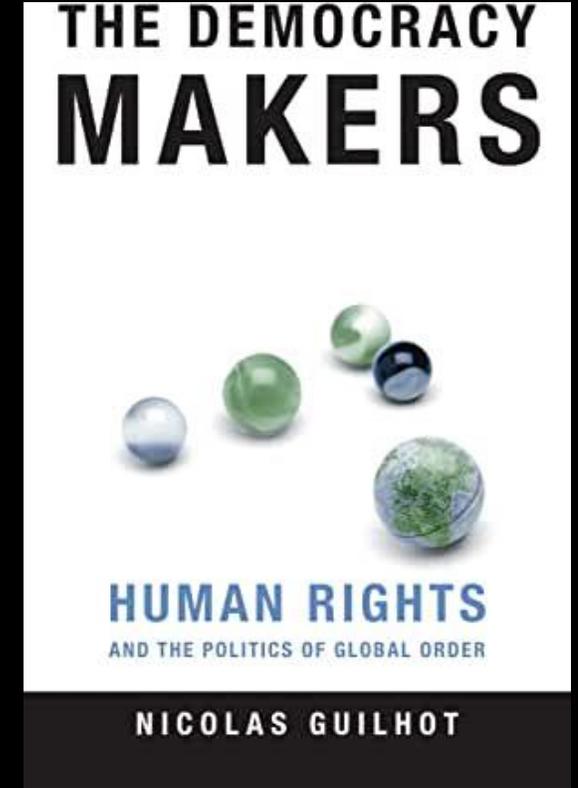
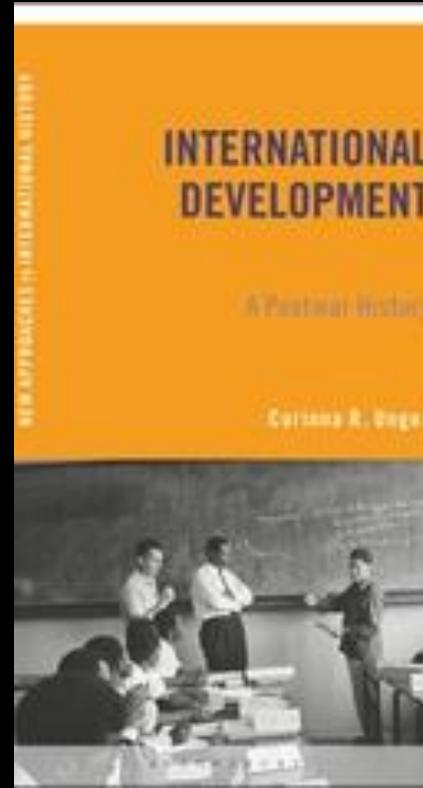
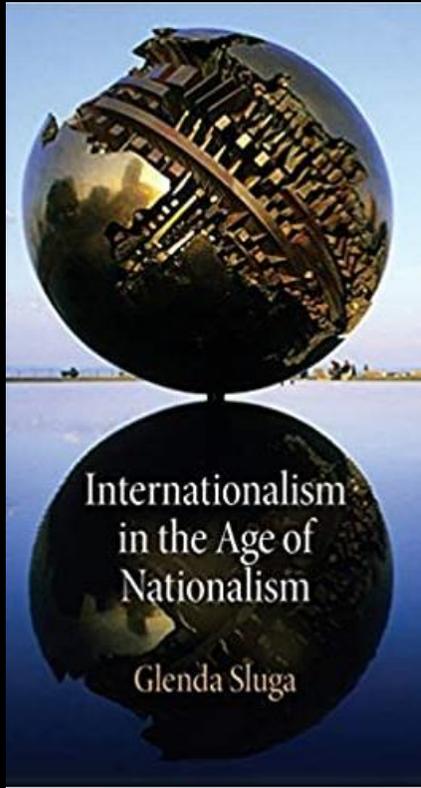


