



Data at work: The benefits of better access



The age divide: Old and young living apart



More work, less say: What do we think about our jobs?

Welcome

to the Winter issue of *Society Now*, the ESRC's regular magazine which showcases the impact of the social science research we fund.

In this issue Professor Philip McCann explains the massive differences in economic productivity between UK regions and nations, and why our system of government is illequipped to address the issues.

Features look at the new Administrative Data Research Partnership – a collaboration between the ESRC, the Office for National Statistics and centres in the devolved UK administrations. And the age divide, where residential age segregation means the old and young are now living in different areas.

Agnes Norris Keiller of the Institute for Fiscal Studies examines how UK trade policy may change after Brexit. And the latest Skills and Employment Survey shows we are working harder, feel we have less say, but are less anxious about losing our jobs.

Finally, economist Scott Corfe tells us about the Fourth Industrial Revolution and the effects it may have on our lives.

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HORTAGE OF non-pharmacological options and alternative treatments may be one reason that anti-depressant prescription rates in Northern Ireland (NI) are significantly higher than the rest of the UK, suggests researchers following a two-year study of prevalence and variation in anti-depressant prescribing across NI.

Anti-depressant prescription rates in the UK are among the highest in Western Europe. In NI the rates are yet higher, says lead researcher Professor Mark Shevlin of Ulster University. Working with the award-winning NI charity Aware Defeat Depression (Aware), the research team linked returns from the 2011 NI Census with NI prescribing records to map the socioeconomic and geographic landscape of anti-depressant prescribing.

Findings show that antidepressants were prescribed to 12% of NI's population in 2011 with this rate rising to 14% by 2015. "Over the entire five-year period 24% of the population were prescribed antidepressants," says Professor Shevlin. "Existing figures for 2013 show that proportionately more anti-depressants were prescribed in NI than 23 other countries worldwide and that, overall, GPs in NI prescribed enough anti-depressants to give every member of the population a 27-day supply; the same statistics for England and Wales were 10 days and 19 days respectively."

While prescription rates in NI are

Hence, more resources aimed at encouraging patients to improve their physical health through education on diet and exercise could ameliorate the effects of low mood without pharmacological intervention. Other alternatives to anti-depressants, say researchers, range from psychological

Over the entire five-year period 24% of the population were prescribed anti-depressants

climbing annually, rates of depression are not changing. Moreover, existing evidence reveals the rate of antidepressant prescribing (15% in 2015) to be higher than household survey estimates of the proportion of the NI population that suffers low mood (9%) and clinical depression (7%). "We suspect that this disparity is occurring because some GPs are prescribing antidepressants for non-clinical depression because they do not have access to alternatives, as the infrastructure for 'social prescribing' in NI is poor," says Professor Shevlin.

Study findings show a clear association between self-reported poor physical health and the likelihood of being prescribed anti-depressants.

treatments such as counselling to greater social interaction and taking steps to combat loneliness.

Based on these findings, project partner Aware Beat Depression aims to identify geographical areas of high anti-depressant prescribing and particularly vulnerable groups such as young people and those aged 40-54, which it will target with support, education and information on alternatives to anti-depressant use.

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IN BRIEF

NURTURE NETWORK

The e-Nurture Network is a new collaborative, cross-sectoral initiative to explore how to equip parents, teachers, practitioners, policymakers and young people with support and resources that promote positive mental health in a digital age. Researchers will explore the digital environment's impact on young people's wellbeing, develop intervention programmes to improve mental health outcomes and identify ways to disseminate new knowledge. ESRC grant number ES/S004467/1

GROUNDWATER PLANS

Billions of people worldwide rely on groundwater for their everyday existence. Yet groundwater's invisibility makes it difficult to govern. Researchers aim to study promising grassroots initiatives of people mobilising to protect groundwater in places where pressures on the resource are particularly acute (eg, India, Algeria, Morocco, USA, Chile, Peru and Tanzania). The study will focus on groundwater practices of knowing, accessing and sharing. ESRC grant number ES/S008276/1

DRIVERLESS FUTURES

Self-driving cars promise to be one of the most disruptive technologies of our age. Researchers suggest that rather than 'sleepwalking' into a driverless future, now is the time for democratic discussion of the opportunities and uncertainties that these cars bring. Their study aims to be the world's first major social science project that brings the public voice into the debate on the future of self-driving cars. *ESRC grant number ES/S001832/1*





Better interventions to target domestic violence

OMESTIC VIOLENCE IS widely accepted in most developing countries, says a new study of attitudes towards domestic violence in 49 lowand middle-income countries across Central, East and South Asia, Central Europe, Latin America, the Caribbean, North- and Sub-Saharan Africa.

"Our findings show that more than one third of people in these countries believe that domestic violence is justified in situations where the woman is seen as transgressing traditionally expected gender roles," says lead researcher Dr LynnMarie Sardinha. "Domestic violence prevention policies tackling harmful gender norms are thus urgent and vital."

Based on Demographic and Health Survey data from 1.17 million men and women, the study provides insights into attitudes towards domestic violence in the Global South and the influence of country-level socioeconomic and political factors on its acceptance.

The surveys asked whether people thought a husband or partner was justified in beating his wife or partner if she goes out without telling him, argues with him, neglects the children, refuses sex, burns the food or if he suspects her of being unfaithful. On average 36% of respondents justified it in at least one of these situations.

Justification of domestic violence varied significantly across the 49 countries. Overall, acceptance was highest in South Asia (47%) and Sub-Saharan Africa (38%) compared with Latin America and the Caribbean (12%). And in 36 of the 49 countries (mainly in south-east Asia and Sub-Saharan Africa), women were more likely to justify the behaviour than men. "Women in these contexts may often internalise the idea that the physical 'punishment' is a husband's legitimate reprisal for a wife's disobedience, and may view this as 'disciplining' rather than 'violence'," says Dr Sardinha.

Macro contexts, such as political environment, play an important role in acceptance of domestic violence. For example, acceptance is more prevalent in countries that have experienced political conflict in the past five years and lower in countries with more democratic regimes.

"Commonly-used measures of countries' gender equality – for example, women's labour force participation and number of seats held by women in national parliament – did not significantly influence society's acceptance of domestic violence," says Dr Sardinha. "International policies that focus on narrowly defined economic or political 'empowerment' alone will not be sufficient in tackling domestic violence and its acceptance. We need tailored, context- and gender-specific interventions that target existing discriminatory gender norms."

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Global household data on inequality

New research using household expenditure surveys gives a fresh perspective on world inequality between 1890 and the 1960s.

In the first study of its kind, researchers identified 1,300 household surveys worldwide carried out between the 1880s and 1960s. Of these, 500 provided data suitable for the study of inequality in 46 countries. Previous analysis based on national accounts and various proxy measures of inequality pointed to falling inequality in the first half of the 20th century in advanced industrial countries. The new household expenditure data, however, provides evidence of roughly stable levels of inequality in the UK and Europe, once appropriate

adjustments have been made for changes in sampling methodology. While in Latin America, this household level data suggest less of an increase in inequality than previously thought. "These new household expenditure data provide important insights into the time-path of inequality than had previously been possible," says Professor Ian Gazeley.

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Classical musicians face wide-ranging inequalities

nequalities in the classical music profession are wide-ranging and persistent, says a recent study of the working lives of classical musicians in Germany and the UK.

Findings show, for example, that in 2014 less than 2% of 629 orchestra players could be identified to be from a black or minority ethnic background. In the same year only 1.4 % of the UK's orchestra conductors and 2.9% of artistic/musical directors were female.

In the five-year project, Dr Christina Scharff, Senior Lecturer in Culture, Media and Creative Industries at King's College, London explored not only ongoing gender, racial and class inequalities, but wider questions such as what it is like to work as a classical musician today and what happens when musicians become entrepreneurial and

think of themselves as a product that needs to be sold and marketed.

Recommendations to tackle these inequalities range from ensuring that the issue is discussed more openly, to structural solutions (blind auditions and quotas), informal methods such as mentoring schemes, and professional development courses aimed at under-represented groups, as well as campaigns that critique the sexualisation of female musicians and focus on attitude change.

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IN BRIEF



FIRST-TIME VOTERS

Voting in the first two elections of a person's life is likely to lead to a lifetime of voting, while abstaining in both may lead to chronic abstention, research suggests. The First and Foremost project aims to explore the experience of citizens' first vote and the psychological, institutional, and contextual factors that impede or improve their participation and their likelihood of voting in future. ESRC grant number ES/S000100/1

LINGUISTIC EVOLUTION

All languages have a systematic structure which allows us to communicate our thoughts. Where does this linguistic structure come from? Do the origins lie in the way humans think, or are the structures we find in languages the result of cultural processes like interaction and learning? Researchers will use multi-modal experiments to take a new look at the mechanisms that create structured languages. *ESRC grant number ES/R011869/1*

UNCERTAIN OUTCOMES

Every day we are confronted with uncertainty about the outcome of future events. Excessive stress in response to uncertainty is common in anxiety disorders. A new study will explore how individuals with high intolerance to uncertainty (IU) differ from those low in IU when faced with uncertainty. Findings will help in the design of interventions to treat anxiety disorders. *ESRC grant number ES/R011451/1*

IN BRIEF



PAY IMPACTS ON HEALTH

Performance-related pay (PRP) (being paid according to how well you perform) appears to be linked to poorer health in workers. A new study will investigate whether workers paid by PRP report poorer health because PRP work is stressful in ways that are detrimental to health. The project builds on a small pilot study that explored differences in stress between PRP and non-PRP workers. ESRC grant number ES/R01163X/1

SUICIDE RISK FACTORS

Self-harm and having thoughts about dying by suicide are two of the most important known risk factors for death by suicide. Researchers aim to link data from Northern Ireland's national Registry of Self-Harm with additional health, social services, census and death data to generate a unique dataset of health and social information that will improve understanding of suicide risk factors.

ESRC grant number ES/R011400/1

POPULIST PARTIES

Taking a comparative case study approach, new research will investigate four seasoned populist radical right (PRR) parties which are well-established within their party systems: the Italian Northern League, the Flemish Interest in Belgium, the Finns Party in Finland and the Swiss People's Party. The study will map the parties' formal and informal organisational structures and shed light on the motivations of party members. ESRC grant number ES/R011540/1

Gibraltar's shift to 'Britishness'

AN ORAL HISTORY project among 400 Gibraltarians identifies a clear shift towards 'Britishness' over the past century.

"In our four-year study among Gibraltarians from all religious, ethnic and economic backgrounds and aged between 16 and 101, we explored how Gibraltar evolved from an overwhelmingly Spanish-speaking country at the start of the 20th century to one which is increasingly Anglophone and where most people passionately reject any association with Spanishness," explains research Professor Andrew Canessa.

Nevertheless, the consequences of Brexit are now a source of huge anxiety for Gibraltarians, 96% of whom voted in favour of Remain. Although negotiations with Spain suggest a smooth transition, Brexit promises to fundamentally change Gibraltar's relation with its EU neighbour as well as the UK.

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Personal assistance demands

is an innovative role within social care whereby disabled people directly employ others to provide support. While usually empowering for both employer and workers, personal assistance relationships can also entail emotional tensions, says a recent study.

In England, an estimated 64,000 disabled people are employing some 145,000 personal assistants. Under the Personal assistance (PA) model of support, disabled people take control of recruiting, training and managing the people that help them.

When disabled people take control over their support arrangements, they have better quality of life and participation. But drawing on qualitative interviews with 30 disabled people and 28 personal assistants, researchers from the University of East Anglia find that all PA relationships can be emotionally demanding. Efforts are required to prevent PA relationships becoming fractured.

Good communication is required from all parties for the relationship to go well. "Everyone needs relevant skills and knowledge to manage these relationships effectively," says lead researcher Professor Tom Shakespeare.

The project report *Personal*Assistance Relationships: power, ethics and emotions makes a series of recommendations for disabled people employing PAs, for PAs themselves, and for policymakers and public bodies. These include a call for greater efforts to bring more people into the

PA workforce, as a lack of choice for disabled people can force them to employ unsuitable PAs. The team have also produced a Future Learn massive open online course (MOOC) for employers and workers, which has to date been completed by nearly 1,500 people.

As well as training, peer support is needed – for both PAs and employers – to help with the potential isolation caused by these cash for care arrangements, researchers state. In the worse scenarios, both employers and PAs need access to independent legal advice.

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Lone child migrants face uncertain adulthood

OUNG PEOPLE WHO migrate to the UK alone face uncertain futures as they turn 18, says recent research into the post-18 wellbeing outcomes of young people who migrated on their own to the UK as children from Afghanistan, Eritrea and Albania.

