

MANCHESTER
1824

The University of Manchester

Policy Week 2015

2 – 6 November

**Science, Technology
and Public Policy**

Part of



#policyweek

“ Science and technology have freed humanity from many burdens and give us this new perspective and great power. This power can be used for the good of all. ”

– Jawaharlal Nehru, First Prime Minister of India



The majority of Policy Week events will take place at the Manchester Museum with various additional events taking place across the city centre. See pages 22-23 for our quick guide.

Policy Week: at a glance

Manchester Museum, Oxford Road, Manchester, M13 9PL
 10-12 July 2015
 10am-5pm daily
 www.policyweekmanchester.com

Manchester Lecture Theatre, Manchester Museum

Day	Time	Event	Location
Monday	10am-12pm	Registration	Manchester Museum
Monday	12pm-2pm	Registration	Manchester Museum
Monday	2pm-4pm	Registration	Manchester Museum
Monday	4pm-5pm	Registration	Manchester Museum
Tuesday	10am-12pm	Registration	Manchester Museum
Tuesday	12pm-2pm	Registration	Manchester Museum
Tuesday	2pm-4pm	Registration	Manchester Museum
Tuesday	4pm-5pm	Registration	Manchester Museum
Wednesday	10am-12pm	Registration	Manchester Museum
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Friday	10am-12pm	Registration	Manchester Museum
Friday	12pm-2pm	Registration	Manchester Museum
Friday	2pm-4pm	Registration	Manchester Museum
Friday	4pm-5pm	Registration	Manchester Museum

Welcome



Given that Manchester is a city of firsts – from Rutherford splitting the atom to Geim and Novoselov isolating graphene – it seems appropriate that we should have the honour of being the first UK city to host Europe’s foremost scientific meeting in 2016.

The EuroScience Open Forum (ESOF) next July will be the culmination of an 18 month celebration in our city to mark the accompanying status of being European City of Science – and I’m delighted that this year’s Manchester Policy Week will form a key part of those rich festivities.

The theme for ESOF – Science as a Revolution – means many things to Manchester. It captures the excitement of science itself and how new ideas are always coming up to turn over established ways of thinking.

Science also revolutionises the world we live in – we are constantly coming across new materials, new ways of understanding our own bodies and new approaches to the grand societal challenges relating to sustainability, energy, food and water resources. Science is driving revolutions all around us, every day.

All these changes, of course, bring with them significant implications and challenges for society and government; and it is this impact of science and technology, upon all areas of public policy, that Policy Week 2015 will probe.

I’m delighted that the former Minister for Universities and Science, David Willetts, will deliver the keynote address and open up discussions on how new technology is set to disrupt higher education as we currently know it.

Today Manchester is a living laboratory for new ways to co-deliver healthcare and social services; it’s appropriate, then, that patient empowerment through technology and the potential for Life Sciences companies to achieve global success will both be explored.

Years on from his very public sacking as a government drug advisor, Prof David Nutt is still an outspoken and controversial figure; his ‘in conversation’ event on speaking scientific truth unto power at the intimate Portico Library looks set to be one of the hot tickets. And for those keen to ensure their research influences government decisions and policy, the Government Office for Science will be staging a special ‘how to’ session.

Policy@manchester, the University’s pioneering policy engagement arm, continues to go from strength to strength, and it’s fantastic to see them securing big hitters like David Willetts and Professor David Nutt, but also Vicky Pryce, Will Hutton, Lucy Powell MP and Clare Moody MEP for an ambitious and varied programme – and one which includes many of our own academics.

And if all the debate and discussion becomes a little too heavy, there is the chance to sit back and be entertained and informed by the film programme – a fresh innovation for 2015, in which Alec Guinness takes centre stage.

Just like ESOF and the City of Science programme, Policy Week will bring excitement and the kind of challenges which others will want to share and contribute to.

In many ways, it will be a big party where people can come together to have fun, but at the same time they can go away carrying new ideas and having had their own ideas tested.

Book early to ensure you don’t miss the fun.

Prof Luke Georghiou

Co-champion of ESOF 2016 and Vice President for Research and Innovation, The University of Manchester.

Monday 2 November

The Pros and Cons of Fracking

10am – 11.15am
Kanaris Lecture Theatre, Manchester Museum

Extraction of natural gas by hydraulic fracturing is a contentious issue in the UK, exacerbated by a dense population relative to the USA where unconventional drilling is now well established. This panel-audience debate will explore the pros and cons of fracking in a UK context, including environmental concerns, energy and economic policy, energy security, geological and petroleum engineering practicalities, and local and regional impacts on the UK population. Representatives from industry and academia will comprise a panel of experts in each of these areas, who will pitch their views prior to an audience Q&A and panel cross-questioning. The session will begin and conclude with an interactive survey of the audience's views on various aspects of fracking and how these may have changed over the course of the debate.

Can Researchers Speak Truth Unto Power?

