

[1] Price, Don Krasher, *The scientific estate*, Harvard University Press, 1965, p. 201. As a general rule, Price may well be right. I am asking, however, where we are more likely to find cases in which politics will “dictate” to science, and where this may become a structural, rather than incidental, problem.

[2] Questions such as which findings are valid, which have been falsified, and where there still is debate, are not addressed in this essay.

[3] The term ‘political economy’ of science refers to an analysis of the factors of production of science, and their relations with other institutions, including specifically government, social conventions, culture, and law. Cf. Roger Bate, *The Political Economy of Climate Change Science*, Environmental Unit Briefing Paper No. 1, London : Institute of Economic Affairs, 2001. Verweij, M., Douglas, M., Ellis, R., Engel, C., Hendriks, F., Lohmann, S., Ney, S., Rayner, S., Thompson, M. *Clumsy Solutions for a Complex World: The Case of Climate Change*, *Public Administration*, 2006, Vol. 84, pp. 817-845.

[4] Robert K. Merton, *The Sociology Of Science: Theoretical and Empirical Investigations*, University of Chicago, 1973. Cf. Thomas Kuhn, *The Structure of Scientific Revolutions*. 2nd ed. Chicago: U of Chicago, 1970.

[5] The culture of science is defined as the beliefs, customs, and practices that govern science.

[6] Science is only one way of knowing, and it has a narrow scope of application. While, in the final analysis, science can claim a special status only if it reveals objective truth, it is not doable to verify whether a particular scientific study does so. It therefore is useful to use proxies for science’s veracity. Important proxies are the social norms of science, the cultural environment within which science is conducted, and the relation with politics and policy-making.

[7] H. Floris Cohen, *The Scientific Revolution: A Historiographical Inquiry*, University of Chicago Press, 1994.

[8] Robert J. Gordon, *The Demise of U.S. Economic Growth: Restatement, Rebuttal, and Reflections*, NBER Working Paper No. 19895, February 2014.

[9] A contrarian viewpoint has been expressed by George H. Daniels, 'The Pure-Science Ideal and Democratic Culture', *Science* 156 (1967), pp. 1699-1705 (“Utility is not to be a test of scientific work, but all knowledge will ultimately prove useful.”) Cf. Arie Rip, *LEGITIMATIONS OF SCIENCE IN A CHANGING WORLD*, in: *Wissenschaftssprache und Gesellschaft: Aspekte der wissenschaftlichen Kommunikation und des Wissenstransfers in der heutigen Zeit*, Hamburg: Edition Akademie, 1986, pp. 133 – 148.

[10] Contrary to conventional wisdom, it has been argued that even basic research is a private good that will be produced by industry. It currently does not happen due to the ‘crowding out’ effect of government funding. See Terence Kealey, *The Economic Laws of Scientific Research*, Palgrave Macmillan, 1996. Cf. Henry Sauermann, Paula E. Stephan, *Twins or Strangers? Differences and Similarities between Industrial and Academic Science*. NBER Working Paper No. 16113, Issued June 2010, NBER Program(s): LS PR.

[11] The term ‘social sciences’ as used in this essay includes the humanities.

[12] For a critique of this expectation, see Hayek, *The Counter-Revolution of Science* (1952), *The Free Press*, 1955. Cf. Karl Popper, *The Poverty of Historicism* (1957), Routledge, 2<sup>nd</sup> edition, 2002.

[13] See, for instance, LEE JUSSIM, JARRET T. CRAWFORD, STEPHANIE M. ANGLIN, AND SEAN T. STEVENS, *Ideological Bias in Social Psychological Research* (2015). For further discussion, see Joseph Schumpeter, *Science and Ideology*, in: DANIEL M. HAUSMAN (editor), *The Philosophy of Economics*:

An Anthology, Third Edition, Cambridge University Press, 2008, pp. 207-221.