"Some of these young people gain secure legal status," Dr Elaine Chase explains. "But for others, becoming 'adult' involves a transition to 'illegality' and invisibility as they become no longer eligible for support services dedicated to 'children', and reach the end of their legal right to remain in the UK."

The study finds that securing a permanent right to remain in the UK generally led to very positive outcomes for former lone child migrants in terms of health, education, social support and a sense of belonging and identity. But others experienced many years of confusion and uncertainty over their legal status with some disengaging from all statutory services (due to a fear of detention and forced removal) and living illegally in the UK or 'disappearing' to other parts of Europe. The uncertainties generated by the system, say researchers, often had a highly detrimental impact on young people's mental and physical wellbeing. Moreover, those young people who on reaching the age of 18 were forcibly

removed to their countries of origin, usually attempted re-migration involving further extended periods of uncertainty and risk.

"At present, children who migrate alone are in an ambiguous position as they become adults in the UK with no secure legal status," Dr Chase argues. "We have a policy framework shaped by a state-centric view of migration and a bias towards returning these young people to their country of origin whenever this is possible, even though they have built strong ties and a sense of belonging here.

"Our research," she continues, "has demonstrated a clear disconnect between policies determining what should happen to young people in this situation and young people's own ideas of how they intend to build their futures and pursue their aspirations. We need to unsettle these policy assumptions and rethink the range of options open to migrant young people who are unable to return to their countries of origin and yet are denied the opportunity to make their lives in the UK."

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Understanding bus use trends

THE NUMBER OF free bus journeys taken by senior residents in the West Midlands fell by 21% between 2011 and 2016, says new research into changing bus use in West Midlands Combined Authority (WMCA).

"Understanding these trends is an urgent priority since, in our ageing society, inclusive mobility becomes a crucial enabler of health and wellbeing," says Dr Jens Kandt of University College London. "In view of this, the sharp decline in bus use among the 60-plus age group is concerning."

In a pilot demonstrator project, researchers analysed boarding patterns of nearly 400,000 anonymised passenger accounts registered under the English **National Concessionary Travel Scheme** (ENCTS). While some of the decline can be attributed to restrictions in eligibility to the scheme (due to an increase in state pension age for women from 2010 to 2016), the findings also indicate that reduced bus use occurs in contexts of higher social disadvantage. This, researchers believe, may result from greater poverty or illhealth among pensioners leading to fewer out-of-home activities. Further possible causes include structural changes in the transport system such as the extension of the Midlands metro, introduction of e-hailing services and an uptake of online shopping among senior residents.

The data linking methods used in this pilot could be reproduced in other UK regions, researchers conclude, providing local authorities and transport providers with information key to future public transport planning.

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Social norms help sway food choices

MAKING HEALTHY FOOD choices is not easy in an environment in which high-calorie foods are easily available and highly visible. One way of encouraging healthier eating is to provide information about the healthy eating habits of others, says new research from the University of Birmingham.

Researchers from the four-year study found that informing university students that their peers are actually eating small amounts of 'junk food' reduces students' junk food choices. Similarly, informing students who did not eat much fruit and vegetables that their peers eat more of these foods than they might think prompts healthier food intake. Moreover, merely being told that other people enjoyed eating vegetables increased the likelihood of study participants selecting broccoli to eat, and this effect lasted for at least 24 hours.

The data from these laboratory-based studies were used to design an intervention to promote purchase of vegetables with lunch in a workplace restaurant. "The evidence suggests that social norms can be used to promote the selection of nutritious foods such as fruit and vegetables wherever people may select or consume food, including supermarkets and cafeterias and schools," explains researcher Suzanne Higgs, Professor in the Psychobiology of Appetite.

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Communities' input into post-disaster recovery

ISTENING TO AND involving communities at the design, planning and implementation stages of post-disaster recovery is key to achieving better outcomes and longer-term recovery, says research into the effectiveness of the aid efforts to the Visayas region of the Philippines in the wake of Typhoon Yolanda in 2013.

Typhoon Yolanda, the deadliest Philippine typhoon on record in the modern era, left at least 6,300 people dead, four million more displaced and over a million homes destroyed. The total number of people affected by the typhoon, in terms of livelihood, environmental and food security, was approximately 16 million.

In a three-year collaborative project, researchers at the University of Nottingham, UK and the University of Nottingham, Ningbo (China), in partnership with the University of the Philippines, have worked closely with local communities to identify the lessons from Typhoon Yolanda. The research team carried out 200 interviews with NGOs and local government personnel; held 50 focus groups with local people; and undertook three annual surveys (2015 to 2017) in 800 households from the region.

Findings indicate that community rebuilding is more sustainable when communities are actively involved in schemes such as 'sweat equity', where beneficiaries donate their labour to the housing schemes that they will eventually occupy, and in the design and planning stages of their communities. However, the findings also revealed examples of lip service being paid to community involvement without it happening in a sustainable fashion. For sustainable rehabilitation to take place, more work needs to be done to engage the most vulnerable people within communities, such as women and 'own account' (or self-employed workers).

"Our research has contributed to the awareness of NGOs – including foreign aid agencies, and some national and local policymakers and government officials – of the need to further engage local communities in the rebuilding and rehabilitation of their communities," Dr Pauline Eadie concludes.

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New electoral violence resources

THE ELECTORAL VIOLENCE Prevention Practice database (EVPPD), a collaborative initiative between King's College London and Creative Associates International, is based on a three-year research project which aimed to understand why and when electoral violence occurs and what can be done to prevent it.

The EVPPD (www.preventelectoralviolence. org) equips policymakers, researchers and other practitioners with a searchable database of interventions that have been employed to prevent, manage or mediate electoral violence. The project has also produced a dataset of Countries at Risk of Electoral Violence and a further database on electoral violence interventions undertaken by the UN Development Programme from 2003-2015.

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Drivers of Mediterranean migration

ONFLICT, PERSECUTION and general insecurity are the main drivers of migration by sea to Europe, says research into the Mediterranean migration crisis.

People have complex reasons for coming to Europe, says Professor Brad Blitz, lead researcher of the 'EVI-MED, Constructing an evidence base of contemporary Mediterranean migrations' project. Based on 750 questionnaires and more than 100 interviews carried out in reception centres in Greece, Italy and Malta, researchers found war, insecurity and concern for family to be the dominant factor driving refugees to Europe. War was the biggest 'push' factor, and given as the reason for leaving their homes by 49% of those questioned in Greece, and 53% of those in Malta.

"The overwhelming majority of people we spoke to were coming from desperately poor countries, but also places where they were subject to targeted violence or other concerns around family security," he says.

The study identified major differences between migrant reception systems. In Greece, for example, migrants have been detained and left in camp-like situations; in Italy a permissive approach towards refused asylum-seekers has encouraged their informal integration into the country through exploitative labour practices.

The report, Mapping Refugee
Reception in the Mediterranean, makes
12 recommendations for policymakers
including the need for new guidelines
to standardise and improve the quality
of reception for migrants across the
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IN BRIEF



ONLINE HATE CRIME

The UK Government's Hate Crime Action Plan stresses the need to tackle hate speech on social media by bringing together policymakers with academics to improve the analysis and understanding of the patterns and causes of cyberhate and how these can be addressed. New research aims to assist policymakers in identifying areas that require policy attention and better targeted interventions in the field of online hate. ESRC grant number ES/P010695/1

ANTIBIOTIC OVERUSE

Corporate food retailers play a pivotal but frequently ignored role in tackling antimicrobial resistance (AMR). The overuse of antibiotics on farm animals is leading to growing resistance among certain bacteria such as E-coli. Researchers aim to address the responsibility of retailers in tackling the AMR challenge through chicken and pork supply chains and investigate the retailers' future role. ESRC grant number ES/P011586/1

GREEN GROWTH

The green economy has significant potential for delivering inclusive economic development in Africa. With work focused on three countries – Ethiopia, Kenya and Nigeria – researchers will address key questions such as: what are the current greening activities taking place in Africa; what are the successes, challenges, synergies and trade-offs associated with greening in Africa; and how do these differ across countries? *ESRC grant number ES/P006671/1*

More work, less say

Workers in Britain are working harder and have less say, but are less anxious about losing their job or having their job changed in some way, according to the findings from the latest Skills and Employment Survey. By Professors **Alan Felstead** and **Francis Green**

HE QUALITY OF JOBS HAS become a hot topic among UK policymakers over the last 18 months. This has been triggered by the Taylor Review of Modern Working Practices which called on government to report annually on the quality of work in the UK, the government's commitment to promote and create better quality jobs, and the centrality of good work to the government's Industrial Strategy.

In the devolved administrations (as well as in some local authorities) interest in job quality has also grown. In Wales, for example, the First Minister announced in 2017 that he wanted 'to make Wales a fair work nation' and in July 2018 a Fair Work Commission was set up to help make this happen. In Scotland, the Fair Work Convention was established in 2015 and fair work has been a central part of the Scottish Government's economic strategy for a number of years.

The study of job quality has a long history among sociologists, economists and psychologists. In recent decades, the European Commission, OECD and the International Labour Organisation have all debated the question. It is now widely accepted that good jobs have objective features which have the potential to enhance workers' wellbeing, while bad jobs constitute health risks. It is also agreed that there are many dimensions to it, including wages, job prospects, the quality of working time and intrinsic aspects of the work

1.7 million workers are very anxious that their hours of work might be unexpectedly cut, raised or rescheduled.



itself. However, there is no agreed standardised, single index of job quality or its dimensions.

A recent survey of workers supported by the ESRC and others sheds new light on some of the more important job quality dimensions and how they have changed. The Skills and Employment Survey 2017 (SES2017) is a nationally representative sample survey of individuals in employment aged 20-65 years old in Britain. A total of 3,306 individuals took part. They were interviewed in their own homes for around one hour. The 2017 survey is the seventh in a series which began in 1986.

The quality of jobs in the UK is worsening in more respects than it is improving

The latest results show that the quality of jobs in the UK is worsening in more respects than it is improving. It shows that workers are working harder and have less say, but are less anxious about losing their job or having their job changed in some way. Almost a half (46%) of workers in 2017 strongly agreed that their job requires them to work very hard compared to just a third (32%) of workers in 1992. School teachers in state schools top the list. A remarkable 92% of teachers strongly agreed that their job requires them to work very hard, up from 82% in 2012.

In the five years since 2012, the proportion who said that they had a great deal influence over what tasks they do fell by three percentage points and there was a five percentage point drop in the influence they had over how to do the tasks. Over the longer term the drops have been even greater – since 1992 the scope to decide what tasks to do has fallen by 13 percentage points and discretion over how to execute these tasks has fallen by 18 points. Other forms of participation at work have also fallen. Consultative meetings and problem-solving groups declined between 2012 and 2017, falling by eight and two percentage points respectively.

These trends are not simply of academic interest. Quite the contrary, they have significant implications for economic performance and hence for the wellbeing of us all. Efficiency-enhancing ideas, for example, are more frequently offered and acted upon in organisations where employee involvement is high. Such employers allow employees more autonomy to decide how



to do their jobs, are more supportive of those they manage, give employees more opportunity to express their views, and carry out appraisals which affect employees' earnings and/or training opportunities. Despite these benefits, employee involvement has become a less prevalent feature of British workplaces over the last decade. This comes at a time when productivity growth has been sluggish and the economy would have benefited from greater employee involvement most.

To make matters worse, high work intensity and limited job control can be a toxic combination resulting in 'high strain' jobs which can produce high levels of work-related stress. Worryingly, the survey finds that high strain jobs have become more prevalent. For women, the proportion rose by five percentage points between 2012 and 2017, leaving one in five women at an elevated risk of stress. For men, the jump of four percentage points, up to 15% of jobs, took place between 2006 and 2012. Among school-teachers, 28% were in high strain jobs, and 72% reported that they always or often came home from work exhausted.

The results are positive in one respect – insecurity levels have fallen. Less than one in ten (9%) workers in Britain in 2017 reported that they had a better than evens chance of losing their job in the next 12 months. This is half the proportion (18%) of workers who made a similar assessment in 2012 – falling from its highest point in the series to its lowest point. The difficulty of getting an equivalent replacement job more or less mirrored this pattern with 17% of workers reporting in 2017 that it would be very difficult to find as good a job as the current one. This exceeds

Among schoolteachers, 28% were in high strain jobs, and 72% reported that they always or often came home from work exhausted.

by three percentage points the other low point in the series recorded in 2001. Anxiety about changes to the job has also fallen dramatically. For example, in 2012, 37% of employees were anxious about receiving a pay cut, but by 2017 this had fallen to 28%.