1.15pm – 2.45pm
Kanaris Lecture Theatre, Manchester Museum

Chair: Prof Francesca Gains

Panel: **Martin Stanley**, former senior civil servant in the Department for Business (now BIS), author and Honorary Fellow of The University of Manchester. **Dr Patrick Diamond**, Queen Mary's University London, former Head of Policy Planning in No 10 and Vice-Chair of the think tank Policy Network. **Dr Nick Turnbull**, The University of Manchester and **Prof David Richards**, The University of Manchester.

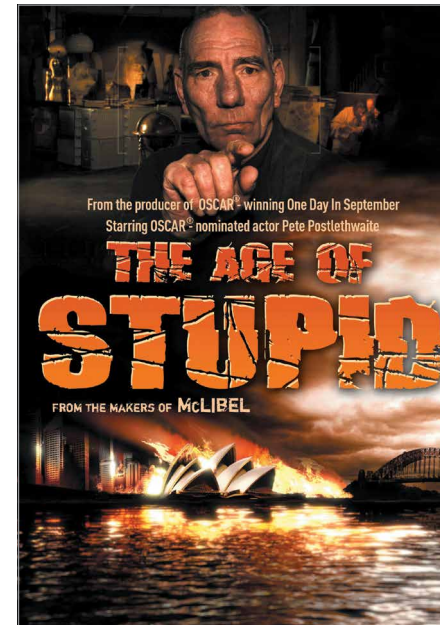
Academics are increasingly aware of the importance of generating impact from their research and of the need to communicate policy relevant research findings and influence policy makers. Officials are urged to act to enhance public value and deliver good governance. But navigating the politics of policy advice presents challenges when researchers and officials seek to speak 'truth unto power'. This session aims to surface the issues researchers, politicians and policy makers face when engaging in a dialogue about evidence which may be unpalatable, challenging or downright contentious.

Film: The Age of Stupid

(Running time: 89 minutes)

3.15pm – 4.45pm
Kanaris Lecture Theatre, Manchester Museum

The Age of Stupid stars Oscar-nominated Pete Postlethwaite as a man living in a devastated future world of 2055, looking back in time and asking why we didn't stop climate change when we had the chance. The film led to the formation of the 10:10 carbon reduction campaign which now operates in 45 countries (www.1010global.org). Its premiere in London famously saw guest and then Energy Secretary Ed Miliband grilled live on stage by a raging Postlethwaite, who threatened to never vote Labour again unless the Government changed its policy on coal-fired power stations. A month later, it did exactly that.



Climate Negotiations Simulation

4.00pm – 6.00pm
Lecture Theatre, Manchester Art Gallery,
Mosley Street, Manchester, M2 3JL

As world leaders prepare to gather in Paris, the Tyndall Centre for Climate Change Research will host a mock UN climate negotiation in Manchester with input from expert speakers including **Prof Alice Bows-Larkin**, Director of Tyndall Manchester. This event is an opportunity for you to discuss the issues at stake for each country, and learn about trends in climate, energy and greenhouse gas emissions.

The World Climate Exercise was developed by Climate Interactive and MIT. Thousands of people have participated in these events around the world, from primary school classes to major business CEOs. It is regularly used in The University of Manchester's teaching.

Underlying negotiations, of where and when emissions will be cut, is a robust climate model, so delegates will have real time results on the likely consequences.



Disruptive influence: How Will Emerging Technology Impact Higher Education?

Monday 2 November, 7.30pm – 8.30pm (Drinks Reception from 7.00pm)
University Place Lecture Theatre A, The University of Manchester

Whether it's the explosion of Massive Online Open Courses (MOOCs) or the development of mobile learning tools, technology is set to have a huge impact on higher education in this country.

For this keynote address, we are delighted to welcome **David Willetts**, the former Minister for Universities and Science, who will give his perspective on the potential impact of technology on higher learning.

Is it really going to disrupt the sector in the way many experts are predicting? If so, what are the long term implications for our universities? What significant changes, opportunities and challenges will it bring?

David Willetts is Executive Chairman of the Resolution Foundation and a visiting professor at King's College London. He is Governor of the Ditchley Foundation and a member of the Council of the Institute for Fiscal Studies. David was the Minister for Universities and Science from 2010-2014 and Member of Parliament for Havant from 1992-2015.

David has worked at HM Treasury and the Number 10 Policy Unit. He also served as Paymaster General in the last Conservative Government. David has written widely on economic and social policy and his most recent book *The Pinch* was published in 2010.

Tuesday 3 November

How Much Evidence is 'Enough' Prior to Policy Implementation?

8.30am – 9.45am (Breakfast included)
Kanaris Lecture Theatre, Manchester Museum

Chair: Dr Kieron Flanagan

Speakers: Dr Julian Simpson, Charles Jarvis, Dr Kathryn Oliver.

The New Researchers Network (NRN) are delighted to host this breakfast event discussing what 'good enough' evidence looks like in policy-making.

- Are there areas where we don't require as rigorous evidence as others?
- How is the balance struck between 'ideal evidence' and pragmatic decision-making?

We are keen to strike up as much audience debate as possible and provide you with an interesting start to your day. (Think Radio 4's *The Philosopher's Arms*).

Time to Use Technology for a Better Picture of People's Exposure to Pollutants?