[14] Scientists, as Feynman has pointed out, “don’t have any magic formula for solving social problems (...) social problems are very much harder than scientific ones, and we usually don’t get anywhere when we do think about them.” Richard P. Feynman, *The Value Of Science*, A public address given at the 1955 autumn meeting of the National Academy of Sciences.

[15] Richard P. Feynman, *The Uncertainty of Science* (1963), in: Richard P. Feynman, *The Meaning of It All: Thoughts of a Citizen Scientist*, Basic Books, 2005. “All other aspects and characteristics of science can be understood directly when we understand that observation is the ultimate and final judge of the truth of an idea.”

[16] As Merton has posited, for claims to be scientific claims, they must not depend on “the personal or social attributes of their protagonist; his race, nationality, religion, class, and personal qualities are as such irrelevant. Objectivity precludes particularism.” Robert K. Merton, *The Sociology Of Science: Theoretical and Empirical Investigations*, University of Chicago, 1973, p. 270.

[17] Post-modernists were heavily influenced by Marxism. Post-modern sociological theories of risk included neo-Marxist and critical theory. Christopher Butler, *Postmodernism: A very short introduction*. Oxford: Oxford University Press, 2002, p. 38. For a lengthy discussion, see Lucas Bergkamp, *The Intellectual Origins of Precautionary Risk Governance* (work in progress). Critical theories are “reflective,” and aimed at developing a new sort knowledge that will liberate people. Geuss, R. *The Idea of a Critical Theory*, Cambridge: Cambridge University Press, 1981.

[18] See, e.g., ASCN, *How social sciences can contribute to changing a society* (undated),.

[19] Emrys Westacott, *Cognitive Relativism*, *International Encyclopedia of Philosophy*, <http://www.iep.utm.edu/cog-rel/>

[20] Emrys Westacott, *Moral Relativism*, *International Encyclopedia of Philosophy*, <http://www.iep.utm.edu/moral-re/>

[21] Nancy Cartwright and Julian Reiss, *Social Science Needs to Benefit Society, and Now*, January 14, 2015, available at <http://www.socialsciencespace.com/2015/01/social-science-needs-to-benefit-society-and-now/> Michael A. Toman, *CONNECTING SCIENTIFIC RESEARCH AGENDAS TO SOCIAL NEEDS: SOME REFLECTIONS*, *Journal of Contemporary Water Research and Education*, 1998, pp. 4-8.

[22] Lee McIntyre. *Dark Ages: The Case for a Science of Human Behavior*. London: The MIT Press, 2006.

[23] Emile Durkheim. *Emile Durkheim: Selected Writings*. Cambridge University Press, 1972, p. 60.

[24] Henry Heller, *How US universities became IP-based capitalists*, October 20, 2016, available at <https://www.timeshighereducation.com/comment/how-us-universities-became-intellectual-property-based-capitalists>

[25] In 1942, Merton identified “four sets of institutional imperatives taken to comprise the ethos of modern science (...) universalism, communism, disinterestedness, and organized skepticism.” Robert K. Merton, *The Sociology Of Science: Theoretical and Empirical Investigations*, University of Chicago, 1973.

[26] Karl Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge* (Routledge Classics) 2nd Edition, 2002.

[27] “Real science depends for its progress on continual challenges to the current state of always-imperfect knowledge.” Daniel Sarewitz *The voice of science: let’s agree to disagree*, *Nature*, Vol. 478, 2011, p. 7.

[28] Bruce Macfarlane and Ming Cheng, *Communism, Universalism and Disinterestedness: Re-examining Contemporary Support among Academics for Merton’s Scientific Norms*, *Journal of Academic Ethics*, March 2008, Volume 6, Issue 1, pp 67–78.

[29] Shackley S, Wynne B (1996) Representing uncertainties in global climate change science and policy: boundaries-ordering devices and authority. *Sci Technol Hum Val* 21: 275–302.

[30] Cf. Marcel Kuntz, *The postmodern assault on science: If all truths are equal, who cares what science has to say?*, *EMBO Rep.* 2012 Oct; 13(10): 885–889.