Yet insecurity may have taken a different form. Based on the 2017 survey, we estimate that 1.7 million workers are very anxious that their hours of work might be unexpectedly cut, raised or rescheduled. This group is several times larger than those working on Zero Hours Contracts which have received much attention. Those working insecure hours also report higher levels of work intensity, lower levels of pay, and greater exposure to a range of other fears, anxieties and worries than those whose hours of work are more secure.

Given the increased policy interest in monitoring features of good (and bad) work, evidence from the most recent Skills and Employment Survey should be of particular interest and value to the UK government, the devolved administrations and local authorities. We also hope that, in seeking to deepen the evidence base, the instruments developed and supported by this ESRC survey can be used in future national data collection exercises.

SES2017 was funded jointly by the ESRC, Cardiff University and the Department for Education with Welsh Government funding to boost the sample size in Wales (ES/P005292/1). The research team was Alan Felstead, Duncan Gallie, Francis Green and Golo Henseke.

Six initial findings reports have been published; these are available from the project web site: www.cardiff.ac.uk/socsi/ses2017 and there is a job quality quiz: www.howgoodismyjob.com



The technology revolution

The Fourth Industrial Revolution is set to radically change the way we live our lives with potentially enormous benefits for all. By **Scott Corfe**

E ARE ENTERING a new era for the world economy – the Fourth Industrial Revolution (4IR) – which is set to radically change the way we live our lives – in the home, in the workplace and in the way we access public services.

The First Industrial Revolution saw water and steam used to power and mechanise production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. The Fourth Industrial Revolution is building on the Third, the digital revolution that has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres. These technologies include artificial intelligence, big data, machine learning and "the internet of things" which is seeing an increasing proportion of household and business appliances connected to the internet.

According to the World Economic Forum, there are three reasons why today's transformations represent more than a prolongation of the Third Industrial Revolution and rather the arrival of a Fourth and distinct one: speed, scope, and systems impact. On speed, when compared with previous industrial revolutions, the Fourth is evolving at an exponential rather than a linear pace. In scope, it is disrupting almost every industry in every country, with robotics and artificial intelligence potentially dramatically changing the types of jobs available in our economy – and the skills needed to perform them. The breadth and depth of these changes could transform the entire system of production, management, and governance.

As Social Market Foundation research has shown, the benefits of 4IR are potentially enormous. In the workplace, the use of new technologies could end the collapse in productivity growth which has held back wages in the UK economy. Conceivably, productivity could rise so significantly that a fourday working week would become the norm. At home, new connected household appliances could improve energy efficiency and make it much easier to care for other family members. Countries such as Japan are exploring the use of care robots to help get individuals out of bed, and to provide mental stimulation for the elderly.

4IR could revolutionise public service delivery. Wearables – such as smart watches – can "gameify" healthy activities such as walking frequently, awarding individuals with points to incentivise such behaviours. 4IR will allow the development



of a healthcare system that increasingly revolves around illness prevention, rather than treatment, by encouraging healthier lifestyles. In education, artificial intelligence and machine learning can provide customised e-learning solutions that are tailored to an individual's needs and preferred mode of learning.

Despite this wide range of benefits, 4IR is not without some substantial challenges. As has been widely discussed, the rollout of robotics and artificial intelligence could lead to substantial job losses, requiring many to reskill for new careers. There are also concerns about new technologies being rolled out in a way that undermines dignity in the workplace. Amazon, for example, has come under fire for using technology to set aggressive targets for warehouse workers, leaving some employees too afraid to take time out for a toilet break. Increased use of algorithms in the workplace could see more employees shifted onto precarious zero hours contracts, with computers determining the optimal number of hours to be worked in a day or week.

Critically, there is a key role for policymakers to play in ensuring that the benefits of 4IR outweigh the costs. Our education system needs to be reformed to focus more on adult learners looking to reskill in an age of robots and artificial intelligence. We also need a broad debate about some of the ethical issues associated with 4IR, such as those related to excessive monitoring of employees. Done right, 4IR could dramatically improve our lives. Done wrong, 4IR could leave us disempowered and vulnerable. It is crucial that we get it right.

i

Scott Corfe joined the Social Market Foundation (SMF) as Chief Economist in June 2017. The ESRC partners with the Social Market Foundation to deliver their popular lunchtime seminar series, Ask the Expert.

Web www.smf.co.uk @SMFthinktank @scottcorfe

The birds and the bees

Research on birth order suggests a number of ways that later-born children might be disadvantaged in terms of parental relationships, even in the 'big talk' about sex

ITTING YOUR CHILD down to 'the big talk' can be a recipe for embarrassment, awkward questions and red faces – which might be why parents seem less and less inclined to go through with it after their first-born.

While much research has been done on whether children's psychological or social outcomes in life are affected by the order of birth (being the first, second or third child of the family), the outcomes for sexual health has had much less attention. This is the focus for a new study led by Dr Lotte Elton at the London School of Hygiene and Tropical Medicine.

The researchers used data from the National Survey of Sexual Attitudes and Lifestyles (Natsal), one of the largest scientific studies of sexual health and lifestyles in Britain. The survey, which is partfunded by the ESRC, has been carried out every 10 years since 1990 with more than 45,000 people interviewed to date.

Using a dataset of 5,000 participants from Natsal-3 (ie the third Natsal survey) aged 17 to 29 who were either first-born, middle-born or last-born, the research team analysed responses to questions about parent and sibling involvement in sex education.

They found that 48% of first-born women and 37% of first-born men reported learning about sex from a parent, compared to 40% of middle-born women and 29% of middle-born men. Last-born women and men were also less likely than those first-born to report a parent as their main source of sex education. Among men, middle- and last-borns

Later-born children were more likely to learn about sex from siblings compared with first-born children

were less likely than first-born to having found it easy to discuss sex with their parents when growing up. Later-born men were also less likely to report learning about sex from their mothers.

"In addition to seeing differences according to birth order, we also found clear differences between the sexes; across all birth order categories, men consistently reported lower parental involvement in sex education than women," says Dr Elton. "We have seen from previous research that parents are less likely to speak about sexual matters with their male children. Our findings suggest that there may be even less communication about sex with male children if they are middle- or last-born."

Instead of learning from parents, later-born children were more likely to learn about sex



Researchers found that 48% of firstborn women and 37% of first-born men reported learning about sex from a parent. from siblings compared with first-born children. This suggests that education programmes could potentially involve adolescents in teaching their younger siblings, particularly in families where parents' involvement in sex education is low.

The findings are consistent with previous research evidence on birth order, adds Dr Elton. "A number of studies have suggested that parents may have closer relationships with their first-born children and spend less time with later-born children," she says.

"Birth order literature suggests a number of ways that later-born children might be disadvantaged in terms of parental relationships. It has been noted that first-born children receive undiluted parental attention prior to the birth of their younger sibling, potentially allowing for a closer parent-child relationship. Other research suggests that parents' involvement is 'diluted' with each successive child, as a parent must split their time and resources between their other children."

Lotte Elton, Melissa Palmera and Wendy Macdowall: Birth order and parental and sibling involvement in sex education. A nationally-representative analysis (Sex Education. DOI: 10.1080/14681811.2018.1509305)

The British National Surveys of Sexual Attitudes and Lifestyles (Natsal), part-funded by the ESRC, are among the largest studies of sexual behaviour in the world. Natsal is managed by a research team from University College London, the London School of Hygiene & Tropical Medicine and NatCen Social Research.

Web www.natsal.ac.uk/home.aspx

North and south

Research has found that only a small percentage of papers published in surveyed journals were from authors in the Global South. And 43% of publications in top Development Studies journals were from authors located in the USA and UK alone. Why? By **Tin Hinane El Kadi**

HE WORLD OF academic publishing is notoriously unequal. Research from scholars based in the Global South is hugely under-represented in leading international peer-reviewed journals. A recent study by CPAID (Centre for Public Authority in International Development) found that less than 3% of papers published in surveyed journals were from authors in the Global South. Another recent research project has shown that 43% of publications in top Development Studies journals were from authors located in the USA and UK alone. Scholars based in the North are widely perceived to be at the frontier of knowledge production and tend to benefit from broader networks and means to disseminate their research. Meanwhile, authors based in the South are often marginalised from academic debates and are less likely to serve on the editorial boards of prestigious journals.

The problem is most acute when it comes to African scholars. Of course, there are some who have major contributions to the humanities and social sciences (to give just a few examples from East Africa: Mamdani, Ogot, Mazrui, p'Bitek and Mbiti), but the majority were the graduates of universities established and supported under colonial rule, and they were able to secure reasonably remunerated academic posts. In many places that career path has become much more difficult. Also, the relative isolation of Southern-based scholars can limit the repertoire of methodological tools that are available (and fundable) in their research. Dominant approaches

In several African countries universities started declining in the decades after independence, partly due to political upheavals.



in some disciplines such as economics and political science, particularly in US institutions, have become hegemonic in ways that can exclude work by scholars from elsewhere, especially in the Global South. Central research questions then are directed to the interests of often Northern-based scholars and their funding agencies.

Authors based in the South are often marginalised from academic debates

There are multiple reasons behind this imbalance in representation. For instance, in several African countries, universities started declining in the decades after independence, partly due to political upheavals, but also because of shifting funding priorities – linked to campaigns against rural poverty and urban bias. Broadening primary education was emphasised over higher education for elites. These trends were then exacerbated by neoliberal reforms in the 1980s. Ever greater teaching and administrative loads were imposed on academic staff and, inevitably, there was a weakening of research capacity. African-based scholars had no option but to take on additional work, such as farming, running a business, or doing consultancies for aid agencies. In his compelling book, Scholars in the Market Place, Mahmoud Mamdani reports this transformation at the University of Makerere in Uganda.

However, the issue of under-representation goes far beyond a question of finances. A 2016 study found that although African-based scholars were submitting more papers to two leading African Studies Journals, the rate of publications had declined from 30% to 15%, because of increasing rejection rates. Some editors of African journals indicate that the style of critical comments from reviewers can discourage possible authors, and efforts have been made to moderate the tone of criticism and assist African scholars with resubmissions. However, the pressures on academic life everywhere make that kind of dedicated support more difficult to sustain. Also, finding sufficient African reviewers of articles is a challenge, and the evidence from the abovementioned studies suggests that, even when African-based authors manage to publish, their articles are less likely to be cited than articles published by Northern-based scholars.

One consequence of the dearth of publications from authors based in the South in top journals is that it is sometimes challenging to put together geographically-balanced reading lists of high-quality publications. Students have complained about this situation and called for the 'decolonisation of curricula' from South Africa to the UK. The decolonisation movement is demanding that universities recognise the structural and epistemological legacy of colonialism in academic curricula and take steps to correct them. Even if the decline in many universities, especially in Africa, occurred after the end of colonial rule, the legacy of colonial attitudes and the sidelining of Southern voices tends to persist.

While correcting the under-representation of scholars from the Global South requires broad structural changes in the global economy, some steps can be taken to address this crucial issue.

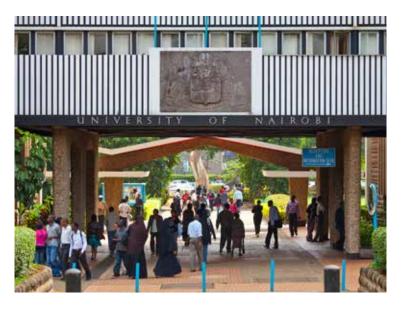
Even when African-based authors manage to publish, their articles are less likely to be cited

First, the adverse effects of shifting funding from elite institutions of higher learning to primary education need to be more fully appreciated. Primary education should be a right for everyone, but if there is insufficient support for higher education and research, who will represent marginal populations and who will set political and social agendas? Governments and development agencies need to give greater priority to the role of higher education and provide more technical and financial support to research in poor countries.

Second, scholars in privileged positions in Northern-based institutions can encourage academic diversity by citing colleagues based in universities in the South and engage with their contributions to the field. Although some journals and presses have taken exemplary steps in the right direction, by, for instance, organising writing workshops in countries in the Global South, it is essential to promote more geographically-representative editorial boards.

Finally, universities and research institutes in the North need to re-examine incentive structures for academic recruitment and promotion that have an adverse impact on greater equality. Currently, these tend to undervalue mentoring work directed at the capacity building of more junior scholars—whether from the North or the South. There is also a privileging of publications which appear in highly select journals and big university presses, none of which include Africa-based publishers.