10.15am – 11.45am
Kanaris Lecture Theatre, Manchester Museum

Speakers: Prof David Polya, School of Earth, Atmospheric and Environmental Sciences, The University of Manchester, Dr Ovnair Sepai, Public Health England.

We are all exposed to harmful chemicals (eg arsenic, lead, fluoride, pesticides, and isocyanates) but public health advice is hamstrung by a lack of large studies on actual exposures and health risks. Internet-based technologies provide an opportunity to tackle this problem through large-scale bio monitoring surveys.

We want to explore public reaction to the possibility of a large scale beneficial public participatory science project. What are the benefits? What are the ethical issues? Are there concerns over the use of personal data?

Those attending will receive an insight into: how regulation of chemicals in the environment comes about, where there are still uncertainties in the science underpinning environmental regulation, and how public participation and guidance may help improve public health advice and protection in the future.

Film: Disruption

(Running time: 52 minutes)

12pm – 1.00pm

Kanaris Lecture Theatre, Manchester Museum

Through a relentless investigation to find the answer, Disruption takes an unflinching look at the devastating consequences of inaction when it comes to climate change.

The exploration lays bare the terrifying science, the shattered political process, the unrelenting industry special interests and the civic stasis that have brought us to this social, moral and ecological crossroads. The film also takes us behind-the-scenes of the efforts to organise the largest climate rally in the history of the planet during the UN world climate summit. The film enlarges the issue beyond climate impacts and makes a call for bold action that is strong enough to tip the balance to build a clean energy future.



Powering the Northern Powerhouse

1.15pm – 2.45pm

Kanaris Lecture Theatre, Manchester Museum

Chair: Teresa Chilton, Project Manager for Manchester Energy and is a specialist in science communication, stakeholder engagement and outreach.

Speakers: Vicky Pryce, former Director General for Economics at the UK Department for Business, Innovation and Skills (BIS) and was Joint Head of the UK Government Economics Service, **Clare Moody MEP**, sits on the European Parliament's Industry, Research and Energy Committee, **Sarah Davies**, Head of Strategy and Programmes for the Greater Manchester Environment Team, **Ian Jackson**, Strategic Business Development, National Nuclear Laboratory, **Dr Chris Peters**, Scientific Liaison, Sense About Science, **Prof Melissa Denecke**, Scientific Director at The University of Manchester's Dalton Nuclear Institute, **Prof Peter Crossley**, Director of the Centre for Doctoral Training in Power Networks at The University of Manchester and member of the Greater Manchester Energy Group

The Government wants to create a Northern Powerhouse to better balance the UK economy. Proposals call for investment in transport, science and innovation, plus devolution of civic powers. This event asks the question: what if energy policy was also devolved – how would we develop a strategy that could power the Northern Powerhouse? A range of proposals made by a University think-tank, involving both academics and students, will be revealed and then debated live by our panel of experts, drawn from the worlds of politics and economics, policy and strategy, science and energy-related research. From this analysis delegates will vote for their preferred option.

Hot in the City: Urban Resilience and Cooling

3.15pm – 4.45pm

Kanaris Lecture Theatre, Manchester Museum

Chair: Dr Sarah Mander, Tyndall Manchester, The University of Manchester.

Panel: Dr Rita Shaw, Electricity North West Ltd, **Dr Claire Smith**, University of Leicester, **Dr Jeremy Carter**, Centre for Urban Resilience and Energy, The University of Manchester, **Dr Vladimir Jankovic**, Centre for History of Science, Technology and Medicine, The University of Manchester.

Heatwaves cause great discomfort to many in cities around the world and are likely to increase with climate change. Unfortunately, one of our main responses, air conditioning, is expensive and may cause significant stress to the electric grid.

This event brings together leading experts to discuss our understanding of increased temperatures in urban environments in an interactive format. There will be a particular focus on Manchester. It will be of interest to public and private sector building managers, property developers, those with responsibility for groups vulnerable to heatwaves (eg the elderly), electricity system stakeholders affected by cooling loads, and policy makers with an interest in addressing the above.

As Policy Week takes place in November, a time of the year when the discomfort of sweltering city temperatures is far from people's minds, a short film will be shown to set the scene.

Using digital technology to assess quality in the arts

11am – 2pm

Venue TBC

Speakers: Dr Kostas Arvanitis, Senior Lecturer in Museology, The University of Manchester, **Dr Hasan Bakhshi**, Director Creative Economy in Policy & Research, NESTA,

Dr Francesco Chiaravalloti, Assistant Professor of Cultural Policy, University of Amsterdam, **Cimeon Ellerton**, Head of Programmes, Audience Agency, **Dr Abigail Gilmore**, Senior Lecturer in Arts Management, & Cultural Policy, The University of Manchester, **Alison Clark-Jenkins**, Director, Combined Arts and North, Arts Council England, **Dr John Knell**, Director, Intelligence Agency, **Dr Nick Merriman**, Director, The Manchester Museum.

How do people judge the quality of the arts? What measures do arts organisations use to improve their performance? And how do policy makers and funders know they are investing in quality arts and cultural experiences? How can digital technologies help?

