

Digital Futures

British Sociological Association Presidential
Event, 22nd November 2018



Cabinet Office

The Cabinet Office's Open Innovation Team helps policy-makers generate analysis and ideas by deepening collaboration with academics. We are supported by Research Councils UK and sponsored by the universities of Bath, Lancaster, Southampton and Warwick, but we do not have an exclusive relationship with these partners.

On 22 November 2018, we hosted an event with the British Sociological Association (BSA) looking at the UK's digital future. This slide pack summarises the research and ideas presented at the event, including:

- **Youth Futures:** how can we make inclusive digital futures for and with young people?
- **Work Futures:** how are new digital technologies re-shaping skills, occupations and careers?
- **Data Futures:** how can digital data infrastructures enable a fair and vibrant society for all?

Digital futures

A person with long dark hair, wearing a grey sweater, is seen from the side, sitting at a desk and looking at a computer monitor. The desk is cluttered with various items: a black office phone, a printer, a smartphone, a black mug, a wire mesh pen holder containing a pen and a small globe, and several papers. In the background, there are multiple computer monitors. One monitor displays a web application with a 'Sign Product' button and a list of items. Another monitor shows lines of code in a dark-themed editor. The scene is lit with a cool, blue-toned light, suggesting a professional or technical environment.



Professor Susan Halford

President, British Sociological Association

Professor of Sociology, University of Southampton

- **The digital age raises profound questions about social life and social change:**
 - How do digital data and algorithmic decision making define social groups and shape opportunities?
 - How does the 4th industrial revolution impact on productivity, skills, education and life chances?
 - What do privacy, citizenship and the nation state look like in the digital age?
 - How do machines and humans live together?
- The digital age is as much about social processes as it is about technical innovation. **We must think now about the society we want for the future.**
- **Sociology is uniquely well-placed to analyse the challenges and opportunities.** It offers expert knowledge of social life and social processes, a rich repertoire of skills for analysing social life and social change and a history of integration with other forms of expertise and other disciplines.



Professor Phil Howard

Director, Oxford Internet Institute
University of Oxford

- **New information technologies are having a significant impact on major policy challenges**, including privacy, inequality, and citizen engagement. To get meaningful answers, some of these familiar policy challenges must be reframed and questions recast. For example, how do we apply long-accepted election guidelines to modern, data-rich political campaigns?
- **Digital tools change what we know and how we can know it.** State of the art social research combines new forms of data and computational methods with rigorous critique and empiricism. Researchers must be trained to do these things.
- **New technologies will improve links between researchers and policy officials.** Digital media allows us to make actionable research available to policy makers faster and more easily. It is vital that we make the most of these opportunities.

Professor Dave de Roure

Turing Fellow, Alan Turing Institute

Digital Humanities, University of Oxford @dder



- **Computer Science underpins the operation of the Web**, the new algorithms that are deployed in its operation, and the algorithmic decision making that it enables.
- **Hence computer scientists need to understand this extraordinary large scale system**, which is profoundly socio-technical - it is co-created, and evolving. For this we have turned to collaboration with social science.
- While other disciplines may benefit from "computational thinking", **there is a case also for "sociological thinking" in computer science and engineering.**
- **These interdisciplinary strengths are needed more than ever as the systems also become cyberphysical** (e.g. smart buildings, medical devices, devices in manufacturing and supply chain) - where algorithms have direct effect on our lives and environment.



Youth futures

Professor Sonia Livingstone OBE

Professor of Social Psychology, www.sonialivingstone.net
Department of Media and Communications, LSE



- **Parents are preparing their children for (what they imagine to be) a digital future** by investing in hardware, software, connectivity and learning opportunities.
- **But they face a range of difficulties:**
 - Disconnect between home and school → parental efforts are often wasted
 - Differences across families → variations in parent and school investment exacerbate inequality
 - Less support from their own parents for digital compared with other problems
- **The current public debate over “screen time” isn’t helping:** media and policy debates make excessive claims based on contradictory research.
- **We need a systematic review of evidence on screen time, digital learning and online risks:** advice to parents needs to be nuanced by child’s age, vulnerability and social dis/advantage, educational practice should be responsive to parental efforts and concerns.