The marginalisation of other perspectives hinders intellectual diversity and distorts our understanding of major fields of knowledge and entire regions of the world. At a recent conference on Decolonising Development Studies organised at the University of Sussex, one attendee questioned:



"Would we find it acceptable if scholarly knowledge on women's conditions and gender inequality were produced almost entirely by men? To what extent would this influence the kinds of perspectives presented?" If we accept the link between positionality and perspectives, it is critical to tackle inequality in academic publishing and to expand the sources of knowledge for scholarship and practice.

On a small scale, CPAID, together with the Firoz Lalji Centre for Africa (FLCA) at London School of Economics and Political Science (LSE) has been proactively forging new links with African scholars and institutions to increase the visibility of Africa in the LSE's teaching, research and policy engagement. FLCA builds on a wide range of ongoing programmes and activities such as coordinating research on Africa, the Programme for African Leadership (PfAL), the LSE Africa Summit, the Africa Talks series, the African Visiting Research Fellowship Programme and its Africa at LSE blog. One of the centre's projects, a podcast series called 'Citing Africa', aims to provide advice to young African-based scholars on the publishing process. Episodes include topics such as 'Dealing with rejection' and 'Selecting the right journal for your work'. Academic writing workshops have been held in the UK, Belgium, the US, South Africa, Kenya, South Sudan, the DRC and Uganda, with another currently being organised in Sierra Leone. These are small steps, and much more needs to be done, but it has already been so rewarding. The activities have brought together scholars from the South and the North, and the capacities of the latter has been enhanced at least as much as the former.

The Centre for Public Authority and International Development (CPAID) explores how forms of public authority shape and are shaped by global challenges that affect international development and inclusive growth.

CPAID is led by Professor Tim Allen at the LSE and funded by the ESRC through the Global Challenges Research Fund.

Tin Hinane EI Kadi is a political economy researcher at the LSE.

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Inoculating against fake news?

Benjamin Franklin is said to have coined the phrase that an ounce of prevention is worth a pound of cure. This applies to many things, even combating 'fake news' and other forms of misinformation. By **Stephan Lewandowsky**, **Sander van der Linden** and **John Cook**

ISINFORMATION STICKS. Erasing 'fake news' from your memory is as difficult as getting jam off your fingers after a Devonshire tea. Once you hammer into people that there are Weapons of Mass Destruction (WMDs) in Iraq, it doesn't matter that none were found after the country was thoroughly scoured by the invading forces. The constant drumbeat of 'WMD, WMD, WMD' in the lead-up to the invasion, followed by innumerable media reports of 'preliminary tests' that tested positive for chemical weapons during the early stages of the conflict - but ultimately were never confirmed by more thorough follow-up tests - created a powerful impression that those weapons had been discovered. An impression so powerful that four years after the absence of WMDs became the official US position, 60% of Republicans and 20% of Democrats believed either that the US had found WMDs or that Iraq had them, but had hidden the weapons so well that they escaped detection.

Misinformation can stick even when people acknowledge a correction, and know that a piece of information is false. In a study conducted during the initial stages of the invasion of Iraq, colleagues and ourselves presented participants with specific warrelated items from the news media, some of which had been subsequently corrected, and asked for ratings of belief as well as memory for the original information and its correction. We found that US participants who were certain that the information had been retracted, continued to believe it to be true.

This 'I know it's false but I think it's true' behaviour is the signature of the stickiness of misinformation. Misinformation sticks even in



Once you hammer into people that there are Weapons of Mass Destruction (WMDs) in Iraq, it doesn't matter that none were found after the country was thoroughly scoured by the invading forces.

situations in which people have no ideological or motivational incentive to stick to their erroneous beliefs. In the laboratory, the original misinformation shines through in people's responses to inference questions when they are presented with entirely fictional but plausible scripts about various events. For example, people will act as though a fictitious warehouse fire was due to negligence even if, later in the script, they are told the evidence pointing to negligence turned out to be false.

Is there any way to unstick information?

There is broad agreement in the literature that combating misinformation requires that the correction be accompanied by a causal alternative. Telling people that negligence was not a factor in a warehouse fire is insufficient – but telling them that arson was to blame instead will successfully prevent any future reliance on the negligence idea.

Another way to combat misinformation is to prevent it from sticking in the first place.

An ounce of inoculation turns out to be worth a pound of corrections and causal alternatives. If people are made aware that they might be misled before the misinformation is presented, there is evidence that people become resilient to the misinformation.

This process is variously known as 'inoculation' or 'prebunking' and it comes in a number of different forms. At the most general level, an upfront warning may be sufficient to reduce - but not eliminate - subsequent reliance on misinformation. In one of our studies, led by Ullrich Ecker, we found that telling participants at the outset that 'the media sometimes does not check facts before publishing information that turns out to be inaccurate' reduced reliance modestly (but significantly) in comparison to a retraction-only condition. A more specific warning that explained that 'research has shown that people continue to rely on outdated information even when it has been retracted or corrected', by contrast, reduced subsequent reliance on misinformation to the same level as was observed with a causal alternative.

A more involved variant of inoculation not only provides an explicit warning of the impending threat of misinformation, but it additionally refutes an anticipated argument that exposes the imminent fallacy. In the same way that a vaccination stimulates the body into generating antibodies by imitating an infection, which can then fight the real disease when an actual infection

INOCULATING AGAINST FAKE NEWS? FEATURE



occurs, psychological inoculation stimulates the generation of counter-arguments that prevent subsequent misinformation from sticking.

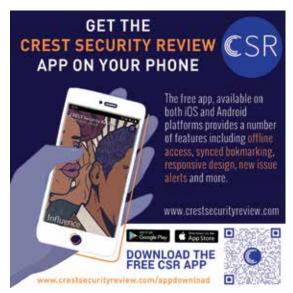
The inoculation idea can be illustrated with an example from climate change. Although there is a pervasive scientific consensus - reliant on 150-yearold basic physics and 15,000 modern scientific articles - that the Earth is warming from the burning of fossil fuels, political operatives often seek to undermine that consensus to introduce doubt about those scientific facts in the public's mind.

Ullrich Ecker and ourselves showed that people can be inoculated against those disinformation efforts by presenting them with (1) a warning that attempts are made to cast doubt on the scientific consensus for political reasons, and (2) an explanation that one disinformation technique involves appeals to dissenting 'fake experts' to feign a lack of consensus. We illustrated the 'fake-expert' approach by revealing the attempts of the tobacco industry to undermine the medical consensus about the health risks from smoking with advertising claims such as '20,679 Physicians say 'Luckies are less irritating".

By exposing the fake-expert disinformation strategy at the outset, the subsequent misinformation (in this case, the feigned lack of consensus on climate change) was defanged and people's responses did not differ from a control condition that received no misinformation about the consensus. (Whereas in the absence of inoculation, that misinformation had a detrimental effect.)

Misinformation sticks and is hard to dislodge. But we can prevent it from sticking in the first place by alerting people to how they might be misled.

Although there is a pervasive scientific consensus that the Earth is warming from the burning of fossil fuels, political operatives often seek to undermine that consensus to introduce doubt about those scientific facts in the public's mind.



Stephan Lewandowsky is Professor of Cognitive Psychology at the University of Bristol. Dr Sander van der Linden is a lecturer in psychology at the University of Cambridge and Dr John Cook is a research assistant professor at the Center for Climate Change Communication at George Mason University.

This article first appeared in CREST Security Review issue 08: www.crestsecurityreview.com/article/can-we-inoculate-against-

The Centre for Research and Evidence on Security Threats (CREST) is a national hub for understanding, countering and mitigating security threats. CREST brings together the UK's foremost expertise in understanding the psychological and social drivers of the threat, the skills and technologies that enable its effective investigation, and the protective security measures that help counter the threat in the first place.

CREST Security Review has a new website and mobile app.

Web www.crestsecurityreview.com

Examining online hate

The ESRC-funded HateLab is analysing data to see how social media spreads and amplifies hate speech in the aftermath of terror attacks and what factors help or hinder

N 2016 THE Brexit referendum was linked by the Home Office to the largest increase in police-recorded hate crime since records began. This was overtaken by a spike in hate crimes around the 2017 terror attacks in Manchester and London. Political votes and terror attacks have become 'trigger events' for hate crimes on the streets, but also for hate speech on social media.

Exclusive analysis by the ESRC-funded HateLab, part of the Social Data Science Lab, has shown that following trigger events it is often social media users who are first to publish a reaction. Discernible spikes in online hate speech were evident in 2017 that coincided with the UK terror attacks in Westminster, Manchester, London Bridge and Finsbury Park.

HateLab analysis has shown that social media acts as an amplifier of hate in the aftermath of terror attacks. Hate speech is most likely to be produced within the first 24-48 hours following an incident, and then dies out rapidly – much like physical hate crime following terror attacks. Where hate speech is re-tweeted, the evidence shows this activity emanates from a core group of like-minded individuals who seek out each other's messages via the use of hashtags. These Twitter users act like an echo chamber, where grossly offensive hateful messages reverberate around members, but rarely spread widely beyond them.

In the minutes to hours following an attack those associating themselves with far-right ideologies on Twitter capitalise on the event to spread messages of hate and division. These tweeters are also known to have spread messages posted by Russian-linked fake accounts, attempting to ignite and ride the wave of anti-Muslim sentiment and public fear.

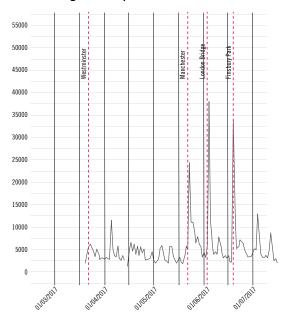
For instance, in the wake of the Westminster attack, fake social media accounts retweeted fake news about a woman in a headscarf apparently walking past and ignoring a victim. This was retweeted thousands of times by far-right Twitter accounts with the hashtag '#BanIslam'.

The additional challenge created by these fake accounts is that they are unlikely to be susceptible to counter-speech (eg, challenging stereotypes, requesting evidence for false claims) and traditional policing responses. It therefore falls upon social media companies to detect and remove such accounts as early as possible to stem the production and spread of divisive and hateful content.

The first few hours following a terror attack represent a critical period within which police and government have an opportunity to prevent hate speech, through dispelling rumour and speculation, appealing for witnesses and providing factual case updates. HateLab analysis shows that tweets from media and police accounts are widely shared in the aftermath of terrorist incidents. As authorities are more likely to gain traction in the so-called 'golden hour' after an attack, they have an opportunity to engage in counter-speech messaging to stem the spread of hate online. In particular, the dominance of traditional media outlets on Twitter, such as broadsheet and TV news, shows that these channels still represent a valuable pipeline for calls to reason and calm following criminal events of national interest. However, where newspaper headlines include divisive content, HateLab analysis suggests these can increase online hate speech.

HateLab continues to examine the factors that enable and inhibit the spread of online hate around events like terror attacks and key moments in the Brexit process. It has officially partnered with the National Police Chiefs' Council's (NPCC) National Online Hate Crime Hub to develop an Online Hate Speech Dashboard to monitor aggregate trends in real-time using cutting-edge artificial intelligence. The Dashboard will be evaluated in operations throughout 2019.

Race and religious hate speech - 2017 terror attacks



i By Professor Matthew Williams, Professor Pete Burnap and Sefa Ozalp HateLab is a global hub for data and insight into hate crime and speech.

Web HateLab.net

@hate_lab

@SocDataLab

Undercover economist

We talk to economist, writer and broadcaster Tim Harford about his work, developments in economics and his advice on starting out on a career in economics and policy

How has the ESRC supported your career?

The ESRC paid for me to study economics in a twoyear Master's degree at Oxford University. Without that start, there's no way that my career would have taken the twists and turns that it has.

What's striking is that the sum of money involved wasn't really very big; in principle I could have borrowed the money. But it doesn't look that way to a young student: for me, a few thousand pounds from the ESRC was the difference between diving into serious study, or giving up.

What do you see as the most important contributions of social science to society?

Well, social science is the study of us – how we make decisions, individually and as groups; how we allocate or mis-allocate resources; why some of us struggle and some do not, and what to do about that. We're difficult to study! But making progress is vital if we want to understand the societies we live in and how to make them better.

Can you tell us about a particularly interesting development in contemporary economics?

There's always something fascinating going on! We're still working through the implications of behavioural economics – the attempt to include more psychologically realistic behaviour in economic models, even though that makes them harder to analyse. That has led to a better design of pension systems, smarter regulations, and I think there's plenty of insight still to be gleaned from the field.