[31] Cf. R.A. Pielke, *The Honest Broker: Making Sense of Science in Policy and Politics*, Cambridge, 2007.

[32] Gavin A. Schmidt, *What should climate scientists advocate for?*, *Bulletin of the Atomic Scientists* 2015, Vol. 71(1), pp. 70–74.

[33] Open Letter to Prime Minister Rutte and Vice Prime Minister Asscher (undated), available at [https://secure.avaaz.org/act/media.php?press\\_id=665](https://secure.avaaz.org/act/media.php?press_id=665)

[34] The petition sets forth a series of particular legal conclusions unsupported by argument and emphasizes the moral imperative of climate protection, which was not an issue in the decision faced by the Dutch government. Thus, the petition does not explain its legal relevance, if at all applicable; it makes a general argument about the importance of climate policies, which was not in dispute before the court. For instance, it states that the ‘court simply applied existing law’ without further clarification. It further suggests that ‘the Dutch government has an existing legal duty to go much further than it originally planned’, but the legal basis thereof is not specified. Likewise, the signatories request that the Dutch government ‘accept a judgment which is solidly based in existing law [and] jurisprudence’. Again, no analysis or argument is proffered for this conclusion. On the whole, none of the signatories are able to verify the veracity of the legal statements in the very petition they signed. Nevertheless, the media emphasized the strong academic credentials of the petitioners, and made explicit reference to Harvard University as one of the major academic institutions with which one of the petitioners is affiliated.

[35] The language barrier and the inevitable idiosyncrasies of any national legal system, which impede sound and coherent judgment and reflection, accentuate the problem. Insofar as the petition could be viewed as personal opinions, they were unfounded from a legal perspective for reasons discussed in the following publication: L. Bergkamp, J.C. Hanekamp, *Climate Change Litigation against States: The Perils of Court-Made Climate Policies*. *European Energy and Environmental Law Review*, October 2015, 102 – 114.

[36] The question the academic community faces is whether such petitions are in line with both current academic policies and standards of academic excellence, impartiality, and disinterestedness; the boundaries between desirable academic engagement and misleading academic activism are currently unclear.

[37] Bruce Macfarlane and Ming Cheng, *Communism, Universalism and Disinterestedness: Re-examining Contemporary Support among Academics for Merton’s Scientific Norms*, *Journal of Academic Ethics*, March 2008, Volume 6, Issue 1, pp 67–78.

[38] Activist science can positively harmful if it is false and misleads the policy-maker. Cf. *The Scientific Activist*, available at <http://scienceblogs.com/scientificactivist/> Scientist-versus-activist debates mislead the public, *Nature*, Vol. 506, 29 February 2014, p. 409. Jaleh Daie, *The Activist Scientist*, *Science*, Vol. 272,

Issue 5265, 1996, p. 1081. For an interesting case report on activist science, see The Risk-Monger, IUCN's Anti-Neonic Pesticide Taskforce: An exposé into activist science, December 2, 2014, available at <http://risk-monger.blogactiv.eu/2014/12/02/iucn%e2%80%99s-anti-neonic-pesticide-task-force-an-expose-into-activist-science/> Cf. Angela Logomasini, Activist Science Undermines Research on Honeybees and Pesticides, CEI, December 15, 2014, available at <https://cei.org/blog/activist-science-undermines-research-honeybees-and-pesticides>

[39] Climate scientists have organized in separate groups and associations, established their own departments or teams within academies, set up their own journals, organized their peer review processes, etc. As soon as they had successfully claimed their domain, including the related intellectual products, and started to gain the marked benefits, they successfully sought to enhance their size and standing. This kind of 'proselytization' arises 'naturally' (in a sociological sense), whenever specialists successfully professionalize. At the same time, such activism is never uncontested and often involves fierce political and social controversy. The battles over climate change offer prime examples of this dynamic. Roel Pieterman, Personal Communication, Aug. 15, 2016. Cf. William Darity, Professionalization, in: International Encyclopedia of the Social Sciences, Vol. 6., 2nd ed., Detroit: Macmillan Reference USA, 2008, pp. 515-517. Andrew Abbott, The System of Professions: An Essay on the Division of Expert Labor. Chicago: University of Chicago Press, 1988.

