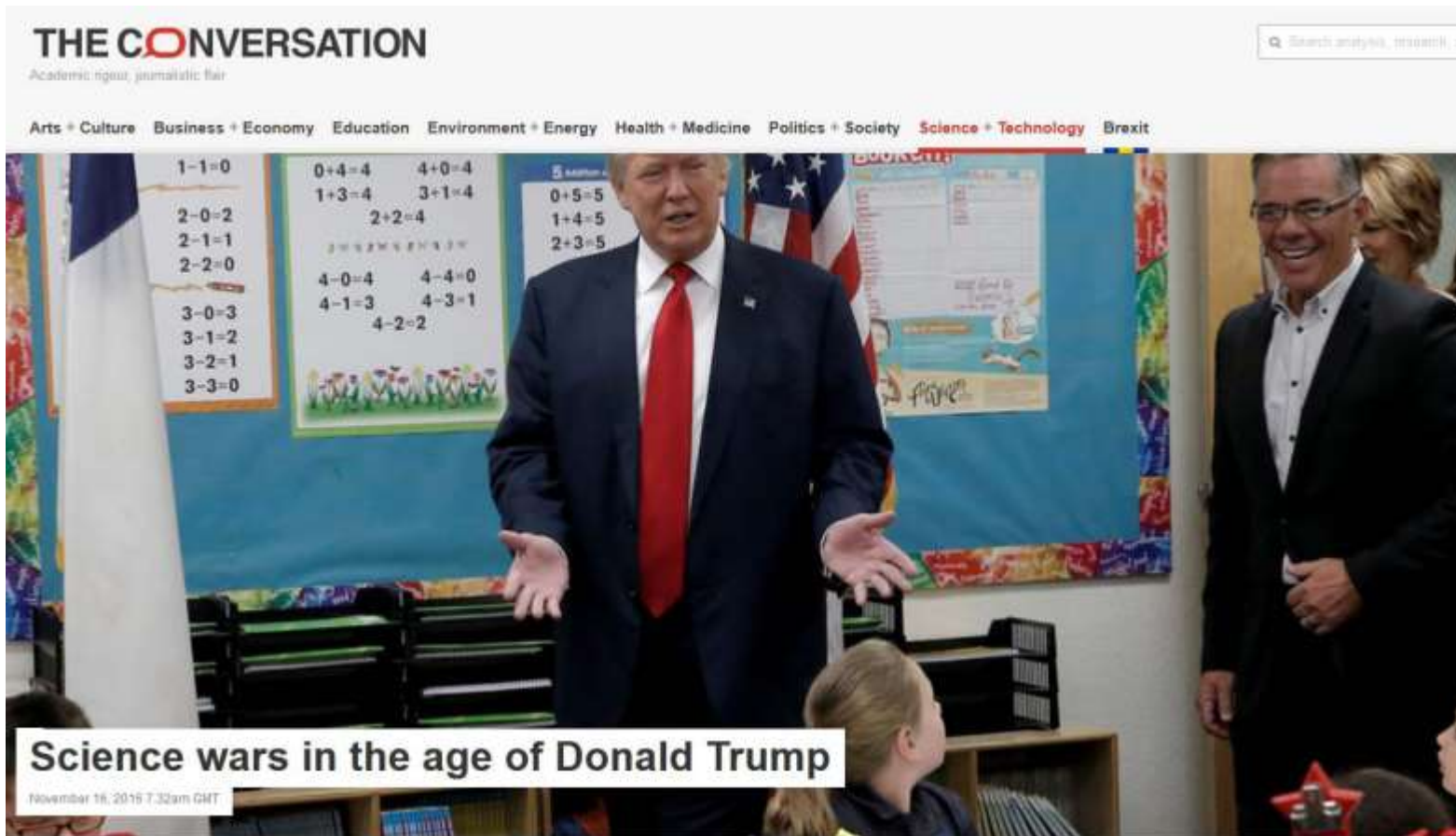
Marcus R. Munafò , Brian A. Nosek, Dorothy V. M. Bishop, Katherine S. Button, Christopher D. Chambers, Nathalie Percie du Sert, Uri Simonsohn, Eric-Jan Wagenmakers, Jennifer J. Ware & John P. A. Ioannidis

Nature Human Behaviour **1**,
Article number: 0021 (2017)
[doi:10.1038/s41562-016-0021](https://doi.org/10.1038/s41562-016-0021)

Published online: 10 January 2017

“[...] measures [to] improving the transparency, reproducibility and efficiency of scientific research”

Diversion (There is a problem, and this is due to an ongoing war on science between the educated liberal left and the ignorant conservative right)



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Displacement (This is the post-truth era)

THE CONVERSATION

Academic rigour, journalistic flair

Arts + Culture Business + Economy Education Environment + Energy Health + Medicine Politics + Society **Science + Technology** Brexit

To tackle the post-truth world, science must reform itself

January 27, 2017 7:33am GMT



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Thesis 4: Solutions aren't forthcoming anytime soon, but:

Church / indulgencies =

Science / predatory publishers, citation cartels, trade in authorship, sugar-cholesterol scandal ...

A combination of corruption, rage and new technology could mobilise major social change (Silvio Funtowicz)

Thesis 5: Areas of resistance and 'Reformation' where science and society work together – emergence of a new polity of science, including citizen scientists and scientist-citizens



Jeffrey Beall



Lois Gibbs



Timothy Gowers



Marc Edwards

<http://scholarlyoa.com/2015/01/02/bealls-list-of-predatory-publishers-2015/#more-4719>

<https://www.bu.edu/lovecanal/canal/> <http://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0127502>

https://en.wikipedia.org/wiki/Flint_water_crisis; <http://flintwaterstudy.org/>;

<http://www.nytimes.com/2016/08/21/magazine/flints-water-crisis-and-the-troublemaker-scientist.html>

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Lovely (also in the sense of 'of love') piece by an Italian scholar [@robertocalasso](https://twitter.com/robertocalasso):

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