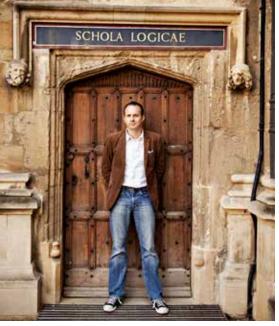
More recently it's become clear that a new frontier in economics is the use of big, messy datasets. For example, we can now get high-resolution photographs of anywhere on the planet at least once a day, and use machine learning to analyse what we're looking at. (Is that road well-maintained? Are those avocados ripe? How full is that oil tanker?) Obviously that is going to transform real-time economic analysis and economic forecasting. There are even people using Spotify streaming data to try to read the 'mood' of the economy; I'm not so sure about that one, but it gives you a sense of how much data is out there.

What do you think would help us better understand and address the UK's productivity puzzle?

Better measurement of output, particularly services. They're hard to measure.

You are an honorary fellow of the Royal Statistical Society – what is your favourite or most surprising statistic?

I've never been very interested in sound-bite statistics. They rarely tell you anything until you ask a bit more, so my favourite statistics are the ones that provoke questions rather than seem to clinch an argument.



notograph: Fran Monks

For example: in the UK, people are having less sex than in the 1980s. That seems to be true, according to the high-quality research study Natsal (which, by the way, had public funding vetoed by Margaret Thatcher). But it raises questions: how do they ask reliable questions about how much sex is going on? What should we make of the fact that heterosexual women and men give very different answers? Why are people having less sex? Who is having less sex – everyone, or just some important subset of people? Is this a global phenomenon or just here in the UK? The numbers should always be a starting point for further inquiry.

What gives you most satisfaction in your career: is it being an economist, a writer, presenter or broadcaster? And why? I enjoy them all, and they all reinforce each other, but writing books is probably the most satisfying activity because it's the hardest to do well.

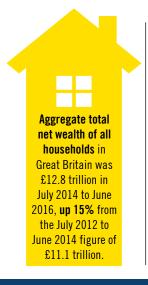
What advice would you give to someone just starting a career in research or policy?

Think about how to clearly communicate what you're doing and why it matters to someone outside your field. Communication is important anyway – but it may also help you do a better job, because if you can't explain what you're doing and why, it may be that you don't really understand it yourself.

i Tim Harford is an economist, journalist and broadcaster, and author of Fifty Things That Made the Modern Economy, Messy, and the million-selling The Undercover Economist. Tim is a senior columnist at the Financial Times, and the presenter of Radio 4's More or Less and radio/iTunes series Fifty Things That Made the Modern Economy.

THE UK BY NUMBERS WEALTH AND DEBT

We present an at-a-glance overview of key topics. This issue's focus is on wealth and debt, including pensions, home ownership, inheritance, savings and loans. Statistics are from the Institute for Fiscal Studies, the Office for National Statistics and the Resolution Foundation



Physical

Property (net)

In July 2014 to June 2016, the wealth held by the top 10% of households was around five times greater than the wealth of the bottom half of all households combined.





In July 2014 to June 2016, aggregate total private pension wealth of all households in Great Britain was £5.3 trillion; this has increased from £4.4 trillion in July 2012 to June 2014.

There was a striking

increase in the value of

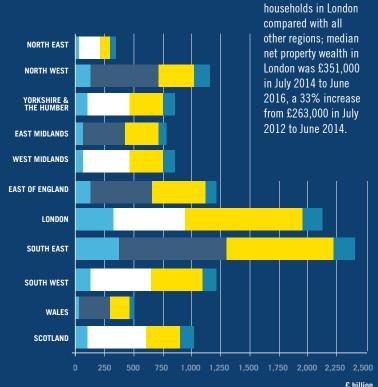
net property wealth for

Outside of primary housing and financial wealth, the largest component of other wealth is that held in second homes — houses, flats or holiday homes (including timeshares). This amounted to 11% of wealth holdings among 55- to 64-year-olds in 2014-15.

Around one-in-six (17%) of 55- to 64-year-olds in 2014-15 held such other property wealth.



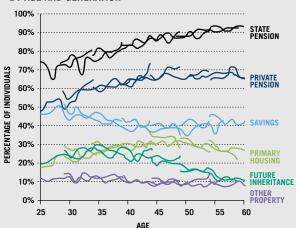
AGGREGATE HOUSEHOLD TOTAL WEALTH BY REGION AND COMPONENTS Great Britain July to June 2016



Private pension

Financial (net)

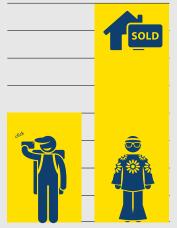
EXPECTED SOURCES OF MONEY IN RETIREMENT, BY AGE AND GENERATION



Note: lines are drawn for five-year date-of-birth cohorts. Sample is individuals who are not yet retired



88% of additional property owners are in the top half of the wealth distribution, and 79% of adults who earn income from additional properties as landlords are in the top half of the income distribution. Second home owners continue to stand out even when compared just to their peers; for example over four-fifths (82%) of baby boomer second home owners are in the wealthiest half of their generation.



Millennial families are only half as likely to own their home by age 30 as baby boomers were by the same age. Four-in-ten millennial families at age 30 live in the private rented sector, four times the rate for baby boomers when they were the same age. This rise in private renting means that young adults face greater housing insecurity than previous generations did.





Adults aged under 45 have slightly less space than they did two decades ago, whereas over 45s have more. And young adults are commuting longer distances: millennials are on track to spend 64 more hours commuting in the year they turn 40 than the baby boomers did at that age.

Multiple homeowners are most likely to be baby boomers,

the group born between 1946 and 1965 and currently aged 52-71. Boomers account for half (52%) of all the wealth held in additional properties, with far higher additional property asset levels than those now in their seventies and eighties had at the same age.

increase between 2000-02

of adults who own multiple

ten adults) in that period

properties, rising 1.6 million to 5.2 million people (one in

and 2012-14 in the proportion



















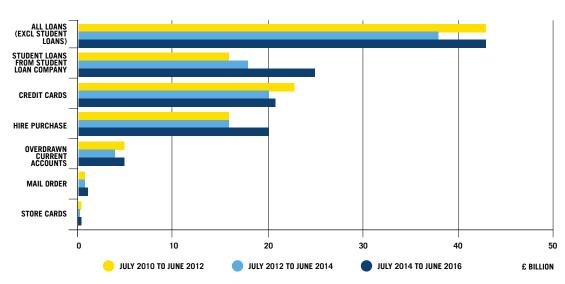
Nearly six-in-ten (59%) landlords are found in the South West, South East, East of England and London, which are also the areas where incomes and average wealth are highest.



Generation X — born 1966 to 1980 and currently aged 37-51 - accounts for a further quarter (25%) of additional property wealth.

TOTAL HOUSEHOLD FINANCIAL LIABILITIES, BY TYPE (£ BILLION)

Great Britain July 2010 to June 2016



Total aggregate debt of all households in Great Britain was £1.23 trillion in July 2014 to June 2016 (a 7% increase from July 2012 to June 2014), of which £1.12 trillion was mortgage debt (6% higher) and £117.0 billion was financial debt (15% higher).

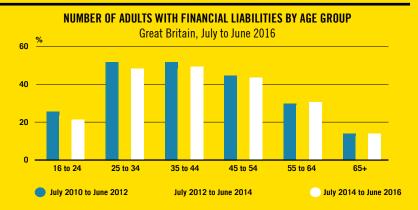
TOTAL HOUSEHOLD DEBT, &BILLION



Of those with financial debts, 9% also indicated that they found these debts to be a

"heavy burden", 21% that it was somewhat of a burden and 70% that it was not a problem at all.

In July 2014 to June 2016, 66% of employees were actively contributing to a private pension scheme compared with 25% of self-employed, with median current pension wealth for employees being £33,000 compared with £21.000 for the self-employed.



A nation of differences

Professor Philip McCann explains the enigma of the UK whose economy is unlike any other. There are massive differences in economic productivity between regions and nations, and a system of government that is the least equipped to address the issues. By **Martin Ince**

HILIP MCCANN IS Professor of Urban and Regional Economics at the University of Sheffield. But he is finding life in the UK a little strange, having been out of the country for most of the past 12 years, especially in New Zealand and the Netherlands. He explains: "The UK has changed a lot in this time, partly because of the Global Financial Crisis. But it still has its own way of doing things, including the narratives that the public and the media tell about the country."

This is especially true, says McCann, when it comes to his own interest as an economic geographer. His work centres on the economic role of towns, cities and regions, and how they relate to national economies. He has studied this dynamic in nations ranging from the UK to Thailand, Japan and the United States, and says: "I have concluded that there is a real enigma here. It is very hard to draw a real comparison between the UK, whose economy is very specific and unique, and any other country."

The first and most striking difference between the UK and other nations, says McCann, is the massive variation in economic productivity between its regions and nations. These different levels of productivity in turn drive levels of affluence and influence social conditions, and are regarded as a key determinant of economic success.

McCann's message is that amongst the industrialised economies, the UK has "some of the world's biggest inter-regional differences in productivity." He has examples to make the point. "On some measures the UK has bigger productivity variations than the whole of the Eurozone. It has regions that are less productive than many parts of the Czech Republic, Slovakia, the Baltic states and the former East Germany. And almost half of the UK population today lives in areas that are poorer than West Virginia or Mississippi in the US, where British TV companies go to make documentaries about poverty."

Continuing the US state analogy, McCann adds that the UK also exhibits huge variations in economic productivity over surprisingly small distances. "The UK is only the size of Wyoming, but we find consistently that the benefits of high productivity in some regions do not spread into the less productive ones." He adds: "There is no simple story about this. Areas that do well on one dimension do less well in others [in a way that is hard to explain]. Even I don't understand it completely, and I wrote the standard textbook on the subject."

This failure would be a cause for concern anywhere, but in McCann's view it is especially damaging in the contemporary UK. He says: "The UK's system of government is the least equipped we can imagine to address these issues. It is very centralised, but in addition it is organised on sectoral lines – so you get a ministry for an area such as transport – rather than regionally. That means that you tend to have one centralised and top-down policy for a highly diverse country."

This approach works well, says McCann, in nations which are very equal inter-regionally. He cites the Netherlands and New Zealand as examples, having worked in both. Japan, despite

On some measures the UK has bigger productivity variations than the whole of the Eurozone

being far bigger, is another example. "There," he says, "policymakers can think about a policy knowing that it will fit and gain traction in the same way all over the country. But if you have big internal differences, like the UK has, that top-down approach will not work."

In contrast to these comparatively homogeneous nations, McCann sees the UK as a patchwork in which the strong productivity growth seen in some regions is "counteracted" by the slow pace of growth elsewhere.

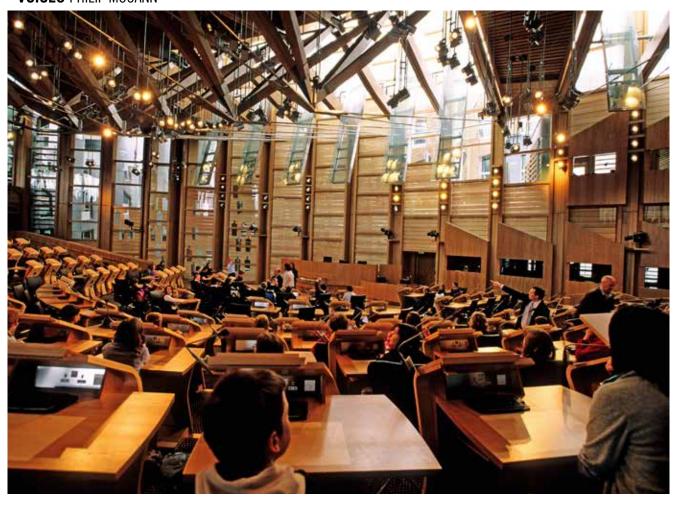
The higher productivity areas, he says, include London and a wide swathe of the South East, the East and parts of the South West of England, as well as Scotland. In the other camp are the English North and Midlands as well as Wales and Northern Ireland. He adds that these two groupings are almost equal in population. So the areas of over- and under-performance cancel each other out and the UK economy as a whole does not go anywhere. And while part of the effect can be blamed on the global financial crisis, which led to a period of low-income growth, the effects still persist a decade later.

Northern Powerless?

McCann agrees that these issues are now on the policy agenda more strongly than in the past. They are the underlying logic behind the Northern Powerhouse and Midlands Engine concepts and have been taken up by the Institute for Public Policy Research and the RSA, amongst others, in a series of reports on the North of England Economy. There is also growing interest



VOICES PHILIP MCCANN



in local economic strategies. In his view, these ideas are all pointing in the right direction. But he adds: "These are not issues that can be sorted out in a few years. The problem is 20-30 years old and calls for large-scale action."