[40] For a discussion and critique, see Lucas Bergkamp, Adjudicating scientific disputes in climate science: the limits of judicial competence and the risks of taking sides, [2015] 3 ENV. LIABILITY, pp. 80-102.

[41] Examples are 'the science is settled,' 'we have no time for a meeting of the flat earth society,' 'skeptics are anti-science or fossil fuel lobbyist.' A more insidious device involves the term 'climate denier;' note that Holocaust denial is a crime in some countries.

[42] Michelle Stirling, Infiltration: The effect of condoning psychologically intimidating language in a climate science peer-reviewed journal. A Case Study, Friends of Science, 2015, available at <https://www.friendsofscience.org/assets/documents/Infiltration2015.pdf>

[43] For examples see WIKILEAKS: ThinkProgress Trashes A Climate Expert's Career To Appease A Hillary Donor, 20 Oct 2016, available at <http://dailycaller.com/2016/10/20/wikileaks-thinkprogress-trashes-a-climate-experts-career-to-appease-a-hillary-donor/> Matt Ridley, Global greening versus global warming, Wednesday, 19 October, 2016, available at <http://www.rationaloptimist.com/blog/global-greening-versus-global-warming/>

[44] Scientists Ask Obama To Prosecute Global Warming Skeptics, The Daily Caller, 17 Sep 2015, available at <http://dailycaller.com/2015/09/17/scientists-ask-obama-to-prosecute-global-warming-skeptics/> US Attorney General: We've 'Discussed' Prosecuting Climate Change Deniers, Breitbart, 10 March 2016, available at <http://www.breitbart.com/big-government/2016/03/10/us-attorney-general-we-may-prosecute-climate-change-deniers/> David B. Rivkin Jr. and Andrew M. Grossman, Punishing Climate-Change Skeptics, WSJ, Mar. 23, 2016. The Wikileaks emails showed also that political operatives organized political attacks on scientists who deviate from their position on climate science, so as to intimidate them, silence them, hurt their careers, undermine their credibility, etc. Elana Schor, Climate lessons from the Clinton campaign's hacked emails, Politico, 22 Oct 2016, available at <http://www.politico.com/story/2016/10/wikileaks-hillary-clinton-climate-230177>

[45] See Lucas Bergkamp, Adjudicating scientific disputes in climate science: the limits of judicial competence and the risks of taking sides, [2015] 3 ENV. LIABILITY, pp. 80-102.

[46] Naomi Oreskes, Erik M. Conway, The Collapse of Western Civilization: A View from the Future, Columbia University Press, 2014.

[47] Naomi Oreskes, Erik M Conway Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming (Bloomsbury Press 2010). This book argues that ‘merchants of doubt’ claim that there is no ‘scientific consensus’ on an issue, although there is one. See also [https://en.wikipedia.org/wiki/Fossil\\_fuels\\_lobby](https://en.wikipedia.org/wiki/Fossil_fuels_lobby) .

[48] Dr. James E. Hansen, for instance, heads the ‘Climate Science, Awareness and Solutions Program’ of the Earth Institute at Columbia University. See <http://www.columbia.edu/~jeh1/>

[49] There probably is a large ‘silent majority’ of climate scientists, who do not dare to speak out. This may be due to the justified fear that sanctions will be imposed on defectors. See Mat Ridley, Matt Ridley, Global greening versus global warming, Wednesday, 19 October, 2016, available at <http://www.rationaloptimist.com/blog/global-greening-versus-global-warming/>