These will be the central questions in this event, which will draw on the research findings of the Culture Metrics project.

Funded by the Digital R&D Fund for the Arts (ACE, AHRC and NESTA), the project has been testing the value of a co-produced metric set and system of opinion-based data collection, bringing together large-scale data on how cultural organisations, their peers and the public assess the quality of work through the Culture Counts digital platform.

Participants will have the opportunity to use the Culture Metrics system to evaluate an exhibition in HOME and then discuss:

- cultural policy implications of performance measurement and audience research via digital platforms;
- methodological implications of aggregating and integrating data in cultural organisation structures and processes; and
- current policy and practice context for data visualisation of audience research.

The Manchester Experience: Science, Technology and Engineering Education Enrichment in Greater Manchester

12pm – 5.00pm

Museum of Science and Industry (MSI),
Liverpool Road, Manchester, M3 4FP

Speakers: Prof Danielle George, The University of Manchester, Colin Brown/Peter Finegold, the Institute of Mechanical Engineering, Dr Rhys Morgan, the Royal Academy of Engineering, Sally MacDonald/Natalie Ireland, MSI, Prof John Perkins, formerly Scientific Adviser to the Department for Business, Innovation and Skills (BIS), Paul Pritchard, Comino Foundation Trustee and Marie Garside, former Head Teacher of St Ambrose Barlow RC High School.

With representatives from: St Ambrose Barlow Expansive Education Network Schools, The Derby High School, Falinge Park High School, Abraham Moss Community School, Christ the King Primary School, Salford and Temple Primary School and Cheetham Hill School.

This session will bring together large and small organisations who provide science and engineering outreach and engagement opportunities, to talk with primary and secondary teachers and their pupils. It provides a vivid chance to hear about practice and aspirations for the future, from which we can drive strategy both individually and collectively to make a difference.

The key focus will be: what's the point in science and engineering outreach and engagement, where is it leading us, and can its effectiveness be maximised?

This consultation is of key relevance to Greater Manchester as it grows into the Northern Powerhouse; it will need to tackle head on the issue of the throughput of qualified scientists and engineers, especially girls, emerging from our education system.

The Future of Science and Innovation Policy

1.00pm – 3.00pm

Venue: TBC

Speakers: Prof Graeme Reid of UCL and CASE (and formerly of BIS) and Naomi Weir, Director of CASE.

Jointly hosted with the Campaign for Science and Engineering (CASE), this event will explore the future of science and innovation policy as the Spending Review nears its conclusion. The panel will consider the impact of active industrial policy and devolution, as well as how decisions might be taken on the locations of 'big science' facilities in this parliament.

The Inaugural Sammy Finer Lecture on Government with Will Hutton

7pm – 8.30pm

Location: TBC

This year is the centenary of the birth of Sammy Finer, an influential and key figure in developing and shaping new fields of interests in political science and history. He served as the Head of the Government Department at The University of Manchester from 1966 -1974.



The inaugural annual Lecture of Government in his honour will be delivered by Will Hutton, current Principal of Hertford College Oxford and political economist, columnist and former editor-in-chief for the Observer.



Wednesday 4 November

Digital Boom or Tech Time Bomb? The Impact of New Technology on Northern lives

10.15am – 11.45am

Kanaris Lecture Theatre, Manchester Museum

Chair: Ed Cox, IPPR North

Speakers: Claire Braithwaite, Tech North, Tom Forth, ODI Leeds, Carys Roberts, IPPR

Is a 'digital economy' in the North a reality on the horizon, or will the digital boom bypass most people living and working here? Could the changing shape of the economy and advance of new technology be concentrated in the hands of a skilled few individuals and corporations, or will people share in the increased connectivity and prosperity offered by tech developments?

This debate will explore the role digital plays in the future Northern economy, and the threats and opportunities posed by the changing technological landscape and how this plays out in people's social and working lives.

Hearing from leading experts, including government officials, on how the future of digital will shape the lives and future of work for people living and working in the North, this event will provide an intriguing insight into the prospects facing current and future generations faced with a changing landscape.

It will prompt intense discussion about how we respond, if at all, to the changing nature of a global, more technologically driven economy and society. This issue will affect all people's lives and have profound impact on public policy. This discussion will kick start some of the important talking points that need to be addressed.

Film: FrackNation

(Running time: 77 minutes)

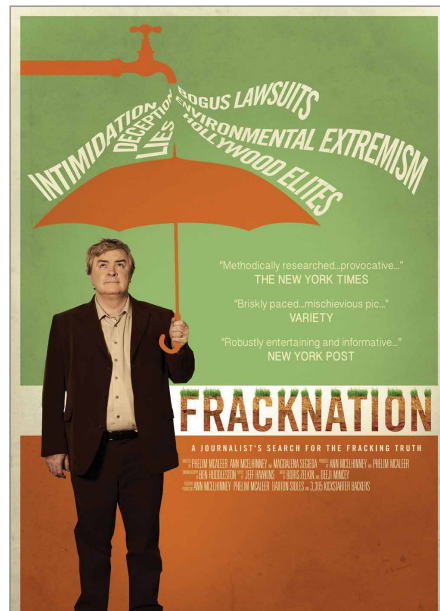
1.15pm – 2.45pm

Kanaris Lecture Theatre, Manchester Museum

The anti-fracking movement in the UK is gathering pace. But FrackNation turns the tables on the campaigners and takes aim at what the filmmakers say is misinformation about the dangers inherent in the process of hydraulic fracturing.