He is particularly keen to debunk the idea that everything that happens in the UK depends on London. McCann says London has been decoupling economically from the rest of the country since the late 1980s. "My research has shown that investing more in London does not drag the rest of the country up. In fact, the more prosperous parts of the country are more like a separate economy. Investing

▲ The famously tragic language skills of the British may be part of the problem

in them leaves huge areas behind. There is no way of avoiding the reality that these weaker areas are the ones that need uplift."

McCann is full of praise for Scotland, especially the way in which it has made use of devolution since the Scottish Parliament was set up in 1999. "Devolution has been helpful and has allowed Scotland to move forward. Scotland does have extra central funding under the Barnett formula [for equalising public spending in the UK regions]. But it also has a long tradition of evidence and analysis." This, he thinks, has allowed Scotland to be a pioneer in progressive and data-driven policy.

By contrast, he says, "Other regions have fewer

Professor McCann is full of praise for Scotland, especially the way in which it has made use of devolution since the Scottish Parliament was set up in 1999.

resources, and are less good at using evidence. And of course, the financial crash overwhelmed the scope for regional thinking." But he adds that some of today's Local Enterprise Partnerships are improving their performance, and in particular that regions including London and Manchester have become much better at using a range of evidence in policymaking. One problem is that "this approach tends to be adopted in places that are already doing well. In general there is a big disconnect between the policy rhetoric and reality as it appears in the data."

And perhaps unexpectedly, McCann adds that the famously tragic language skills of the British may be part of the problem. Near-at-hand Germany, The Netherlands and Scandinavia, he points out, are more equal and in many ways more successful societies than the UK. But nobody in Britain knows about them.

He says: "The UK's poor language abilities mean that we tend to look at how things happen in the US, Canada and Australia. These examples are often of limited use to us, because these countries are very big and have federal political structures. Their economic geography is totally different from ours. We just don't spend enough time reading German documents on economic planning."

McCann points to a range of advantages built into the German system that the UK might learn from. First is that the 16 Länder in which the country is divided give it a less monocentric political culture. There is no economically dominant city, and the political and business capitals are separate. In this respect, Germany is

more like the highly devolved US, Canada and Australia than the UK. This diversity also means that the media narratives in these nations are less centred on the capital.

In addition, these federal political structures mean that the policy machine and the economic actors such as business are not too distant from one another. McCann thinks that a population of perhaps 4-5 million, typical for a German 'Land' or a Canadian province, or indeed Scotland, hits a "sweet spot" for scale that England does not have.

I do not support extreme localism, which tends to turn into nimbyism quite quickly

While emphasising that he is an economic geographer, not a politician, McCann does think that there will be future moves towards structures at this scale in the UK. He explains: "This is what we term the meso-scale of organisation. Nearly all successful countries organise at this level." He adds that he is not in favour of much smaller levels of policymaking. "I do not support extreme localism, which tends to turn into nimbyism quite quickly." The meso-scale, he notes, is mentioned positively in the 2017 UK green paper on industrial policy. "London and Scotland, the successful parts of the UK, already work at this scale."

Working at this scale might also counteract the belief that cities are all-important in regional economics. For McCann, this is another example of US-centric thinking that does not work in the UK. There, he believes, it is generally thought that towns will be left behind economically as cities grow. While this is, he says, "true-ish" in some places including parts of North America, it does not generally apply in the UK. There, small towns and even villages are often highly productive. He explains: "There are struggling towns in the UK, but they are in struggling regions. The narrative that productivity growth benefits are all about cities, and that we have

Insights into productivity



The ESRC announced the establishment of the Productivity Insights Network in January 2018.

The new network will assess the state of productivity research in the UK; improving our understanding of the factors affecting our productivity and informing the development of new strategies and research.

The Productivity Insights Network is led by Professors Philip McCann and Tim Vorley of Sheffield University Management School. They lead a total of nine universities: University of Cambridge, Cardiff University, University of Strathclyde, Durham University, University of Glasgow, Glasgow Caledonian University, University of Leeds and University of Essex.

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a 'cities-versus towns' divide in the UK, is untrue when you look at the data, and I dislike it strongly. In the UK the big productivity issues are at regional level. Cities outside south and south-east England have been underperforming for 20-30 years by comparison with those in the rest of the UK, EU and OECD. The hope in the past was that big companies in these cities would use their supply chains to drive the productivity of the rest of the city. In the past decade this appears not to have happened and the productivity of many of our big cities has been flat since 2008."

These interregional productivity problems, he says, are likely to get worse with Brexit, partly because of the loss of EU Cohesion funds in lower productivity UK regions. And more importantly, the UK's less successful regions tend to have businesses which do relatively more trade with the EU, so these same regions are more exposed to Brexit. "The story that metropolitan elite were the main winners from EU membership was exactly wrong," he points out.

New insights

In his new role in Sheffield, McCann is looking for fresh insights into these issues as codirector (with Professor Tim Vorley) and Principal Investigator of the ESRC's £1.8-million Productivity Insights Network (PIN) programme, which runs until 2020. He says: "The evidence we have so far lays out a broad map of these issues. This network will produce more evidence and details in terms of specific communities, places and economic sectors." He points to the scope for linking data on topics such as health, incomes, tax, education, periods in work and out of work, wages during each period of work and access to credit, all at postcode and household level. This would create a far more textured understanding of the problem than we possess today.

McCann adds that nations such as New Zealand and Australia have long-established expert commissions on productivity, which gather and analyse data in this field. The PIN network is linking with them and also to the OECD Spatial Productivity Lab at Trento in Italy. He hopes that it will be possible for the network to "get under the skin of some thorny issues", and reports that there is already big interest in the calls for funding that the Network has issued. "Lots of people now want to think about this issue," he says, "including many in business and government. The whole point of the discussion is to engage broad areas of society, so the programme is now at a super-interesting stage."

Professor Philip McCann is Professor of Urban and Regional Economics at the University of Sheffield Management School. Philip is also the Tagliaferri Research Fellow in the Department of Land Economy at the University of Cambridge 2015-2018 and Honorary Professor of Economic Geography in the Faculty of Spatial Sciences at the University of Groningen, The Netherlands, 2017-2022.

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Putting data to work

The new Administrative Data Research Partnership is a collaboration between the ESRC, the Office for National Statistics and centres in the devolved UK administrations, designed to support government and academic objectives through better access to data. By **Martin Ince**

HEN THE WORD 'statistics' was first used in 1787, it referred to the numerical information needed to run the state. At that time, the amount of such material was modest. But in the modern world, a vast range of government departments gather data that can inform both policy and academic research.

In response, the ESRC is collaborating with the Office for National Statistics (ONS), and centres in the devolved UK administrations, to establish the Administrative Data Research Partnership. This new structure is designed to support both government and academic objectives through better access to data.

'Administrative Data' is the term for statistical material gathered by any arm of government. The census is the most obvious example, but data on income and spending, educational achievement, housing, health and employment are among many other vital datasets generated by government.

Anna Vignoles, professor of education at Cambridge University and an ESRC council member, has been advising on the creation of ADRP. She says: "The aim of this partnership is to ensure that data is used for research, and especially for research which is policy-relevant and practice-relevant. We want to find out what questions we can answer by linking data from a range of government sources."

The data available via the ADRP will be physically in the hands of the ONS, which Vignoles says will guarantee its security and anonymisation. "ONS has a high level of public trust but we still expect debate on issues such as risk and privacy. This means we have to make the case to government and the public about how important this initiative is. We need to convince government departments of the real benefits in sharing their data through ADRP."

Dr Emma Gordon is the ESRC director responsible for ADRP. On the basis of her previous experience at the UK Treasury and elsewhere, she says: "Government departments are good at using their own data. But they can find it hard to get at other departments' data or to link it to their own." Part of the problem is the legal uncertainty of sharing and linking, and this is where the ADRP's modus operandi is intended to help. "In the past, individual departments have had to sort this out: and someone could go to jail if they got it wrong." In addition, the 2017 Digital Economy Act makes it simpler to justify the use of administrative data,

except on health, in cases where there is a clear public benefit. As the main aim of ADRP is to meet the policy needs of government departments, this ought to be feasible in most cases.

She points out: "ESRC has invested heavily in ADRP data infrastructure at the ONS. It will allow us to store a lot of data, to provide linkage to it and to keep it anonymous. In the past there was no real reason for government departments to give us data." Now, she hopes they may start to see the point.

Most deeper policy questions span more than one department, and our approach should too

Anna Vignoles adds: "There is an awful lot of good data in government departments. The insights we can get are enhanced, for instance, if we can link educational data to data held by the Department for Work and Pensions on employment and by the Ministry of Justice on crime. Most of the deeper policy questions span more than one department and our approach to data should do so too."

As well as holding rich resources of data, the intention is for the ADRP to help develop new ways of linking and analysing it. Vignoles says: "The Administrative Data Research Network [ADRP's predecessor body] did extensive work on methodology, and we have a budget to do more. For academics to provide value to users in government departments, we need to have the right methods, the right data and of course the right questions."

Gordon agrees that the development of novel methodology will be "a big part" of the ADRP mission. "The devolved administrations [of the UK] realise the importance of training in the use of linked datasets, and this will happen in our partnership with the ONS as well. As more people get access to these data, we will need more how-to knowledge on methodology for linking data. There is already a growing realisation of the power of these methods."

In Vignoles' view, the UK is already a world leader in some forms of data, and is especially good at linking longitudinal data collected through people's lives to administrative data. But she adds that there are creative uses of linked data in Scandinavian nations, and that in the US more use is made of commercial data, for example on spending transactions.

Gordon agrees that Scandinavia has some advantages over the UK when it comes to linking



data. Matters there are simplified by the fact that there is a full population register in nations such as Norway. "That means that it is possible to gather administrative data on people throughout their life course, unlike the UK where we take snapshots at specific points."

She adds that in the UK, individual government departments have a lot to gain from allowing the ONS to be the repository for the data they gather. "In most of government, data sharing is one of the activities that tends to suffer when spending is tight. It can never be a priority compared to work related directly to policy."

By contrast, she characterises the new ADRP approach as "de-risking" data issues for government. It provides it with a trusted route for data to be curated and made available, whether for academic users, the public at large, or indeed government itself.

Vignoles and Gordon also share an enthusiasm for making the ADRP visible throughout the UK, not just along the corridors of power in London. Vignoles says: "The ADRN has had huge success in Scotland, Wales and Northern Ireland. In each country there have been exciting projects with impact. ADRP has funding for this to continue and grow, and indeed to show the rest of the UK the right way to do this."

As Gordon sees it: "The devolved administrations have proved the benefits of analysing linked data. We intend to champion the success we have had in the devolved UK, where we have seen new policy insights coming from datasets that had never been linked before." There is no lack of interest in linked data within central government, but it inevitably has longer chains of command which call for more people to sign up to any new process.

Linked data showed that rich and noor children with the same level of prior school achievement were equally likely to go to university - the real issue was maior differences in school achievement.

The ADRP is only now getting started, but Professor Vignoles and Dr Gordon have been active in this field for some time. What is their favourite example of linked data in action?

Vignoles works in the field of education data, and points to a case in which she and colleagues were able to illuminate the contentious area of school achievement and university entry. "The HESA [Higher Education Statistics Agency] data had never been linked with data on school achievement. Once we did that it was possible to see deep inequity in university access." Linked data showed that rich and poor children with the same level of prior school achievement were equally likely to go to university. The real issue was major differences in school achievement. This work has now been extended to look at graduate earnings from a full range of courses and universities.

Emma Gordon points to work early in her career, on the Avon Longitudinal Study of Parents and Children. She did research on linking these data from Bristol to hospital episode statistics, looking for links to physical or mental disability. If a child of 12 is diagnosed as being on the autistic spectrum, what were their hospital notes saying about them at the age of two, compared to the surveys the mothers were filling in at that time as part of the study? "This analysis was a very powerful one and produced a lot of primary research. It was the spur for me to get more academics to use administrative data on everything from birth registrations to cancer diagnoses, and illustrates the advantages of making this data more accessible."

Administrative Data Research Partnership Web esrc.ukri.org/adrp

Who bears the Brexit brunt?

With only months until the UK leaves the EU, Brexit negotiations are reaching a climax. There remains, however, a considerable degree of uncertainty about how UK trade policy may change after Brexit. By **Agnes Norris Keiller**, Institute for Fiscal Studies

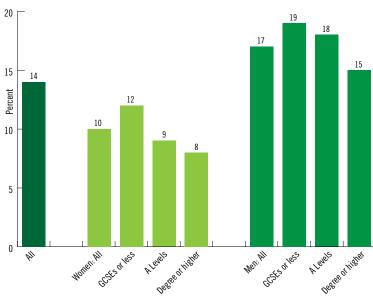
HILE THE GOVERNMENT has stated it wishes trade between the UK and the EU to remain "as frictionless as possible", it also aims to eventually leave both the Customs Union and the Single Market. Leaving these institutions will almost inevitably make it harder for firms in the UK to both import from, and export to, the EU. What has so far been less clear is exactly where in the economy such impediments to trade are likely to have the greatest impacts.

