

### Summer Reading List 2018

Please see below the Summer Reading List 2018 for the MPhil in Technology Policy. The list is intended to be somewhat intimidating. One of the main goals of this year is to learn to process a huge amount of information quickly. There is no priority offered and books are simply listed alphabetically by title. We hope that at least two or three of these books might attract your interest and that you will read them before coming to Cambridge. If you can read more, then you will benefit even more from the programme. Several of the books listed are third party recommendations, for which we are most grateful. The list is not meant to be exhaustive, but rather to offer a taster of some of the issues that we will discuss over the course of the next year and reflect the diversity of the challenging topics that you will confront. We do not endorse every book but feel that even where we disagree, the arguments are important and worthy of consideration. Some are classics and others more recent offerings that address the latest technologies and controversies. I would also concede that there is an inevitable Cambridge/MIT bias although I do my best to also draw on lists from the Economist, FT and other recommendations from colleagues and alumni. The list includes some books that are science for policy or policy for science, others that are industrial policy or management of technology and still others take an even broader sweep through history and politics drawing on disciplines from psychology to economics. The authors include economists (e.g., Hirschman and Baumol), lawyers (Sunstein and Posner), historians (Darwin and Landes), journalists (Goldacre and Marsh), Cambridge colleagues (Taylor and Coates) and even a few scientists and engineers (MacKay and Rees) as well as some modern and ancient classics (Kuhn, Snow, Sun Tzu). There are some themes that emerge (crises, risks and decision making, understanding history and context, business-government relations, the interaction between science and society, technological foresight, the nature of economics and policy). As a rule they are well written (not necessarily the norm for technology policy and management books) and a few even provide some useful guidance on how to write (which will come in handy, since by the time you graduate you will submit coursework or reports totalling several tens of thousands of words).

We shall discuss the summer readings shortly after you arrive in Cambridge during one of our first meetings together in late September.

Michael Pollitt  
July 2018

Title	Author (s)	Publisher	Edition	ISB No.	Comments
<i>After Tamerlane: The Global History of Empire</i>	John Darwin	Penguin	2008	978-0-1410-1022-9	Rich, entertaining and deeply illuminating review of the broad sweep of empire since Tamerlane in 1400. A truly global (i.e., non-Eurocentric) approach to world history.
<i>After the Music Stopped: The Financial Crisis, the Response, and the Work Ahead</i>	Alan S. Blinder	Penguin	2013	978-1594205309	A brilliant academic economist and former Vice Chair of the Federal Reserve under Clinton (frequently at odds with Alan Greenspan), this book is notably fair and clear on the facts.
<i>The Art of War for Managers</i>	Sun Tzu & Gerald A Michaelson	Adams Media Corporation	2001	1-58062-459-6	Modern perspectives on Sun Tzu's classic military insights.