The crisis of authority and expertise knowledge: the shock of the old

Stéphane Van Damme

Introduction

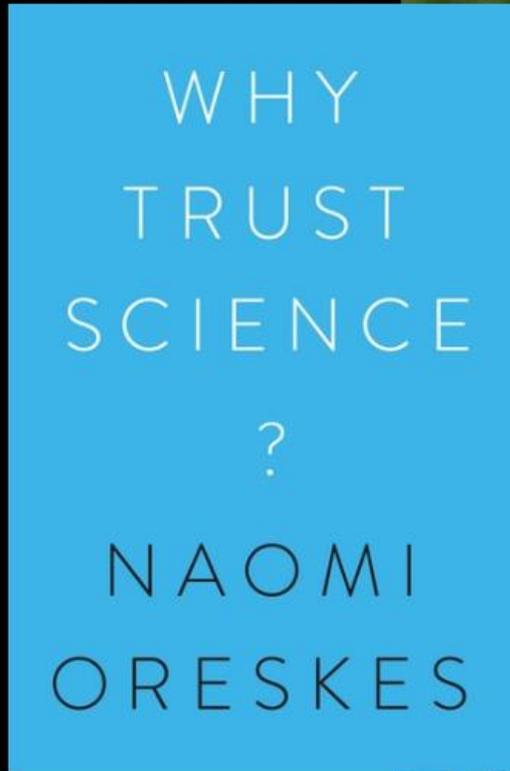
- networks or groups have formed observatories of this “Expertise under pressure” in Cambridge CRASSH programme under the direction of **Anna Alexandrova**.
- David Edgerton, *The Shock of the Old: Technology and Global History since 1900* (2006)
- History of technologies from the users and uses (and not inventors)



Expertise at HEC

1) Positive knowledge: the separate spheres legacy

- “Throughout the eighteenth and the early nineteenth centuries, most scholars located the authority of science in the authority of of the man of science”, Naomi Oreskes said in her book, *Why Trust Science?*, 19



1) Positive knowledge: the separate spheres legacy

- Scientific credibility depended on institutional and individual reputations, verification, and consensus.
- During the 19th century, science has the potential to emancipate people from religion and superstition.
- Importance to higher the boundaries between science and knowledge.
- Expertise is part of a continuum between pure science and applied science
- In the early modern period, it was associated with practical knowledge and useful knowledge

1) Positive knowledge: the separate spheres legacy

- Science is defined as a break with common sense and is characterised by a method.
- “August Comte’s key move was to insist that science is reliable not by virtue of the character of its practitioner, but by virtue of the nature of its practices” (Oreske, p. 23).
- Moral economy of Victorian Science was grounded in the idea of separate sphere, popularization, discipline, racial and gender segregations.

1) Positive knowledge: the separate spheres legacy

- In 2015, the Indian historian of science, Druv Raina urged us to explore the tension produced by a progressive dissociation between two conceptions of scientific activities which occurred early 20th century.
 - Druv Raina, "Science and Democracy", in Romila Thapar (ed.), *The Public Intellectual in India*, New Delhi, Aleph Book, 2015, p. 62-78.
- One is politically engaged in the promotion of rationalism and since the late 19th century, the other will defend the ideal of neutrality and disinterestedness and will favor the separation with the world

1) Positive knowledge: the separate spheres legacy

- Already in 1920, philosopher John Dewey defended a place for science as an instrument to build "a republic of learning", a "commonwealth of science" and a central role in his general model for a "participatory political democracy"
- After the Second World war, this dilemma is so strong that left-wing scientists like J.D. Bernal wanted to break with the notion of neutrality while the sociologist of science Robert Merton characterized science by its social virtue, originality and scepticism.
- By questioning scientism or the idolatry of science, philosophers, historians and sociologists of science have considered that the scientific method is diverse and multiple, putting an end to the dream of positive and absolute knowledge.