Recent research carried out at the Institute for Fiscal Studies has examined in detail how different industries could be affected by potential trade barriers between the UK and the EU and which types of workers are most at risk of negative impacts.

Increased barriers to trade with the EU would have a negative impact on the economy as a whole

According to this research, increased barriers to trade with the EU would have a negative impact on the economy as a whole, but these impacts will also vary greatly across different industries. If the UK were to leave the EU Customs Union, manufacturers of transport equipment (including car manufacturing), of chemicals and pharmaceuticals and of clothing are likely to

Fraction employed in very highly exposed industries under a 'No Deal' trade policy scenario, by sex and education





experience the largest negative impacts on their value added (the value of output minus the cost of production inputs) across a range of trade policy scenarios. If the UK were to leave the EU without a trade deal, for example, increases in trade barriers would expose these industries to estimated reductions in their value added of between 15% and 20%. These effects are more than seven times greater than the estimated negative impact of trade barriers on the economy as a whole. Negative impacts in these industries would be less severe if the UK stayed within the European Economic Area, but they would still be exposed to falls in value added of between 4% and 7%.

Clothing, transport equipment and chemical and pharmaceutical manufacturers are particularly exposed to negative impacts for three reasons. First, around 25% to 30% of the inputs used in these industries are imported from the EU. A UK car manufacturer may for example import engines from Germany and bumpers from Eastern Europe. Second, around 25% to 40% of output in these industries is sold to the EU. As a result, reductions in demand from European consumers as imports from the UK become more expensive would have a relatively large negative impact on demand for these industries. Finally, the trade barriers affecting these sectors are expected to be greater than in other sectors. This could for example be because delays caused by customs checks are particularly costly for "just-in-time" manufacturing methods, which are common in the car industry. In combination these facts suggest increases in input costs and falls in demand due to trade barriers are

WHO BEARS THE BREXIT BRUNT? FEATURE

likely to be larger in these industries than in others, leading to greater exposure.

The IFS research also found that the agriculture sector and wood and paper product manufacturers may stand to gain from increased UK-EU trade barriers. If the UK left the EU without a trade deal, for example, increases in trade barriers are estimated to boost value added by around 11% in the agriculture and fishing industry and by around 3% in the wood, paper and printing industry. Increases in value added in these sectors are estimated to be smaller if the UK remained in the European Economic Area, but still positive. These impacts are due to UK firms in these industries increasing their market share in the UK as trade barriers cause the cost of EU imports, with which they compete, to rise. However, the industries that could benefit from higher trade barriers make up only a small share of employment, and the benefits to those involved in these industries would come at the expense of consumers who would face higher prices and reduced choice.

The agriculture sector and wood and paper product manufacturers may stand to gain

The way in which changes in industry value added due to trade barriers will impact workers depends on two main factors. The first factor is how businesses respond to these changes. Firms that experience reductions in value added due to trade barriers may reduce the size of their workforce or suppress the wages of their employees. Alternatively they may leave pay and employment unchanged and instead take a hit to their profits. If companies pass on some of the impact to workers (either in the form of job or pay cuts), the second factor that will determine the outcomes of adversely-affected workers is how easily they are able to find reemployment in other industries. This will depend on whether there are alternative employment opportunities in their home region, how easily workers can move to new locations if there are not, and whether they possess skills that are easily transferable between industries.

This complexity makes it hard to anticipate exactly how trade barriers are likely to affect workers. Nonetheless, it's quite likely that workers employed in industries that experience large reductions in value added due to trade barriers face a higher risk of experiencing negative effects. To focus on the workers that are most exposed to negative impacts, the IFS researchers classified workers as 'very highly exposed' if they are employed in industries where value added is estimated to fall by more than 5%.

Looking again across a range of trade policy scenarios, the analysis shows that very highly exposed workers are more likely to be male and to have low formal educational qualifications.



If the UK left the EU without a trade deal, for example, nearly 20% of men with low levels of formal qualifications (around 1 million workers) would be very highly exposed to negative impacts in comparison to 15% of highly educated men and less than 10% of highly educated women. This number rises to 25% among men with fewer educational qualifications in Northern Ireland and the West Midlands, suggesting that these workers are particularly at risk of negative impacts as alternative job opportunities in less-exposed industries would be harder to find.

Workers in process, plant and machine operative occupations also face a higher risk of negative effects with 29% of the workers in this occupation group - roughly half a million people - employed in industries where value added is estimated to fall by more than 5% in the event of a No Deal Brexit. Workers in these occupations tend to be older and are more likely to have skills that are specific to their current roles and industries of employment. As a result, they may find it particularly difficult to move to as well-paid employment in less adversely affected industries. Policymakers should therefore consider whether specific interventions (such as greater retraining and employment support) could help workers in these particularly highly exposed groups to adjust to the introduction of new trade barriers.

While there remains considerable uncertainty about how trade policy between the UK and the EU is likely to change in the coming years, this research shows we can be more certain about which industries and types of workers are most exposed to negative impacts due to increased barriers to trade. This means that, despite ongoing uncertainties, policymakers are in a position to assess whether interventions to mitigate the impacts of future trade barriers on the most adversely affected parts of the economy are warranted.

Agnes Norris Keiller is a research economist at the Institute for Fiscal Studies. She is currently researching the labour market impacts of future trade policy scenarios in work funded under the ESRC's UK in a Changing Europe initiative.

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The age divide

Housing debates have almost entirely ignored residential age segregation as one of the potential consequences of the ongoing housing affordability crisis. Is age segregation something we should be worried about? By **Albert Sabater**, **Nissa Finney** and **Elspeth Graham**

CENTRAL HOUSING POLICY issue in the UK is the so-called 'affordability crisis' – the fact that both owner-occupied and private rental housing have become increasingly unaffordable, particularly for young adults. While the UK's affordability crisis has been developing slowly for decades, house prices rose steeply in the 1990s and early 2000s, and the potential consequences for the age make-up of different communities has so far been neglected.

An increase in residential separation of older and younger adults in England and Wales is evident: since the 1990s, neighbourhoods have become less age-mixed. In 1991, 33 districts (around 10%) had moderate levels of residential age segregation; by 2011 this had risen to 190 (almost 60% of districts).

Should this be seen as a problem? Conventional wisdom perhaps suggests that residential age segregation is expected and unproblematic given that people have different housing needs at different stages of life, and housing types tend to be clustered. However, residential age segregation can be considered, in many ways, similar to ethnic, racial or social class segregation. It is likely to emerge from an intricate interplay between changing individual/household preferences at different life stages on the one hand, and external constraints on the other, with housing affordability being particularly influential. Thus, increasing age segregation between generations can be considered problematic if it reflects an inability of households to access the housing that they need. Age segregation might also be seen as problematic in its effects: the spatial separation of people of different ages can hinder essential opportunities



for older and younger individuals to meet and interact, with associated policy implications for social cohesion and the organisation of society.

One of the main mechanisms of residential segregation is the varying access of households to

Many younger people and those on low incomes are priced out of the market

housing. Under conditions of housing shortage, households compete for homes and locations, hence their strength within the housing market depends on their resources (eg, income, social contacts, knowledge, and political power). Because the construction of new housing in the UK has been decreasing steadily since the 1970s, leading to a substantial housing shortfall, the main effect of policies that stimulate housing demand – such as Help-to-Buy, Buy-to-Let etc – is to increase house prices rather than supply. In such housing market conditions, it is no surprise that levels of housing affordability have decreased significantly in many areas as average house prices have outstripped average earnings, with the result that many younger people and those on low incomes are priced out of the market.

This can be seen in the reduction in the number of first-time buyers and the decreasing home ownership rates among younger adults. According to figures from the Office for National Statistics, over half of the 25 to 34 age group were home owners in 2001 (59.6%), whereas this had declined to just over a third by 2014 (35.8%). There were also reductions in home ownership over the same period among the 35 to 44 age group (from 73.9% to 58.8%).

Younger adults generally have fewer resources than older adults to afford housing, although there are also stark socioeconomic differences within generations. These variations in housing affordability are contributing to concentrations of populations of similar age and socioeconomic status in different areas. Those with lower economic resources face restricted access to certain areas, limiting their choice, whereas for those with greater economic resources housing preferences can take precedence. Housing (dis)advantages between older and younger adults have therefore become a potential source of intergenerational conflict. Nonetheless, there remains a need for a better understanding of the geographic significance



FEATURE THE AGE DIVIDE



of housing (un)affordability for trends of residential age segregation over time.

Our analyses indicate that the probability of an older adult (65 and over) sharing the same neighbourhood with a younger adult (aged 25-44) has decreased over time, with evidence of higher residential age segregation as housing affordability decreases across each neighbourhood in England and Wales. While this relationship could be expected to be driven by the effect of London house prices, our results indicate a similar association between housing (un)affordability and residential age segregation outside London.

So, this is not just a London phenomenon and it's not just an urban phenomenon. Our results show that the gradient of increasing residential age segregation as affordability decreases is more evident in rural areas than in urban areas. But it is also clear that neighbourhoods in both rural and urban areas with lower levels of affordability are becoming more residentially age-segregated. This pattern of increased residential separation between older and younger adults indicates that there is an important socioeconomic dimension to residential age segregation, and that age is a significant dimension along which residential neighbourhoods with different levels of housing (un)affordability are becoming segregated.

The current policy focus in the UK and elsewhere on 'ageing in place' highlights one possible mechanism expected to increase residential age segregation, but the lack of affordable housing is also playing a key role. Dramatic increases in house prices relative to earnings and restrictions on mortgage borrowing imposed since the financial crisis are resulting in an increasing number of young adults facing the prospect of

a lifetime of renting. Indeed, evidence suggests that residential aspirations have been significantly hampered by recent housing market failures, just as public resources have become constrained and employment conditions have worsened. In the UK context, these changes are likely to be reshaping not only the tenure composition of the housing stock, with more focus on private renting as the main alternative to home ownership, but also the residential distribution of older and younger adults.

The potential socio-spatial consequences of increasing age segregation are considerable. The inability of many young people to access desired housing can affect other aspects of life, such as starting a family and employment opportunities. Moreover, increasing residential separation by age implies reduced inter-generational interaction that could threaten social cohesion. The spatial separation of older and younger adults is not only likely to be reducing cross-age interactions outside the family but also has substantial implications in terms of socio-political change, including competition between age groups for limited public resources to support the interests, agendas, services, and institutions that best meet age-specific needs.

Albert Sabater, Nissa Finney and Elspeth Graham, ESRC Centre for Population Change, School of Geography and Sustainable Development, University of St Andrews (Un)Affordable housing and the residential separation of age groups, CPC Briefing Paper 45:

www.cpc.ac.uk/docs/BP45_UnAffordable_housing_
and_the_residential_separation_of_age_groups.pdf
Web www.cpc.ac.uk
Telephone 020 76126661

@CPCpopulation

News briefs

ESRC LAUNCHES 2019 CELEBRATING IMPACT PRIZE

The ESRC has launched the 2019 Celebrating Impact Prize. The ESRC Celebrating Impact Prize is an annual opportunity to recognize and celebrate the success of ESRC-funded researchers in achieving and enabling outstanding economic and/or societal impact from excellent social science research. There are six categories for the Prize:

- Outstanding Business and Enterprise Impact
- Outstanding Public Policy Impact
- Outstanding Societal Impact
- Outstanding International Impact
- Outstanding Early Career Impact
- Impact Champion

Applications are welcome from individuals or teams detailing the outstanding impact of their research,

knowledge exchange or impactgenerating activities.

ESRC Executive Chair, Professor Jennifer Rubin said: "This is a fantastic opportunity for social scientists to be recognised for the impact their work makes. Previous winners have produced excellent work across a breadth of topics. I have no doubt that this year we will see a diverse range of entrants from across the social sciences."

All finalists have a film professionally made about their work and its impact, and winners are awarded £10,000 to spend on further knowledge exchange, public engagement or other communications activities. To apply, researchers (individually or in a team) complete an online form setting out their impact activities and achievements. This is

reviewed by academics, engagement and knowledge exchange experts and research users, and shortlisted applicants are invited to an interview, along with non-academic supporters who help describe the impact of their work. Finalists attend a high-profile awards ceremony, where the winners are announced.