<i>Athena Unbound: The Advancement of Women in Science and Technology</i>	Henry Etzkowitz	Cambridge University Press	2000	978-0521787383	To quote an alum: 'especially good when it comes to describing the various cultural, sociological, and capital difficulties women face at various points of their career development, from childhood onward'.
<i>Bad Science</i>	Ben Goldacre	Harper Perennial	2009	978-0-0072-8487-0	An entertaining and sometimes damning review of current trends and fads in science and pseudo-science, especially how they are reported in the media. You can also follow his blog <a href="#">Bad Science</a> .
<i>Big Data: A Revolution That Will Transform How We Live, Work and Think</i>	Viktor Mayer-Schonberger and Kenneth Cukier	John Murray	2013	978-1848547926	It seems almost too early to be predicting what effect big data have on society, but this is an excellent effort. Also see <i>Delete...</i>
<i>The Big Switch: Rewiring the World, from Edison to Google</i>	Nicholas Carr	W.W. Norton & Co	2008	0-393-33394-9	A provocative and thoughtful book by the author of <i>Does IT Matter?</i> Here, Carr links the history of electrification to the growth of the internet.
<i>Blink</i>	Malcolm Gladwell	Little, Brown	2005	0-31617-232-4	By the author of <i>Tipping Point</i> – looks into the role of 'rapid cognition' or intuition when faced with complicated problems.
<i>Brainwashed: The Seductive Appeal of Mindless Neuroscience</i>	Sally Satel and Scott O. Lilienfeld	Basic Books	2013	978-0465018772	A welcome challenge to the newfound infatuation with neuroscience. The problem, as they see it, is not the science but dubious applications.
<i>Catastrophe: Risk And Response</i>	Richard Posner	Oxford University Press	2004	0-1951-7813-0	A remarkable and entertaining tour of a challenging issue written by the prolific judge and law professor.
<i>Code: and Other Laws of Cyberspace, Version 2.0</i>	Lawrence Lessig	Basic Books	2006	978-0465039142	By the foremost legal scholar on the subject. As you might expect from Lessig, you can download the full pdf file at: <a href="http://codev2.cc/">http://codev2.cc/</a>
<i>Consent of the Networked: The Worldwide Struggle for Internet Freedom</i>	Rebecca MacKinnon	Basic Books	2012	978-0465024421	Before the latest wave of controversies, MacKinnon tackles questions of what 'rights' we have in public and private spheres and how they are infringed. She is particularly good on China, and offers a refreshingly global take on these issues.
<i>The Death of Expertise: The Campaign Against Established Knowledge and Why It Matters</i>	Tom Nichols	Oxford University Press	2017	978-0190469412	Hardly the radical, Nichols teaches at the US Naval War College. Written largely before the Trump election, Nichols explores increasing public hostility to expertise and reliance on technology for answers (such as Wikipedia or WebMD).
<i>Delete: The Virtue of Forgetting in the Digital Age</i>	Viktor Mayer-Schonberger	Princeton University Press	2011	978-0691150369	This is an important book that helped shape EU policy on data protection.

<i>Doing Capitalism in the Innovation Economy: Markets, Speculation and the State</i>	William H Janeway	Cambridge University Press	2012	978-1107031258	In spite of (or perhaps because) Janeway is one of the leaders of the field of venture capitalism (longtime Warburg Pincus) this work extends far beyond VC and is a thoughtful historically- and economically-rich account by one of 'our' own.
<i>Economics: A Very Short Introduction</i>	Partha Dasgupta	Oxford University Press	2007	978-0192853455	Part of a great series from OUP. 'Short' does not mean 40 pages, nor does it mean that is some version of Econ 101. It is non-mathematical, but it does deal with how economics intersects with ethics, politics, etc.
<i>Economics for the Common Good</i>	Jean Tirole	Princeton University Press	2017	978-0691175164	Tirole, a Nobel laureate in economics, shows how economics can illuminate the choices confronting societies. Topics include role of the state, climate change, labour markets, competition policy, future of the EU, digital economy, and innovation.
<i>The Emergence of Entrepreneurship Policy</i>	D M Hart (Ed.)	Cambridge University Press	2003	0-521-82677-2	A review of national policies for economic growth from our former external examiner.
<i>The Entrepreneurial State: Debunking Public vs Private Sector Myths</i>	Mariana Mazzucato	Anthem Press	2013	978-0857282521	Drawing on examples from DARPA and the NIH, Mazzucato argues that state plays an essential role in supporting science-based innovation, which is inevitably longer-term.
<i>Endless Frontier: Vannevar Bush, Engineer of the American Century</i>	G. Pascal Zachary	MIT Press	1999	0-262-74022-2	Compelling biography on the most important figure in post-WWII American science policy.
<i>Exit, Voice and Loyalty</i>	Albert O. Hirschman	Harvard University Press	1970	0-674-27660-4	A classic on ethics issues at work with wide application. Reading anything by Albert Hirschman is time well spent.
<i>The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism</i>	William J. Baumol	Princeton University Press	2003	978-0-6910-9615-5	Unlike many other economists, Baumol, one of the leading economists of our time, places innovation at the core of understanding the success of markets and the drivers of growth.
<i>Freakonomics: A Rogue Economist Explores the Hidden Side of Everything</i>	Steven D. Levitt & Stephen J. Dubner	Penguin Books	2006	0-141-01901-8	Best-seller that applies statistical methods and economic reasoning to non-traditional policy problems. See also: <a href="http://freakonomics.com/">http://freakonomics.com/</a>
<i>Frugal Innovation: How to do More with Less</i>	Navi Radjou & Jaideep Prabhu	The Economist	2015	978-1781253755	Explains the principles, perspectives and techniques behind Frugal Innovation; co-authored by Jaideep, one of our core lecturers.
<i>The Future of the Internet: And How to Stop It</i>	Jonathan Zittrain	Yale University Press	2008	0-300-12487-2	An instant classic. As Hal Abelson of MIT argues in American Scientist: "This book is a must-read for any student of technology and policy".