[50] Lucas Bergkamp, Accountability for Climate Change Damages: Is Fossil Fuel Like Tobacco?, November 8, 2015, available at <https://judithcurry.com/2015/11/08/accountability-for-climate-change-damages-is-fossil-fuel-like-tobacco/>

[51] The Union of Concerned Scientists is one of the organizations that pushes partisan academic activism. While they severely criticized the Bush administration’s ‘distortion and suppression of climate change research,’ they have failed to adopt a similar critical attitude vis-à-vis the Obama administration’s unsupportable, unscientific claims about the relation between extreme weather events and climate change. Cf. Union of Concerned Scientists, Scientific Integrity in Policymaking: An Investigation into the Bush Administration’s Misuse of Science, March 2004.

[52] Robert K. Merton, The Sociology of Science: Theoretical and Empirical Investigations, University of Chicago, 1973, p. 277

[53] Ulrich Beck, Risk Society: Towards a New Modernity, Translated by Mark Ritter (Risikogesellschaft: Auf dem weg eine andere Modern. Frankfurt: Suhrkamp, 1986), London: Sage, 1992.

[54] Lucas Bergkamp, Understanding the Precautionary Principle, Parts I and II, Environmental Liability, 2002, pp. 18-30 and pp. 67-82.

[55] Exaggerated claims about the ‘power of science’ have begun to threaten its legitimacy; it has even been suggested that science can determine human values and all of morality can be founded on a scientific basis. Sam Harris, The Moral Landscape: How Science Can Determine Human Values, Free Press, 2011.

[56] Daniel Sarewitz, Saving Science, The New Atlantis, 2016, pp. 5-40. Daniel Sarewitz, How science makes environmental controversies worse, Environmental Science & Policy 7, 2004, pp. 385–403. Cf. Daniel Sarewitz, Constructive engagement is the key to climate action, Nature, vol. 529, 2016, p. 6.

[57] David Guston, Daniel Sarewitz, Michael Crow, and Robert Frodeman, Carl Mitcham, The Rightful Place of Science: Politics, Consortium for Science, Policy and Outcomes, 2013 (arguing that scientific research and technological change cannot be understood separately from their sociopolitical contexts).

[58] Lucas Bergkamp, Adjudicating scientific disputes in climate science: the limits of judicial competence and the risks of taking sides, [2015] 3 ENV. LIABILITY, pp. 80-102.

[59] Climate science is tasked with producing “the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change. (...) To be able to do science relevant to the UNFCCC and IPCC, the actual occurrence and magnitude of human climate influences are simply assumed to be detectable and quantifiable. This postulation has overestimated scientists’ potential, however, by way of a series of counterfactuals, it asks scientists to study what the

climate would be like without some or all of human influences, and compare it to the world with human influences. Logically, answers to such questions can be produced ad infinitum, but verification and/or falsification is beyond anyone's reach." Jaap C. Hanekamp and Lucas Bergkamp, The 'Best Available Science' and the Paris Agreement on Climate Change, EJRR, 2016, pp. 42-48.

[60] As a result, outdated technologies are not replaced. This presents an issue of risk/risk trade-off. Lucas Bergkamp, Understanding the Precautionary Principle, Parts I and II, Environmental Liability, 2002, pp. 18-30 and pp. 67-82.

[61] Cf. Bradley Campbell and Jason Manning, Microaggression and Moral Cultures, Comparative Sociology, Volume 13, Issue 6, 2014, pp. 692 – 726. B. Campbell and J. Manning, Microaggression and changing moral cultures, The Chronicle of Higher Education, July 9, 2015.

[62] Saul Cornell, Splitting The Difference: Textualism, Contextualism, and Post-Modern History, American Studies, Vol. 36, No. 1: Spring 1995, pp. 57-80.

[63] Joanna Kempner, Jon F. Merz, and Charles L. Bosk, Forbidden Knowledge: Public Controversy and the Production of Nonknowledge, Sociological Forum, Vol. 26, No. 3, September 2011 (arguing that the "social processes that create forbidden knowledge are embedded in the everyday practices of working scientists").