2) Restaging expertise during the Cold War

- Attacks on expertise date back to the 1960s when new technologies encouraged the birth of social movements
 - OECD's survey in 1971, *Science, croissance et société* ; 1979, *La Technologie contestée: participation du public et prise de décision en matière de science et de technologie* ; National Research Council, *Risk Assessment in the Federal Government. Managing the process*, Washington, 1983.
- Lewis Mumford, « Authoritarian and democratic technics », *Technology and Culture*, Vol. 5, n°1 (1964), p. 1-8.
- K. Moore, *Disrupting science. Social Movements, American Scientists and the Politics of the Military, 1945-1975* (2008).

2) Restaging expertise during the Cold War

- The interpretation in terms of irrationality is rejected by sociologists such as Dorothy Nelkin (1933-2003) in the 1960s.
- D. Nelkin, *Nuclear Power and its Critics. The Cayuga lake Controversy*, Ithaca, Cornell University Press, 1971.
- D. Nelkin, *Technological Decisions and Democracy. European Experiments in Public Participation*, London, Sage, 1977.

2) Restaging expertise during the Cold War

- Political scientists and sociologists embark on the analysis of controversies (on nuclear power) which show the work of demarcation science and citizens.
- Psychological interpretations (and psychometry) are abandoned in favor of an interest in the logic of these controversies.

3) Expertise as a power technology in 1980s and 1990s

- -Sheila Jasanoff, *The Fifth Branch. Scientific Advisors as Policy Makers* (1990).
- The key concept is that of credibility, which is defined by 3 shifts.
- -Experts who used to be scientists are now professional experts.
- -Constitution of an autonomous world of expertise around risk assessment policies.
- -Emergence of a scientific field: that of regulatory science, which appeared in the 1970s and took shape in 1981 with the Society for Risk Analysis.

3) Expertise as a power technology in 1980s and 1990s

- Daniel Carpenter, *Reputation and Power. Organizational Image and Pharmaceutical Regulation at FDA*, Princeton, PUP, 2010
- Daniel Carpenter studies the Federal Drug Administration and shows that the power of the FDA was built on its capacity to produce standards of analysis that are adopted by all institutions and actors.

3) Expertise as a power technology in 1980s and 1990s

- -Growing importance of measurement, quantitative techniques in government practices :
 - Alain Desrosières, *Politics of Large numbers: a History of statistical reasoning*, Harvard University Press, 2010
 - Ted Porter, *Trust in Numbers. The pursuit of Objectivity in Science and Public Life*, Princeton University Press, 1995.
- -Standardization of risk analysis protocols.
- -Of course scientific experts still have links with scientists, there is a continuum between academic science and expertise, but gradually regulatory science differs in criteria and competences from academic science.

4) Democratizing expertise in 2000s

- **The participation paradigm and “hybrid forums”**
- Michel Callon, Pierre Lascoumes and Yannick Barthe, *Acting in an Uncertain World – An Essay on Technical Democracy* (2001).
- This period is characterized by different elements:
 - -controversies are now perceived as positive. They help to improve the quality and robustness of the decision.
 - -experts insist on ways of framing technical debates.
 - -finally, sociologists recommend integrating participation practices into the decision-making process.
- Andy Stirling, « Opening Up and Closing down. Power, Participation, and Pluralism in the Social Appraisal of Technology », *Science, Technology and Human Values*, Vol. 22, Number 2, March 2008, 262-294.

4) Democratizing expertise in the 2000s

- **The participation paradigm called into question**
- -instrumentalization of the public sphere: Erik Conway and Naomi Oreskes publish *Merchants of doubts. How a handful of scientists Obscured the Truth on issues from Tobacco smoke to global warming* (2012)
- Conway and Oreskes showed that false experts are even employed by companies to produce these "doubts", to "create uncertainty".
- The study of ignorance: Robert Proctor, *Agnotology. The Making and Unmaking of Ignorance* (Stanford University Press, 2008)

4) Democratizing expertise in the 2000s

- **The participation paradigm called into question**
- -among scientists, movement to restore a distance:
- Some scientists are mobilizing between 2005 and 2010 to alert the public authorities **against the precautionary principle** which risks paralyzing research.
- (Royal Society, Academy of Science)
- H.M. Collins and R. Evans, “The Third wave of science studies: studies of expertise and experience”, *Social Studies of Science*, vol. 32, n°2, p. 235-296.