The 2019 Prize is now open for applications and the application deadline is 16:00 on 8 January 2019. For more information, see: esrc.ukri.org/research/celebrating-impact-prize/



PROFESSOR JENNIFER RUBIN APPOINTED TO INDUSTRIAL STRATEGY COUNCIL

Professor Jennifer Rubin, ESRC Executive Chair, has been appointed to the independent Industrial Strategy Council.

Andy Haldane, Chief Economist at the Bank of England, will act as Chair of the Council and will develop the work programme. The Council draws on expertise from business, academia and civil society across the UK. It will meet three to four times a year, and its remit will include reviewing the impact of the Industrial Strategy, its contribution to UK productivity growth and developing a series of success measures.

Professor Rubin said: "I am delighted to be asked to join the Industrial Strategy Council. It is a great opportunity to bring interdisciplinary social science to the endeavour, thinking about how we assess and evaluate the range of important outcomes for the economy and society. I look forward to working with the Chair and the wider Council in contributing to this important challenge." For more information, see: www.gov.uk/government/news/new-industrial-strategy-council-meets-asmembership-announced

ESRC ANNOUNCES LAUNCH OF LEGACY CENTRE STATUS FOR EXISTING ESRC CENTRES

ESRC has announced the launch of legacy centre status and funding for existing ESRC centres. This represents the latest stage in the implementation of ESRC's new graduated centres funding model, announced in 2017, introduced with the aim of fostering and sustaining a larger number of centres over the longer term.

Legacy centre status introduces the opportunity for centres to be invited to apply to be recognised as an ESRC centre for a further five-year period once substantial ESRC centre funding comes to an end, through a process of legacy centre status review.

ESRC legacy centre status review will be a rigorous process of review to establish the ongoing excellence and credibility of a former ESRC centre. Application for legacy centre status review is by invitation only.

Centres will typically be invited to apply for this status as their transition funding comes to an end having received between eight and 10 years of funding from the ESRC, and should be largely self-sustaining.

We have, as an exception, invited a small number of former ESRC centres

to apply for the first legacy centre status review that were still active when the centres policy review began, but were unable to benefit from the opportunities created by this recent change in policy.

If successful, legacy centre status will enable the centre to continue to brand itself as an ESRC centre, receive up to £100,000 funding (at 100% fEC) over the five-year period to support knowledge exchange and capacity-building activities, and seek advice and support from the ESRC in its communication and engagement activities.

This extended period of recognition is intended to: maximise the impact of the research activity and ESRC investment to date through support for knowledge exchange, capacity-building and communication activities; support the centre through its assurance of excellence in leveraging further funding; and support the centre's efforts to ensure the influence and use of its research.

For more information on the review and the background and principles behind the revised funding model, see the centres policy summary: esrc.ukri.org/files/funding/guidance-for-large-investments/centres-policy-summary

People

ESRC APPOINTS TWO NEW DIRECTORS

Professor Paul Nightingale has been appointed as ESRC's new Director of Strategy and Operations, and Professor Alison Park will be ESRC's new Director of Research.

Professor Alison Park will be joining ESRC as our Director of Research, from the UCL Institute of Education.

Alison is a Professor of Social Research and the Director of CLOSER (Cohort and Longitudinal Studies Enhancement Resources), a significant ESRC-funded collaboration. CLOSER brings together eight leading UK longitudinal studies, the British Library and the UK Data Service to maximise the use, value and impact of longitudinal studies. It does this by stimulating longitudinal research, developing and sharing resources, and providing training. Prior to joining UCL, Alison led a research team at NatCen Social Research which carried out a range of government and academic studies, both qualitative and quantitative, including Understanding Society, the British Social Attitudes Survey and the UK arm of the European Social Survey.

Professor Paul Nightingale will be joining ESRC as our Director of Strategy and Operations, from the University of Sussex.

Paul is a Professor of Strategy at the University of Sussex and was Deputy Director of the Science Policy Research Unit (SPRU). He is one of the UK editors of *Research Policy*, the leading international innovation studies journal.

Originally trained as a chemist, he worked in industry before undertaking a PhD in Science Policy at SPRU. His main areas of research are science policy and the strategic management of technology, and he has researched extensively on innovation and its management and financing. Paul spent most of his career as a contract researcher and spent 10 years with the Complex Product Systems Innovation Centre, funded by the ESRC.

ESRC APPOINTS NEW DIRECTOR FOR ADRP STRATEGIC HUB

Dr Emma Gordon will be joining ESRC as Director of the ADRP (Administrative Data Research Partnership) Strategic Hub on 10 December. Emma is currently a Deputy Director at HM Treasury, leading the team supporting government economists and social researchers across government. As part of this, Emma also led the development of the new Government Economic Service Degree Apprenticeship Programme.

The Strategic Hub will be based in Swindon, England, and Dr Gordon will work with the Office for National Statistics (ONS) and the three ADRP hubs in Scotland, Northern Ireland and Wales. The ONS will provide secure access to data for researchers and utilise its existing infrastructure and its expertise in data acquisition, curation and provision to support ADRP. The centres in the devolved administrations have a wealth of knowledge gained from the previous work undertaken on the Administrative Data Research Network. These centres will work with devolved governments in Wales, Scotland and Northern Ireland and also a range of partner universities, utilising datasets acquired by ONS alongside data from devolved services.

Professor Jennifer Rubin, ESRC Executive Chair said: "I am delighted to be welcoming Emma Gordon to her new role at the ESRC. The Strategic Hub will link existing data across government specifically to catalyse and support high-quality research to inform policy, and help address major societal challenges in areas as diverse as housing, education, health and wellbeing. This will be a great asset to the ESRC in delivering social science research that makes an impact at a national level."

Before joining HM Treasury, Emma was Head of Health Analysis at the ONS. At the start of her career, she worked as a post-doctoral researcher on the Avon Longitudinal Study of Parents and Children, identifying the prevalence of developmental impairments in the cohort.

ESRC WINS INTERNATIONAL AWARDS FOR IMPACT VIDEOS

ESRC has won first and second prize for videos highlighting impact made in social sciences at the SSH Impact Conference in Vienna. The conference, hosted by the Austrian EU Council Presidency, focused on the impact of social sciences and humanities (SSH) in European research, attracting around 350 participants from all over Europe and international partner countries.

The videos were judged on three criteria – content and scope, dramaturgy of the video, and technical quality. Both of our videos presented research by winners of the ESRC Celebrating Impact Prize.

First prize was awarded to ESRC's video 'Preventing HIV risks in Southern Africa', which achieved the maximum possible score from the jury. This video documented research on HIV prevention by Professor Lucie Cluver that has led to a 'Cash plus Care' programme helping over two million girls in 10 African countries avoid contracting HIV/AIDS since 2014.

Professor Lucie Cluver at the University of Oxford said: "We are delighted and honoured with this prize. We have been lucky to benefit from a European and UK research agenda that supports major impact for those who need it most."

ESRC also won second place with the video 'Using crowd psychology to boost public safety', presenting research by Dr John Drury. This research has improved crowd management practices for over 700 local emergency specialists and changed safety proceedings in the UK and abroad. Dr John Drury, Professor of Social Psychology at the University of Sussex, said: "It's great to have our ESRC-funded research impacts recognised in this way, and it shows that social science research can create positive change."

First place was awarded €1,000, and second place €500. ESRC will be donating this money to the charity Médecins Sans Frontières (Doctors Without Borders).

For more information, see: www. youtube.com/user/theesrc

Books

URBAN POVERTY IN THE WAKE OF ENVIRONMENTAL DISASTER: REHABILITATION, RESILIENCE AND TYPHOON HAIYAN (YOLANDA)

This book investigates the best strategies for poverty alleviation in post-disaster urban environments, and the conditions necessary for the success and scaling up of these strategies. Using the case study of Typhoon Yolanda (Haiyan) in the Philippines, the strongest typhoon ever to make landfall, the book aims to draw out policy recommendations relevant for other middle- and lower-income countries facing similar urban environmental challenges.

Humans are increasingly living in densely populated and highly vulnerable areas, often coastal. This increased density of human settlements leads to increased material damage and high death tolls, and this vulnerability is often exacerbated by climate change. This book focuses on urban population risk, vulnerability to disasters, resilience to environmental shocks, and adaptation in relation to paths in and out of poverty.

Using both qualitative and quantitative methods, including primary

GENDER, SUBJECTIVITY, AND CULTURAL WORK: THE CLASSICAL MUSIC PROFESSION

What is it like to work as a classical musician today? How can we explain ongoing gender, racial, and class inequalities in the classical music profession? What happens when musicians become entrepreneurial and think of themselves as a product that needs to be sold and marketed?

Gender, Subjectivity, and Cultural Work explores these and other questions by drawing on innovative, empirical research on the working lives of classical musicians in Germany and the UK. Christina Scharff examines a range of timely issues such as the gender, racial, and class inequalities that characterise the cultural and creative industries; the ways in which entrepreneurialism – as an ethos to work on and improve the self – is lived out; and the subjective experiences of precarious work in so-called 'creative cities'. Thus, this book not only adds to our understanding of the working

survey data from victims and those charged with overseeing the relief effort in the Philippines, *Urban Poverty in the Wake of Environmental Disaster* has significant implications for disaster risk reduction as it relates to the urban poor and is highly recommended for scholars and practitioners of development studies, environment studies, and disaster relief and risk reduction. *Urban Poverty in the Wake of Environmental Disaster* By Maria Ela Atienza, Pauline Eadie, May Tan-Mullins. ISBN 9781138629998, (hardback), 192pp @ £92.00. Available 22 February 2019.

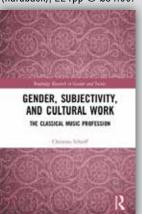


For more information see: www. crcpress.com/ Urban-Poverty-in-the-Wake-of-Environmental-Disaster-Rehabilitation-Resilience/ Atienza-Eadie-Tan-Mullins/p/book/9781138 629998

lives of artists and creatives, but also makes broader contributions by exploring how precarity, neoliberalism, and inequalities shape subjective experiences.

Contributing to a range of contemporary debates around cultural work, *Gender, Subjectivity, and Cultural Work* will be of interest to scholars and students in the fields of Sociology, Gender and Cultural Studies.

Gender, Subjectivity, and Cultural Work by Christina Scharff. ISBN 9781138942561, (hardback), 224pp @ £84.00.



For more information see: www.routledge. com/Gender-Subjectivity-and-Cultural-Work-The-Classical-Music-Profession/Scharff/p/book/978113

EVENTS

16 JANUARY 2019

Resource Recovery from Waste Conference 2019

The final conference for the Resource Recovery from Waste programme will bring together five years of research to highlight the relevance of resource recovery for a clean, low-carbon and resource-efficient economy. The conference will showcase the key achievements of the programme and aim to highlight where changes in policy will be needed to realise the full benefits envisaged for the UK economy, society and environment. It will also look forward to identify future challenges and research needed in this area. rrfw.org.uk/results/events/resource-recovery-from-waste-conference-2019/

13 MARCH 2019

IFS Public Talk: Is it fair to charge £9,250 for university tuition fees?

How much will you really pay for university? Does that depend on where and what you study? Are there any alternative ways to fund higher education? And how would these affect what the education system should be trying to achieve? This Institute for Fiscal Studies (IFS) Public Talk, jointly organised with the University of Manchester, will be given by Jack Britton, Senior Research Economist at the IFS, and will give an economist's perspective on the ongoing tuition fee debate. The talk will be held in the University Place Building at the University of Manchester. www.eventbrite. co.uk/e/is-it-fair-to-charge-9250-foruniversity-tuition-fees-manchester-talkifs-tickets-53091063801

13-24 MAY 2019

STEPS Centre 2019 Summer School

Applications are invited from doctoral and postdoctoral researchers working in fields around development studies, science and technology studies, innovation and policy studies, and who are interested in transdisciplinary methods and the politics of the environment. The Summer School is a two-week immersive course on theories and practical approaches to sustainability, through creative, interactive and participatory learning. Participants will explore the theme of pathways to sustainability through a mixture of workshops, lectures, outdoor events and focused interaction with STEPS Centre members. The Summer School takes place on the University of Sussex campus, near Brighton. steps-centre.org/news/apply-nowsteps-summer-school-2019/

Making sense of society



The ESRC magazine *Society Now* aims to raise awareness of our research and its impact. It addresses a wide range of readers, from the MP to the businessperson, the voluntary worker to the teacher, the public through to the social scientist, and is published four times a year (spring, summer, autumn and winter).

Society Now offers a readable, intelligent, concise overview of current issues concerning society.

To subscribe to the magazine, please send an email including your full name and address to: societynow@esrc.ukri.org







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