<i>Geek Manifesto</i>	Mark Henderson	Bantam Books	2012	978-0593068236	A call for more evidence-based policy making, more science in policy and taking the knowledge economy seriously by the former Science Editor of The Times.
<i>Global Crises, Global Solutions</i>	Bjorn Lomborg	Cambridge University Press	2004	0-52-160614-4	Outcome of 2004 "Copenhagen Consensus". Eight economists ranked proposals for spending \$50 billion to address ten global problems.
<i>Glut: Mastering Information Through the Ages</i>	Alex Wright	Joseph Henry Press	2008	0-30-910238-3	Examines how humans have collected, organised and shared information long before the advent of modern communications.
<i>Globalization Paradox</i>	Dani Rodrik	Oxford University Press	2012	978-0199652525	Globalization brings benefits but also produces disruption leading to social tension, which is why, Rodrik argues, that the most open countries tend to have bigger government, better regulation, and the widest safety net. Read something by Rodrik.
<i>Guns, Germs and Steel</i>	Jared Diamond	Vintage	1997	0-09-930278-0	Technology and its role in dividing mankind. Apart from its insights, it offers a masterclass in how to convey complicated issues clearly.
<i>The Great Convergence: Asia, the West, and the Logic of One World</i>	Kishore Mahbubani	PublicAffairs	2013	978-1610390330	Mahbubani, a former Singaporean diplomat, writes of a 'new global civilization' offering convergence in values and standard of living, but which will require a shift in the global balance of power.
<i>The Great Stagnation: How America Ate All the Low-Hanging Fruit of Modern History, Got Sick and Will (Eventually) Feel Better</i>	Tyler Cowan	Dutton (ebook)	2011	978-1-101-50225-9	US economist who argues we are not innovative as we think we are. A controversial hypothesis, not always supported by the data, but a good challenge to a view of innovation as inevitable.
<i>Homo Deus: A Brief History of Tomorrow</i>	Yuval Noah Hariri	Vintage	2017	978-1784703936	From the author of <i>Sapiens: A Brief History of Humankind</i> . An attempt to depict an image of the future through description of mankind's current abilities and achievements.
<i>The Honest Broker: Making Sense of Science in Policy and Politics</i>	Roger Pielke Jr	Cambridge University Press	2007	0-521-69481-7	Critical analysis of interactions between science, scientists and policy that is useful for TP1 and beyond.
<i>The Hour Between Dog and Wolf: Risk-taking, Gut Feelings and the Biology of Boom and Bust</i>	John Coates	Fourth Estate	2012	978-0007413515	CJBS lecturer and ex-Wall Street trader shows how biology links to bubbles and crashes. Traders are risk-prone and testosterone-driven (literally!) in bull markets and risk-averse in bear markets.
<i>Inside the Black Box</i>	Nathan Rosenberg	Cambridge University Press	1995	0-521-27367-6	A serious and influential examination of the multi-faceted relationship between science, technology and economic growth.