[64] For inexplicable reasons, intellectual diversity, which should be of utmost importance to academic institutions, is almost entirely disregarded in these discussions.

[65] An organization called "The College Fix" reports on these issues. See 'The College Fix,' <http://www.thecollegefix.com/> An exception to this trend is the University of Chicago. See Geoffrey R. Stone, Aims of Education Education Address, Sep. 24, 2016, available at <https://aims.uchicago.edu/page/1995-geoffrey-r-stone> According to Stone, "[t]oday, the principal challenge to academic freedom turns on issues of so-called political correctness. As in the past, these can be difficult issues. Does academic freedom protect the professor who teaches his students that homosexuality is a disease, that gays are depraved, and that they do not belong in a "civilized" university? Does it protect the student who runs for student council on a "Free Speech" platform and displays campaign posters on campus that incorporate Playboy or Hustler centerfolds to make his point? Does it protect the feminist student who defaces these posters as a form of "counter-speech"? Does it protect students who establish an organization on campus that aggressively espouses the view, both in and out of class, that blacks are genetically inferior?"

[66] Sustainable development has been laid down as a guiding principle in a wide range of international law documents.

[67] Matthew Robinson, What is Social Justice?, available at <http://gjs.appstate.edu/social-justice-and-human-rights/what-social-justice>

[68] Report of the Committee on Freedom of Expression at Yale (1974), available at <http://yalecollege.yale.edu/deans-office/policies-reports/report-committee-freedom-expression-yale>

[69] Robby Soave, Watch Leftist Students Say Science Is Racist and Should Be Abolished, Reason, Oct. 14, 2016, available at <http://reason.com/blog/2016/10/14/watch-leftist-students-say-science-is-ra>

[70] Jonathan Haidt, Why Universities Must Choose One Telos: Truth or Social Justice, Oct 21, 2016, available at <http://heterodoxacademy.org/2016/10/21/one-telos-truth-or-social-justice/>