Investigative journalist Phelim McAleer takes a look at the process of fracking for natural gas and questions concerns and alleged dangers surrounding the process that were highlighted in the fracking-critical film *Gasland* by Josh Fox.

This controversial Kickstarter-funded documentary interviews individuals directly affected by fracking – and memorably sees McAleer door-stepping Fox at a film screening, in a terse and highly-charged exchange.



What is Citizen Social Science, and How Can it Help Make Policy?

3.15pm – 4.45pm

Kanaris Lecture Theatre, Manchester Museum

Speakers: Colin Barson, Parish Development Officer, Church of England/Greater Manchester Poverty Action Group, **Dr Sheena Cruickshank**, Senior Lecturer, Faculty of Life Sciences, The University of Manchester, **Alison Peacock**, Mission Planning Officer, Church of England/Greater Manchester Poverty Action Group, **Dr Kingsley Purdam**, Director of Academic Staff Training, School of Social Sciences, The University of Manchester, **James Marshall**, Research and Consultation Manager, Southampton City Council, **Liz Richardson**, Senior Lecturer in Politics, The University of Manchester, **Dr Matt Ryan**, Lecturer, Centre for Citizenship, Globalisation and Governance, University of Southampton, **Dan Silver**, Director, Social Action Research Foundation (SARF), **Paulette Singer**, Community Organiser, Clitterhouse Farm Trust, London, Luisa Vallejo, Community Organiser, Clitterhouse Farm Trust, London.

Citizen social science is research by lay people that also helps tackle complex policy challenges. This intense and interactive session asks what is citizen social science? How does it work in practice? Is it good research? What difference can it make? Do ordinary people want to be social scientists?

Come and hear about six cutting edge examples of citizen social science in action. A local council explains how it is 'crowdsourcing' research on effective behaviour change. There is co-designed research to support the most marginalised groups. Learn how innovative visual techniques can inform how to improve everyday life for citizens. See how research can generate community action and hear about a new national project to use technology to track pollution and allergies.

It will appeal to policymakers, policy influencers, lobbyists and others connected with how decisions get made and members of the public interested in science, organisations interested in using citizen social science for them and academics interested in participatory research.

Rethinking UK Research Funding

8.00am – 4.00pm

Zochonis Building, The University of Manchester, Brunswick Street, Manchester, M13 9PT

Speakers: Prof Adisa Azapagic, The University of Manchester, Dr Iain Cameron, Head of Research Careers and Diversity, Research Councils UK, Andrew Miller, Former MP and Chair of the House of Commons Science and Technology Select Committee, Dr Peter Simpson, Director of the N8 Partnership, former Director of Discovery Science at AstraZeneca

The meeting will assemble key stakeholders to explore the consequences of short-term research funding and consider alternative models.

Participants will have the opportunity to engage in discussion with expert contributors. The meeting will provide a forum for serious discussion and lateral thinking about the way research is funded in the UK, with the potential to feed into broader policy decision making processes. Participants with novel ideas about how to improve funding models or with suggestions on alternative ways of doing things are particularly encouraged to attend.

The event will be of interest to researchers working in higher education and their collaborators in other sectors, individuals with an interest in research reproducibility and ethics, and those involved in allocation and administration of research funding.

In association with the University and College Union.

Synthetic Biology: Reshaping the Future?

1.00pm – 4.00pm

Manchester Research Centre for Synthetic Biology, Manchester Institute of Biotechnology, The University of Manchester, 131 Princess Street, M1 7DN.

Speakers: Prof Eriko Takano, Manchester Institute of Biology, The University of Manchester, Asa Calow, Director, MadLab, Manchester, Prof Phil Macnaghten, Wageningen University, Netherlands, Dr Sarah Hartley, University of Nottingham, Prof Philip Shapira, Manchester Institute of Innovation Research, The University of Manchester, Dr Sally Randles, Manchester Institute of Innovation Research, The University of Manchester, Dr Sarah Chan, Usher Institute, University of Edinburgh

Synthetic biology involves redesigning biological systems found in the natural world or making new ones from scratch. Benefits expected from synthetic biology including low carbon plastics, new biofuels, and rapid vaccine development. But these ground-breaking prospects are accompanied by ethical, risk, and equity policy concerns. Are we prepared for a world where synthetic biology can reshape our lives, economies, and environment?

The workshop will address what synthetic biology is, and then asks how can this fast emerging technology be responsibly developed?



Notes on a Drugs Scandal

Professor David Nutt in conversation with Victoria Gill

Wednesday 4 November, 6.30pm – 8.00pm

The Portico Library, 57 Mosley Street, Manchester, M2 3HY

Professor David Nutt was chief drug adviser to Gordon Brown's Labour government until he was publicly sacked in 2009. He has repeatedly clashed with politicians over what he sees as their use and misuse of scientific evidence in policymaking.