- **Monitoring teens can help us anticipate the future of media.** They are abandoning Facebook and instead inform themselves with other platforms such as YouTube.
- **The majority of teens access the Internet through apps.** They have no awareness of what the physical Internet is nor any concept of the open web. This is important for debates about the Internet's future.
- **PC/laptop ownership.** This causes subsequent incursions into tech subcultures and is introducing an increasingly significant group of teens to a whole new world of risky activities that are almost impossible to regulate.
- **Teens react creatively to subvert attempts to control and regulate them.** Researching this creativity can help produce better regulation.

Dr Huw C. Davies

Researcher

The Oxford Internet Institute, University of Oxford



Work futures



Professor Phillip Brown

Distinguished Research Professor
School of Social Sciences, Cardiff University



- **Claims that automation will cause large scale unemployment in the next decade or so are exaggerated.** However, a transformation of work is already evident and will have major implications.
- **Digital innovation is transforming work at all levels.** Many so called ‘routine’ or ‘low skilled’ jobs will still remain as a key part of the occupational structure.
- **The future of work may not be as biased towards high skilled jobs as some assume.** In the UK and US most job opportunities are predicted to be ‘replacement’, rather than new, high tech jobs.
- **The fundamental problem posed by digital innovation is already one of job scarcity** (i.e. not enough of the kinds of jobs people want). Supply side solutions, such as a greater focus on STEM subjects, will not resolve issues of social mobility or income inequalities.
- **Governments have a crucial role to play but there is a lack of strategic thinking.** Real time analytics could help build capacity for active industrial policy and better anticipate labour market needs.

- Digital competitiveness varies significantly between countries. The [Digital Economy and Society Index \(DESI\)](#) summarises indicators of digital competitiveness in EU member states.
- DESI suggests that the UK is doing reasonably well, although there is room for improvement:
 - **The UK comes 4th in Europe for skills** based on measures of Human Capital/STEM graduates in the labour market and general technological skills.
 - **UK business take up of digital technologies are below the EU average.**
- **We can learn how to design new policy by taking note of the frontrunners.** Canada has a comprehensive policy on education, social policy, minimum wages, equal pay, collective representation, support for displaced workers and the Innovation Superclusters Initiative. This initiative aims to cross-pollinate high tech and traditional sectors in agriculture, retail and energy.

Professor Jacqueline O'Reilly

Professor of Comparative Human Resource Management,
University of Sussex Business School



Data futures

Professor Helen Kennedy

Professor of Digital Society
Department of Sociological Studies, University of Sheffield



- **Up-to-date understanding of people's feelings, perceptions and experiences of and about data is vital** to ensure that future data policies and practices are fair, ethical and just.
- **Data-driven systems discriminate** and are (intentionally or unintentionally) biased, with already-disadvantaged populations more likely to be discriminated against. Policy-makers & practitioners need to engage with research exploring the consequences of this phenomenon.
- **Talking to non-expert citizens about these matters calls into question expert assumptions** about what constitute fair, ethical and just data policies and practices.
- **Evidence-based examples** include: a) people's trust in an organisation's data practices has little to do with the organisation's actual data practices; b) alternative personal data management models may not be the answer; c) data literacy initiatives should build on people's *feelings* about data.

- **‘Big Data’ is helping us learn about the student experience.** Projects to collect and analyse student data are being developed and rolled out across HE.
- **Data supports ‘student-powered’ higher education.** Data enables students to make better choices, and providers to improve the quality, value and market competitiveness of their services. For example, apps for degree applicants funded by the Department for Education.
- **Data also strengthens ‘metrics-powered’ higher education.** Student data is used to produce new performance measures, comparisons and rankings of teaching and learning, and students are addressed as consumers calculating the return on their investment in higher education.
- **Officials, academics and higher education professionals can collaborate on mutually beneficial uses of student data.** This will produce new knowledge and data-driven tools that will be of practical benefit to all.

Dr. Ben Williamson

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