- [71] Andrew Cohen, *The Most Powerful Dissent in American History*, Aug 10, 2013, available at <http://www.theatlantic.com/national/archive/2013/08/the-most-powerful-dissent-in-american-history/278503/>
- [72] Barry S. Levy and Jonathan A. Patz, *Climate Change, Human Rights, and Social Justice*, *Annals of Global Health*, Volume 81, Issue 3, May–June 2015, pp. 310–322.
- [73] Pope Francis, *Laudato Si*, June 2015.
- [74] Bethany Brookshire, *Blame bad incentives for bad science: How a ‘publish or perish’ attitude may be derailing the scientific enterprise*, *ScienceNews*, October 21, 2016, available at <https://www.sciencenews.org/blog/scicurious/blame-bad-incentives-bad-science>
- [75] Donald S. Kornfeld and Sandra L. Titus, *Stop ignoring misconduct*, *Nature*, vol. 537, 2016, pp. 29-30.
- [76] Cf. Marcoen J. T. F. Cabbolet, *Scientific Misconduct: Three Forms that Directly Harm Others as the Modus Operandi of Mill’s Tyranny of the Prevailing Opinion*, *Sci Eng Ethics*, 3 February 2013, DOI 10.1007/s11948-013-9433-8
- [77] Testimony of Dr. Peter Gleick, February 7, 2007 Senate Commerce, Science, and Transportation, Table 1 Categories of Deceitful Tactics and Abuse of the Scientific Process (source: P.H. Gleick, Pacific Institute, 2007).
- [78] Paul E. Smaldino and Richard McElreath, *The natural selection of bad science*, *The Royal Society Open Science*, 3:160384 Sep. 25, 2016. John P. A. Ioannidis, *Why Most Published Research Findings Are False*, *PLoS Med* 2(8):e124, 2005. Cf. Marc A. Edwards and Siddhartha Roy, *Academic Research in the 21st Century: Maintaining Scientific Integrity in a Climate of Perverse Incentives and Hypercompetition*. ENVIRONMENTAL ENGINEERING SCIENCE (forthcoming, 2016).
- [79] Bias is defined as any tendency which prevents unprejudiced consideration of a question. Christopher J. Pannucci and Edwin G. Wilkins, *Identifying and Avoiding Bias in Research*, *Plast Reconstr Surg*. 2010 August ; 126(2): 619–625.
- [80] For a discussion of bias in climate science, see Lucas Bergkamp, *Adjudicating scientific disputes in climate science: the limits of judicial competence and the risks of taking sides*, [2015] 3 ENV. LIABILITY, pp. 80-102. Jaap C. Hanekamp and Lucas Bergkamp, *The ‘Best Available Science’ and the Paris Agreement on Climate Change*, *EJRR*, 2016, pp. 42-48.
- [81] Benessia, A., Funtowicz, S., Giampietro, M., Guimarães Pereira, A., Ravetz, J., Saltelli, A., Strand, R., and van der Sluijs, J. P. 2016. *The Rightful Place of Science: Science on the Verge*. Tempe, AZ: Consortium for Science, Policy & Outcomes.
- [82] Peter Weingart, *Scientific Expertise and Political Accountability: Paradoxes of Science in Politics*, *Science and Public Policy* 26 (3), 1999, pp. 151–161.
- [83] Daniel Sarewitz, *Saving Science*, *The New Atlantis*, 2016, pp. 5-40. Daniel Sarewitz, *How science makes environmental controversies worse*, *Environmental Science & Policy* 7, 2004, pp. 385–403. Cf. Daniel Sarewitz, *Constructive engagement is the key to climate action*, *Nature*, vol. 529, 2016, p. 6.
- [84] The ‘capture’ of the scientific community (including the science-based policy advice community) by policy-makers, a relatively new phenomenon that is to be distinguished from traditional forms of regulatory capture by interest groups. Lucas Bergkamp, *The Paris Agreement on Climate Change: A Risk Regulation*

Perspective, EJRR, January 2016, pp. 35-41. Cf. G. Stigler, The theory of economic regulation, Bell J. Econ. Man. Sci. 1971, 2, pp. 3-21.

[85] A rejection of junk science, biased science and scientism, is not an anti-science, but a pro-science stance.

[86] As Hayek has observed: 'those intoxicated by the advance of knowledge so often become the enemies of freedom'. See F A Hayek The Constitution of Liberty (Routledge 1960).

[87] BETH BAKER, Politicizing Science: What is the role of biologists in a hyperpartisan world?, BioScience (March 2014) 64 (3): 171-177.

[88] Pigliucci, Massimo, Boudry, Maarten, Philosophy of Pseudoscience: Reconsidering the Demarcation Problem. Chicago: University of Chicago Press, 2013. Shermer, Michael, What Is Pseudoscience?: Distinguishing between science and pseudoscience is problematic, Scientific American, September 2011, 92, available at <https://www.scientificamerican.com/article/what-is-pseudoscience/>.

[89] Dan Agin, Junk Science: How Politicians, Corporations, and Other Hucksters Betray Us, Thomas Dunne Books, 2006.

[90] Robert L. Park, Voodoo Science: The Road From Foolishness To Fraud, Oxford University Press, 2003.

[91] "These are cases where there is no dishonesty involved, but where people are tricked into false results by the lack of understanding about what human beings can do to themselves in the way of being led astray by subjective effects, wishful thinking, or threshold interactions." Langmuir, Irving (transcribed and ed., Robert N. Hall). Pathological science. Physics Today 42 (Oct. 1989): 36-48.

[92] James Robert Brown, Smoke and Mirrors: How Science Reflects Reality (Philosophical Issues in Science), Routledge, 1994.

[93] Fox R C, Swazey J. The courage to fail. Chicago, University Press, 1974.