<i>Infotopia: How Many Minds Produce Knowledge</i>	Cass Sunstein	Oxford University Press	2006	0-195-18928-0	To quote Lawrence Lessig: "This extraordinary work synthesizes the latest in how we know... map[s] more compellingly than any other book the promise and risk of the information society."
<i>The Innovators: How a Group of Hackers, Geniuses and Geeks Created the Digital Revolution</i>	Walter Isaacson	Simon & Schuster	2014	978-1471138799	From Ada Lovelace in Victorian times through Alan Turing and Steve Jobs, Isaacson offers a partial, but entertaining great-person view of the path that led to all things digital.
<i>Innovation and Its Enemies: Why People Resist New Technologies</i>	Calestous Juma	Oxford University Press	2016	978-0190467036	Impressive effort by Juma to link historical cases (coffee, printing press, margarine, recorded music, farm mechanization, transgenic crops & animals, electricity, mechanical refrigeration) to current debates over AI, gene editing, online learning, 3D printing, robotics, and drones.
<i>International Business and Government Relations in the 21st Century</i>	Robert Grosse	Cambridge University Press	2011	1107402883	As with any edited volume, sometimes quite patchy, but does have the virtue of covering US, Korea, China and the EU as well as human rights in Sudan.
<i>Knowledge &amp; Wealth of Nations: A Story of Economic Discovery</i>	David Warsh	W.W. Norton	2008	0-393-32988-7	An enjoyable history of economic thought from Adam Smith to Paul Romer.
<i>Laws of Fear: Beyond the Precautionary Principle (The Seeley Lectures)</i>	Cass Sunstein	Cambridge University Press	2005	0-52-161-512-7	A sceptical view of the precautionary principle by a leading US thinker on law and regulation who was a key figure in the Obama Administration.
<i>Limits of the Market: The Pendulum between Government and Market</i>	Paul de Grauwe	Oxford University Press	2017	978-0198784289	de Grauwe explains why neither pure market economy nor a purely government-controlled one is desirable. In practice, rather than balance, we lurch too far in one direction and then the other.
<i>The Machine That Changed the World</i>	James Womack, Daniel T Jones, & Daniel Roos	Harper Perennial	1991	0-06-097417-6	A classic – a readable and entertaining examination of Toyota's revolutionary introduction of 'lean production'.
<i>Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change</i>	Edmund Phelps	Princeton University Press	2013	978-0691158983	How to explain economic dynamism? Economics Nobel Laureate Phelps focuses on the role of the individual enterprise as the heart but worries about its fate with state and corporation placed ahead of the individual.
<i>Microeconomics: A Very Short Introduction</i>	Avinash Dixit	Oxford University Press	2014	978-0199689378	This small, clearly written book made the FT's list of best books of 2014 and is a useful introduction for those needing a primer on microeconomics.
<i>The New Industrial Revolution: Consumers, Globalization and the End of Mass Production</i>	Peter Marsh	Yale University Press	2012	978-0300117776	A lovely book by an FT journalist that takes a dive into the history of manufacturing and uses some illuminating technology-rich cases.