Harry Collins and Robert Evans,
Rethinking expertise (Chicago, 2007)

5) The Globalization of expertise

- The last feature to point out is the transnational dimension of expertise.
- Obviously, this internationalization has long history but it became prominent in science studies in the last two decades
- State expertise has been completely supplanted by international expertise.
- In 1992, Jasanoff had emphasized "national regulatory styles" which also corresponded to a history of the state.
 - S. Jasanoff, "Science, politics and the renegotiation of expertise at EPA", *Osiris*, n°7, 1992, p. 195-217.
- Jasanoff proposes the notion of "civic epistemology" to designate "the form considered as legitimate for the public use of reason and knowledge in a given national space".

5) The globalization of expertise

- Since 19th, there is obviously a slow internationalization of expertise
- This change of scale makes it possible to study the production of international standards.
- a change of scale made relevant by the weight of international organisations.
- emphasises the circulation of practices, experts and standards, the dispossession of national expertise cultures, a "government of standards" (Dominique Pestre).

5) The globalization of expertise

- The emergence around certain issues (climate, epidemics) of the notion of "global good" if not "global commons".
- **Paul Edwards** on climate and **Donald MacKenzie** on mathematical models show the growing importance of simulation models and the construction of simplified indicators.
- D. MacKenzie, "Making things the same: gases, emission rights and the politics of carbon markets", *Accounting Organizations and Society*, n°34, 2009, p. 440-455.
- Paul Edwards, *A Vast Machine. Computer Models, Climate Data; and the Politics of Global Warming*, Cambridge, MIT Press, 2010.

6) Lessons from the COVID expertise

- **A-Biopolitics and medical expertise**
- The anthropologist Frédéric Keck in his book *Avian reservoirs. Virus hunters and Birdwatchers in Chinese sentinel posts* (Duke University Press, 2020) on the SARS crisis in 2003
- The first paradigm defended by microbiologists and ornithologists. Here it is the figure of the "virus hunter".
- The other paradigm is that of the health authorities which, on the contrary, eradicate sick birds to protect populations, favouring "techniques that can be described as pastoral".



avian reservoirs

VIRUS HUNTERS & BIRDWATCHERS
IN CHINESE SENTINEL POSTS

FREDERIC RECK

6) Lessons from the COVID expertise

- **B-Populism and epistemic modesty: renegotiating scientific authority?**
 - Lorraine Daston and Peter Galison, *Objectivity*, Cambridge, Zone Books, 2007.
- "scientific populism" emerged in the media, which was well analysed in the Italian context by the sociologists of science **Luigi Pellizzoni** and **Riccardo Chesta**.
 - L. Pellizzoni, "Uncertainty and participatory democracy", *Environment Values* 12 (2) 2003, 195-224.
 - H. Collins (eds.), *Experts and the Will of the People, Society, Populism and Science* (Palgrave, 2019)

6) Lessons from the COVID expertise

- **B-Populism and epistemic modesty: renegotiating scientific authority?**
- Eric Angner (University of Stockholm) in the *Behavioral scientist* (April 2020)
- "being a true expert, he writes, implies not only having scientific knowledge of the world but also knowing the limits of knowledge and expertise"

6) Lessons from the COVID expertise

- **C-Crisis of a predictive science**
- -a questioning of the anonymous **peer-reviewing** which would format the research; a crisis of the idea of experimental replication (example JOVE platform which uses video to improve the dissimulation of experiments),