At this special event, Prof Nutt will discuss with BBC News science reporter Victoria Gill the realities and unique challenges involved in advising government and 'speaking truth unto power'.

David Nutt is currently the Edmund J Safra Professor of Neuropsychopharmacology and Head of the Centre for Neuropsychopharmacology in the Division of Brain Science, Department of Medicine, Hammersmith Hospital, Imperial College London. He is also visiting professor at the Open University in the UK and Maastricht University in the Netherlands.

He is currently President of the European Brain Council and Chair of the Independent Scientific Committee on Drugs (ISCD) and Past-President of the British Neuroscience Association. He is a Fellow of the Royal Colleges of Physicians, of Psychiatrists and of the Academy of Medical Sciences. He is also the UK Director of the European Certificate and Masters in Affective Disorders Courses and a member of the International Centre for Science in Drug Policy. He has published over 400 original research papers, eight government reports on drugs and 27 books including: *Drugs – Without the Hot Air*, which won the Transmission book prize in 2014.

He broadcasts widely to the general public both on radio and television.

Victoria Gill is a multimedia science reporter for BBC News – writing, producing, filming and presenting reports for the BBC News website, as well as for radio and television bulletins.

Thursday 5 November

Technology and Healthcare; Empowering the Patient and influencing policy

8.30am – 9.45am (Breakfast included)
Kanaris Lecture Theatre, Manchester Museum

Speakers: **John Ainsworth**, Deputy Director, Centre for Health Informatics, The University of Manchester, **Dr Amir Hannan**, GP Partner, Haughton Thornley Medical Centres, Hyde; Tameside & Glossop CCG Board Member (lead for Information Management & Technology, Patient Engagement / Empowerment), **Dr Anne Talbot**, GP/Clinical Director, Bolton Community Practice CIC & Associate Medical Director, NHS England Greater Manchester

Technology is changing the way we access healthcare and manage our health, as well as influencing local and national delivery of health services.

From patients accessing their records, to personalised mobile and e-health platforms providing real time support and data capture, to the wide ranging vision of using technology to radically improve our experience of interacting with the NHS; this is both an exciting and potentially ground breaking opportunity to deliver better health outcomes.

What does this mean for the individual patient, carer, and clinician?

How can this technological disruption help shape public health policy and create the environment needed to deliver connected health and social care solutions?

Organised by Manchester Informatics, The University of Manchester's cross-cutting digital research institute and the Greater Manchester Connected Health Ecosystem.

Is That a Big Number? and Does It Matter?

1.15pm – 2.45pm
Kanaris Lecture Theatre, Manchester Museum

Chair: **Dr Jackie Carter**

Panel: **Hetan Shah**, Executive Director, Royal Statistical Society, **Megan Lucero**, Data Journalism Editor, The Times / Sunday Times, **Julian Cox**, Deputy Director of Research, New Economy, **Victoria Smith**, Q-Step Intern on placement at the Home Office

The need to critically evaluate data and numbers is crucial in policy contexts. The British Academy's 'Count Us In' report, launched in June, calls for "a transformation in the UK's approach to building numeracy, statistics and data analysis skills to ensure that, within a generation, the UK rises to the challenge of becoming a fully data-literate nation."

This panel session, which will be relevant to practitioners, academics, students, policy makers and members of the public, showcases how The University of Manchester trains students to become data savvy graduates through internships.

We will provide an overview of the Q-Step Centre and presentations will be delivered by speakers from the media, an economic think-tank and the Royal Statistical Society on their approaches to support statistical literacy. An undergraduate social science student will present on how their paid internship programme enabled them to crunch and interpret data in a policy-relevant research project.

Organised by The University of Manchester's Q-Step Centre.

Climate, Crises and Policy

3.15pm – 4.45pm
Kanaris Lecture Theatre, Manchester Museum

Speakers: **Dr Jason Lowe**, Met Office, **Dr Vladimir Jankovic**, Senior Lecturer, Centre for the History of Science, Technology and Medicine, The University of Manchester, **Dr Vanessa Castán Broto**, Senior Lecturer, Development Planning Unit, Faculty of the Built Environment, UCL, **Dr Jack Stilgoe**, Lecturer in Social Studies of Science, Department of Science and Technology Studies, UCL

Moderated by **Prof David Schultz**, Centre for Atmospheric Sciences, School of Earth, Atmospheric and Environmental Sciences, The University of Manchester

How does climate science inform decision-making and policy? This is the topic that we will explore in this panel discussion. How do we manage the environment (if not the climate) of cities to promote sustainable development and citizen welfare? How do we provide advice on climate to support decision-making and planning for individuals, government and the private sector? How do we motivate them to act? And to what extent and under what conditions should humans engineer the planet to reverse the negative impacts of climate change?