<i>Nudge: Improving Decisions About Health, Wealth and Happiness (also see Thaler's Misbehaving on behavioural economics)</i>	Richard H Thaler and Cass R Sunstein	Penguin	2009	0-1410-4001-7	"Nudge" became so fashionable so quickly in 2010, that a backlash was inevitable. Still, Nudge offers important insights into influencing decision-making, particularly as government powers are increasingly circumscribed in many countries.
<i>Open Source Intelligence in a Networked World</i>	Anthony Olcott	Continuum	2012	978-1441166081	As far back as 1998, the head of the US Defence Intelligence Agency argued that 90% of intelligence came from open sources. Olcott, a former open source officer, offers a rich history of how 'secrets' hide in plain sight.
<i>Our Final Century</i>	Martin Rees	Heinemann	2003	0-434-00809-5	The Astronomer Royal's pessimistic but thought-provoking futurology.
<i>Pasteur's Quadrant</i>	Donald E Stokes	Brookings Institution Press	1997	0-8157-8177-6	A book built around a single interesting idea. How can national laboratories do fundamental science and yet best serve the national interest?
<i>Policy Paradox: The Art of Political Decision Making, Revised Edition</i>	Deborah Stone	W W Norton, 3rd revised edition	2012	978-0393912722	A key text for TP1. Political decision making – presents generalisable considerations, although it is undeniably an American perspective.
<i>The fall and rise of nuclear power in Britain: a history</i>	Simon Taylor	UIT Cambridge	2016	978-0415431750	Few analysts would be better placed than our CJBS colleague Simon to examine how government decisions, corporate strategy and finance collided in the story of UK nuclear power.
<i>The Rational Optimist: How Prosperity Evolves</i>	Matt Ridley	Harper	2011	978-0007267125	Matt Ridley (Viscount Ridley) is nothing if not controversial. His views are less unusual in America (including both his libertarianism and his climate scepticism) but his belief in both technical and human progress is worth thought.
<i>Rescuing Prometheus</i>	Thomas P Hughes	Vintage Books	1998	0-679-73938-6	A real-world insight into engineering systems – four massive projects that changed the world.
<i>Rewire: Digital Cosmopolitanism in the Age of Connection</i>	Ethan Zuckerman	W.W. Norton & Co	2013	978-0393082838	Does technology lead us to be more cosmopolitan or narrower in perspective? Zuckerman describes why technology falls short when it comes to bringing people together and bridging cultures.
<i>The Rise of the Robots: Technology and the Threat of a Jobless Future</i>	Martin Ford	Basic Books	2015	978-0465059997	One can find such concerns dating back 50 years, but Ford is one of the better efforts. Good to pair with the <i>Second Machine Age</i> since it offers a far more sceptical view of the impact of technology.
<i>Science And Technology Policy in United States: Open Systems in Action</i>	Sylvia Kraemer	Rutgers University Press	2006	0-813538-27-0	A useful textbook on S&T policy in the US, which MIT use as a core text for their TPP intro class.
<i>Scientific Century: Securing our Future Prosperity</i>	Royal Society	Royal Society	2010	Available at: Royal Society	A stellar advisory board chaired by Sir Martin Taylor takes a hard look at the state of British science and engineering and the needs for the coming decades.

<i>The Second Century</i>	Matthias Holweg and F K Pil	MIT Press	2004	0-262-08332-9	The second century of the car. This book extends the research underpinning ' <i>Machine That Changed the World</i> '.
<i>The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies,</i>	Erik Brynjolfsson and Andrew McAfee	WW Norton	2014	978-0393239355	This is an optimistic view of how technology intersects with work or as Clayton Christensen claims, 'it truly helped me see the world of tomorrow through exponential rather than arithmetic lenses' (!?)
<i>The Shallows: How the Internet is Changing the Way We Think, Read and Remember</i>	Nicholas Carr	Atlantic Books	2011	978-1848872271	Extending his essay 'Does Google make us stupid?' Carr asks whether regular internet use impedes our ability to read books and concentrate.
<i>The Signal and the Noise: The Art and Science of Prediction</i>	Nate Silver	Allen Lane/ Penguin Press	2012	978-1846147524	The analytical 'hero' of the 2012 US election (and one of the few advocating caution in 2016!) offers a view of the role of experts and applied statistics.
<i>Smarter Than You Think: How Technology is Changing Our Minds for the Better</i>	Clive Thompson	William Collins	2013	978-0007427772	If <i>The Shallows</i> warns that the internet makes us dumber, Thompson claims the opposite, that technology makes us smarter and more creative.
<i>The Social Amplification of Risk</i>	Nick Pidgeon, Roger E. Kasperson, and Paul Slovic, eds.	Cambridge University Press	2003	0-521-52044-4	Builds on the classic 1988 study by Kasperson and offers a wide range of essays on risks and public perceptions.
<i>Something New Under the Sun</i>	Helen Gavaghan	Copernicus	1997	0-387-94914-3	The classic history of telecommunications satellites as strongly recommended by the Science Director of the European Space Agency.
<i>The Structure of Scientific Revolutions</i>	Thomas Kuhn	University of Chicago Press	1996	0-22-645808-3	A classic that posits science as being determined by social construction of facts using concepts such as "normal science" and "paradigm shifts".
<i>Sustainable Energy without the Hot Air</i>	David MacKay	UIT	2009 (plus later editions)	978-0954452933	Anyone with the slightest interest in energy (or simply in how to communicate technical issues) should read David's book. You can download his book (in your preferred language) from: <a href="http://www.withouthotair.com/">http://www.withouthotair.com/</a>
<i>Technologies of Freedom</i>	Ithiel de Sola Pool	Harvard University Press	1983	0-674-87233-9	Remarkable given it was written in the early 1980s, Pool describes freedom's relation to technology. It posits the need for a type of communications the internet later made possible.
<i>Technically Wrong: Sexist Apps, Biased Algorithms, and Other Threats of Toxic Tech</i>	Sara Wachter-Boettcher	W.W. Norton	2017	978-0393634631	Although drawing primarily on stories, anecdotes and case studies, it engages with critical questions of pervasive and sometimes subtle bias in tech.