Researcher

Morven A. Cameron, Western Sydney University



Educator

Edwin S Monuki, University of California, Irvine



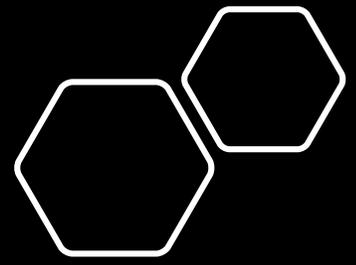
Author

Delphine Dean, Clemson University



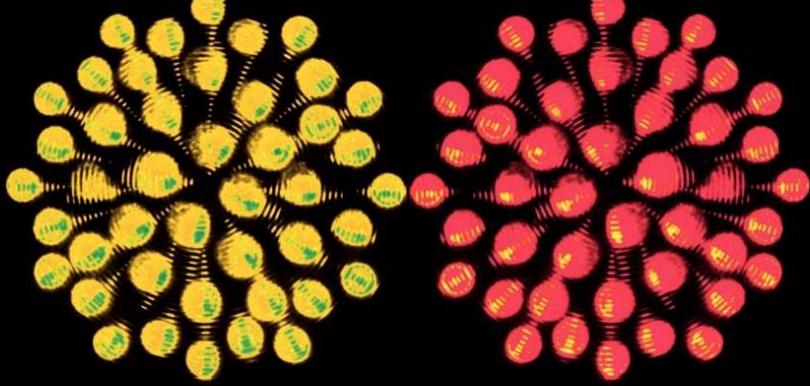
Librarian

Donna Gibson, Memorial Sloan Kettering Cancer Ce



6) Lessons from the COVID expertise

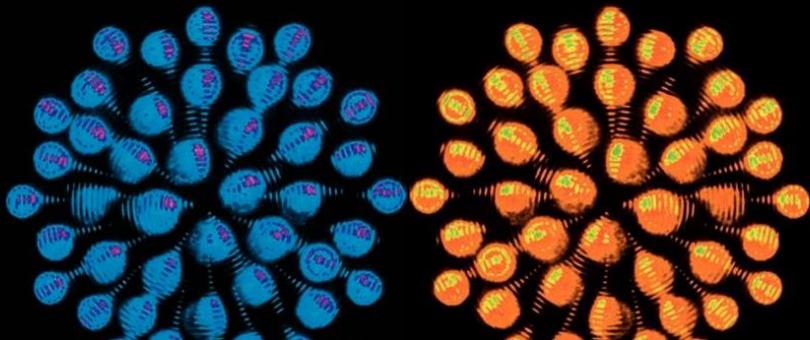
- **C-Crisis of a predictive science**
- -the economist **Juliette Rouchier's** research has dissected behind the apparent consensus and homogeneity a plurality of statistical models that do not lead to the same conclusions, and point to the dilemma between forecasting and explaining



Juliette **Rouchier** & Victorien **Barbet**

La **diffusion**
de la **Covid-19**
Que peuvent les modèles ?

Préface de Franck Varenne



6) Lessons from the COVID expertise

- **D-The limits of globalization**
- Another line of discussion focused on the limits of an internationalization of science, which was thought to be total, as the debate on the effectiveness of the WHO was remembered.
- This debate also revealed **the reversibility** of this globalization, its unfinished or fragile nature (no European policies in charge of health) which very quickly led to a renationalization, a relocation of expertise practices and the affirmation of national expertise cultures.

Conclusion

- The idea was to contrast **different regimes of expert knowledge** and to explore how science studies dealt with them.
- We can end by Naomi Oreske
- « In diversity there is Epistemic Strength » « Put another way : objectivity is likely to be maximized when there are recognized and robust avenues for criticism, such as peer review, when the community is open, non-defensive, and responsive to criticism, and when the community is sufficiently diverse that a broad range of views can be developed, heard, appropriately considered” (p. 53).
- (Tanner Lectures on Human Values at Princeton University, 2019)