Physical Vulnerability and Frailty: Building Resilience in Older People

2pm – 4pm
Manchester Town Hall

There is a lot of interest at present among policymakers in understanding how to help older people to stay as fit, well and independent as possible for as long as possible – and older people say this matters a great deal to them too. This session will look at what makes older people vulnerable to physical issues and frailty in particular, with discussions on how to reduce risk and bolster people's own resilience, to enable them to live longer in the community, in good

health and with a good quality of life. Participation for this event is by invitation only and further information can be found by contacting micra@manchester.ac.uk.

Organised by Manchester Institute for Collaborative Research on Ageing with AGE UK.

On the Home Front: The Challenges of Reducing Household Energy Use

4pm – 9pm
Mechanics Institute, 103 Princess Street, Manchester, M1 6DD

Chair: **Fiona Harvey**, Environment Correspondent of The Guardian

Speakers: **Marianne Heaslip** (Manchester-based architect), **Dr Mari Martiskainen**, Centre on Innovation and Energy Demand, **Councillor Kate Chappell**, **Juliet Davenport**, CEO Good Energy, **Dr Alison Browne**, Sustainable Consumption Institute

Can households dramatically reduce their energy consumption? What can the social sciences tell us about the most effective policies? And, how do the UK government's existing policies measure up to what cutting-edge research and practical experience tells us?

The University of Manchester's **Sustainable Consumption Institute** and the **Centre on Innovation and Energy Demand** are bringing together leading thinkers from the world of social science, policy and practice to grapple with the challenges of reducing household energy use.

Motivating households to reduce their energy consumption or adopt energy savings measures are notoriously difficult to achieve. Over 25% of the UK's total carbon emissions come from energy use in the home. Rapid and widespread reductions in household energy use are, therefore, central to meeting ambitious and necessary carbon reduction targets. As a policy area, however, reducing demand for energy in the home has been the underdog to debates about technological choices of energy production. This event will feature an audience workshop followed by a drinks reception and energy networking event.

Friday 6 November

Seeking Promotion to the Premier League – How Can the Greater Manchester and Cheshire Life Science Cluster Compete in the Global Arena?

8.30am – 9.45am (Breakfast included)

Kanaris Lecture Theatre, Manchester Museum

Chair: **Dr Geoff Davison**, Chief Executive of Bionow

Speakers: **Dr Chris Doherty**, Alderley Park Site Director, Manchester Science Partnerships, **Caroline Simpson**, Executive Director for Growth and Economic Prosperity, Cheshire East Council, **Dr Derek Lindsay**, Chief Operating Officer, Redx Pharma

This will be a varied debate between a range of leading stakeholders from across the GM and Cheshire life science cluster, including industry and the public sector, to discuss what the cluster needs to do to compete in a rapidly changing and highly competitive global industry.

Given the increasing focus on science as the basis for the Northern Powerhouse, this debate will shine a spotlight on the role that the region's life science sector has to play.

Attendees will benefit from an honest reflection by senior stakeholders on the future growth ambitions of the life science cluster at a crucial time in its growth.

Meet the Government Office for Science

10.15am – 11.45am

Kanaris Lecture Theatre, Manchester Museum

Speakers: **Dr Jo Dally**, Deputy Director, Data Analytics, Horizon Scanning and Project Development, GO-Science Senior Management Team, **Prof Francis Livens**, Director of The Dalton Nuclear Institute, **Prof Alice Bows-Larkin**, Professor in Climate Science & Energy Policy and Director of Tyndall Manchester

How can we ensure government policies and decisions are informed by the best scientific evidence? What are barriers to doing this effectively – and what opportunities are being missed? The Government Office for Science (GO-Science) acts as a transmission mechanism between experts and policymakers. As part of its role in catalysing and supporting engagement, it is holding a special session for researchers – with a particular focus on early and mid-career researchers across all disciplines. This is a chance to hear from and question senior figures from GO-Science, as well as those who have advised government.

Engagement Between Scientists and Politicians: Communication of Evidence and Ideas

1.15pm – 2.45pm

Kanaris Lecture Theatre, Manchester Museum

Chair: **Dr Sam Illingworth**, Lecturer in Science Communication, Manchester Metropolitan University

Speakers: **Lucy Powell MP**, **Prof Matthew Cobb**, Professor of Zoology, The University of Manchester, **Dr Richard Walker**, Royal Society of Chemistry, **Dr Caroline Kenny**, Social Science Advisor, Parliamentary Office of Science and Technology (POST)

Is there a lack of engagement between the scientifically and politically minded? Is this due to a divide between scientific method and political action?

This discussion will look to explore how scientists can make their voices heard, whether this corridor of communication should be open and how communication can be improved.