<i>Thinking, Fast and Slow</i>	Daniel Kahneman	Farrar, Straus & Giroux	2011	978-1846140556	A master work summarising the many ways in which human biases and heuristics do not coincide with standard economic thinking, by the Nobel laureate and father of behavioural economics.
<i>Twitter and Tear Gas: The Power and Fragility of Networked Protest</i>	Zeynep Tufekci	Yale University Press	2018	978-0300234176	Tufekci covers the role of social media in Zapatista uprisings in Mexico, the Arab Spring, the Occupy Movement in New York, and her first-hand experience in Istanbul's Gezi Park.
<i>The Two Cultures</i>	C P Snow	Cambridge University Press	1996	0-521-45730-0	The title has almost become a cliché in modern science policy. Although inaccurate, even when written, the central theme is still sufficiently resonant to be cited today.
<i>Ubiquity</i>	Mark Buchanan	Phoenix	2000	0-75381-297-5	Why the natural world is not as complicated as it may appear with insights into critical states and knife-edge instabilities.
<i>The Unbound Prometheus: Technical Change and Industrial Development in Western Europe from 1750 to Present</i>	David S. Landes	Cambridge University Press, 2nd edition	2003	0-521-53402-X	Newer edition of a forty-year-old classic. Richly detailed study of the reverberations created by the Industrial Revolution with a particular focus on Europe.
<i>Undercover Economist</i>	Tim Harford	Little, Brown	2005	978-0-345-49401-6	Read anything by Tim Harford to begin to understand how economists view the world. He also has a regular column in the FT and a wonderful BBC Radio 4 show called More or Less.
<i>Unscientific America: How Scientific Illiteracy Threatens our Future</i>	Chris Mooney and Sheril Kirshenbaum	Basic Books	2010	0-465-01917X	An entertaining read that blames scientists, the public and the media for the decline in scientific literacy, but is more journalistic than rigorous.
<i>Where Good Ideas Come From: The Natural History of Innovation</i>	Steven Johnson	Allen Lane	2010	978-1846140518	From across a wide range of disciplines and sectors, Johnson tries to identify some principles that underpin the generation of great ideas.
<i>Who Can You Trust? How Technology Brought Us Together – And Why It Could Drive Us Apart</i>	Rachel Botsman	Penguin	2017	978-0241296172	Botsman makes a case for a new distributed approach to trust for the digital age. She traces this approach through the rise of enterprises such as Reddit and Kickstarter, as well as a host of technologies, including bots and blockchain.
<i>Why Nations Fail: The Origins of Power, Prosperity and Poverty</i>	Daron Acemoglu and James A. Robinson	Profile Books	2012	978-1846684296	Although there are many books along these lines, this is one of the best recent books that brings together economics and politics and in particular focuses on the role of institutions rather than climate, geography or culture.
<i>Writing on the Wall: Social Media – The First 2,000 Years</i>	Tom Standage	Bloomsbury	2013	978-1408842065	Social media before Facebook (and Friendster and Myspace)?! Standage shows how the diffuse networks of today echo the use of social media since Roman times and that they have long had the ability to shape society.