Film: The Man in the White Suit

(Running time: 85 Minutes)

3.15pm – 4.45pm

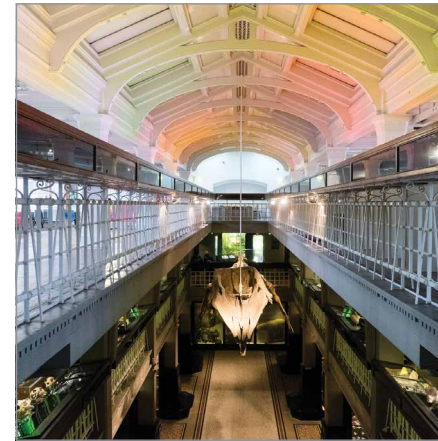
Kanaris Lecture Theatre, Manchester Museum

The Man in the White Suit stars Sir Alec Guinness as brilliant research chemist, Sidney Stratton. He is determined to create an ever-lasting fibre that repels dirt and he eventually succeeds in creating a dirt resistant white suit. However, his invention troubles the establishment, big business and the public as they realise it's bad for the industry. Stratton goes on the run to outwit his detractors and defend his invention. The alliance of capital and labour against the threat posed by him is played out to devastating satirical effect. The Man in the White Suit is a sharp and entertaining satire, whose narrative constantly returns to technology, its products, and the wider societal reaction to new discoveries.





General Information



Manchester Policy Week 2015 will take place largely at the Manchester Museum in the Kanaris Lecture Theatre. There are additional events being held at various venues across Manchester city centre, as listed in the programme.

Information desk

The Policy Week registration and information point will be situated in the foyer area next to the Kanaris Lecture Theatre. Directions will be given once you reach the museum entrance.

Manchester Museum, The University of Manchester, Oxford Rd, Manchester M13 9PL.

Policy Week etiquette

Mobile Phones

Please ensure mobile phones are switched to silent during all sessions and if you need to take a call, please leave the theatre during an ongoing session. We encourage you to follow us on Twitter [@UoMPolicy](https://twitter.com/UoMPolicy) and contribute to conversations and discussions using [#PolicyWeek](https://twitter.com/PolicyWeek).

Session Timings

All Policy Week sessions will start on time. Please ensure you arrive ten minutes ahead of the session start time to secure your place. Sessions will finish promptly; there is a breakout room adjacent to the Kanaris Lecture Theatre for ongoing discussions.

Book your place

The majority of Policy Week events are free but booking is essential:
www.manchester.ac.uk/policy




Tickets for Prof David Nutt in conversation with Victoria Gill will be priced at £4.50 (non-refundable). We recommend you book early for this event.

Accessibility







The Manchester Museum offers excellent accessibility, with a hearing loop available in the Kanaris Lecture Theatre. To check accessibility and facilities for other venues, please contact policy@manchester.ac.uk.



Policy Week: at a glance

This is a handy overview of all the confirmed events taking place during Policy Week 2015. See the front pages of the programme for full event details and speakers, and be sure to book online in advance. Check www.manchester.ac.uk/policy for late additions to the schedule.

-  Breakfast included
-  Film screening
-  Keynote event

Kanaris Lecture Theatre, Manchester Museum

Time	Monday 2	Tuesday 3	Wednesday 4	Thursday 5	Friday 6
8.30am - 9.45am		 How much evidence is 'Enough' Prior to Policy Implementation?		 Technology and Healthcare – Empowering the Patient and Influencing Policy	 Seeking Promotion to the Premier League – How can the Greater Manchester and Cheshire Life Science Cluster Compete in the Global Arena?
10.15am - 11.45am	The Pros and Cons of Fracking (Note: the running time for this event is 10am- 11.15am)	Time to Use Technology for a Better Picture of People's Exposure to Pollutants?	Digital Boom or Tech Time Bomb? The Impact of New Technology on Northern lives		Meet the Government Office for Science
Lunchtime 12pm - 1pm		 Disruption (52 mins)			
1.15pm - 2.45pm	Can Researchers Speak Truth to Power?	Powering the Northern Powerhouse	 Fracknation (77 mins)	How big is that Number? And does it Matter?	Engagement between Scientists and Politicians: Communication of Evidence and Ideas
3.15pm - 4.45pm	 The Age of Stupid (89 mins)	Hot in the City – Urban Resilience and Cooling	What is Citizen Social Science and How Can it Help Make Policy?	Climate, Crises and Policy	 Man in the White Suit (85 mins)

Venue	Time	Monday 2	Tuesday 3	Wednesday 4	Thursday 5
Manchester Art Gallery	4pm - 6pm	Climate Negotiations Simulation			
Manchester Town Hall	2pm - 4pm				Physical Vulnerability and Frailty: Building Resilience in Older People
Museum of Science and Industry	12pm - 5pm		The Manchester Experience: Science, Technology and Engineering Education Enrichment in Greater Manchester		
Manchester Institute of Biotechnology	1pm - 4.30pm			Synthetic Biology: Reshaping the Future?	
Mechanics Institute	4pm - 9pm				On the Home Front: The Challenges of Reducing Household Energy Use
Zochonis Building	9am - 4.30pm			Rethinking UK Research Funding	
University Place, Lecture Theatre A	7.30pm - 8.30pm (Drinks reception from 7.00pm)	 David Willetts How will Emerging Technology Impact Higher Education?			
The Portico Library	6.30pm - 8pm (Access from 6pm)			 In Conversation with David Nutt – Notes on a Drugs Scandal	
TBC	1pm - 3pm		The Future of Science and Innovation Policy		
TBC	11am - 2pm		Using digital technology to assess quality in the arts		
TBC	7pm - 8.30pm		The Inaugural Sammy Finer Lecture with Will Hutton		

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