TRANSFORMING SOCIAL POLICIES

Insights, ideas and challenges for mobilising data and evidence

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I collected my figures with a purpose in mind, with the idea that they could be used to argue for change. Of what use are statistics if we do not know what to make of them? What we wanted at that time was not so much an accumulation of facts, as to teach the men who are to govern the country the use of statistical facts.

Florence Nightingale, letter to Benjamin Jowett, published in Dear Miss Nightingale: Selection of Letters to Florence Nightingale (Clarendon, 1987).

The question addressed to government at every moment of its action and with regard to each of its institutions, old or new is: Is it useful? For what is it useful? Within what limits is it useful? When does it stop being useful? When does it become harmful? This is not the revolutionary question: what are my original rights and how can I assert them against any sovereign? But it is the radical question, the question of English radicalism; the problem of English radicalism is the problem of utility.

Michel Foucault, The Birth of Biopolitics, 2008 (translated)

The mind is a flexible problem solver that evolved to extract only the most useful information to guide decisions in new situations. As a consequence, individuals store very little detailed information about the world in their heads. In that sense, people are like bees and society a beehive: Our intelligence resides not in individual brains but in the collective mind. To function, individuals rely not only on knowledge stored within our skulls but also knowledge stored elsewhere: in our bodies, in the environment, and especially in other people. When you put it all together, human thought is incredibly impressive. But it is a product of a community, not of any individual alone.

Steven Sloman and Philip Fernbach, The Knowledge Illusion, 2017

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Exclusions

The views in this report are those of the author and not of *Understanding Society*. Some of the research for this report was undertaken during 2019, prior to the new government elected on 12 December 2019 and Covid-19, so the context or policy may have changed.

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ABOUT THIS PUBLICATION

The UK supports a wealth of large-scale, long-term population-based studies that play a critical role in social scientific inquiry, policy and practice. These rich longitudinal studies are a central means for understanding how people interact with the world around them, and to identify the causes and consequences of change on individuals, families and groups. *Understanding Society*, the UK Household Longitudinal Study, is specifically designed to gather regular information over time from households and individuals of all ages.

Researchers and 'policymakers' face an overlapping challenge of sense-making in a changing environment, understanding needs and behaviours, measuring risks and the effects of events and policies, and conceptualising new ways to solve problems to bring about change – although their time horizons, ways of thinking and functions are clearly different. However, the real-time application of science to understand and tackle the 2020 Coronavirus (Covid-19) pandemic has illustrated the importance of accurate data, quality research and rapid evidence reviews.

The coronavirus pandemic will have far-reaching consequences, possibly on multiple generations. No one knows exactly how its effects will play out over time – across government and politics, healthcare, the economy, places, the lives of the most vulnerable, social cohesion and society in general. It has created a catastrophic event simultaneously experienced by millions of people and illuminated aspects of society, economy and public policy that have not always been extensively scrutinised publicly. With their historic data and evidence, longitudinal studies will be vital to understand how future aspects of life, work and health will change, for whom and with what consequences.

There is never a good time for crises – they bring danger as well as opportunity, and this health and economic crisis comes alongside other formidable policy challenges. An ageing UK society which is consuming a larger proportion of public spending across health, pensions and social care; the need for accelerating action on climate change; and the role of galloping technology, dubbed as the fourth industrial revolution, which is not only driving creative destruction, but also affecting health and social life; and poor productivity, particularly across some UK regions, which is stifling prospects for improving living standards.

The wide range of policy pressures comes in the context of previously falling confidence in the political system in the UK, with people pessimistic about the country's problems and their possible solutions – although the major decline in political trust took place in the 1980s (Hansard Society, 2019; NatCen Social Research, 2020). A trend in this century across a number of countries has been voters deserting established political parties in frustration.

The coronavirus crisis, along many other ongoing public campaigns, opens up new possibilities for transformational changes, but these are not a given. It is usually not lack of knowledge but how to apply it in highly politicised environments or how to use the evidence to generate pressure in the system that can be the biggest challenge, stifling opportunities for policy innovation and social change. Short policy cycles, political imperatives and power imbalances sub-optimise the use of research for decision-making. For example, evidence on the effects of racial inequality has been extensively documented by social scientists but it was the culmination of the killing of George Floyd in the US, the Black Lives Matter campaign and the disproportionate impact of Covid-19 on ethnic minority groups that has generated momentum for change.

While aspects of life may be changing in unprecedented ways (Colville, 2016), there are also features that are relatively stable, where noticeable change only happens over a period of years, or indeed where the rate of change is slowing down (Dorling, 2020). Long-standing social injustices, an accumulation of adversities over time and wealth inequality, the latter driven by asset bubbles and the long-term returns on labour diverging from superior returns on capital, however, risk embedding inequalities into the fabric of society (Piketty, 2014).

Whether the coronavirus crisis acts as a trigger for fresh policy thinking will depend on latent public demand for change, how the impact is socially and spatially distributed, who will pay the cost of rebuilding, and in general, the interplay between economic, social and political forces. In this uncertain environment and age of economic anxiety, the risk of identity- and cultural-based conflict between groups and nations is never too distant. Populism seeks to break-down shared realities and align these along identity lines.

Whatever the post-crisis scenario, the dilemmas of making policy choices and bringing about measurable change can only grow. Much depends on consensus-building, reasoned decisions by politicians (rather than binary choices presented to the public) and the use of science to separate facts from misinformation.

The genesis of this publication lies in seeking to give researchers *insights into policymaking*, and to facilitate *collective endeavours* between researchers and policymakers in tackling societal challenges. Mobilising knowledge to secure impact across policy issues is not simply a problem of translating excellent research for different policy audiences – though explaining research through effective narrative, storytelling, clear messaging and visualisation matters greatly in the discovery and take up of empirical evidence. Knowledge sharing is also a social process (Hopkins, 2020). Its relational nature, when also examined through unequal access to impact opportunities for researchers, could constrain problem diagnosis and policy choices, and generally stifle the nature of social and political discourse.

This publication is written both as strategic guidance and a 'stimulus' paper, providing insights to researchers and policymakers on how empirical research and policy interact, but also to *raise the game* on academic and policy collaboration by asking more fundamental questions. How can technical expertise and the pursuit of deep analysis of social and economic issues be aligned with 'purposeful creativity' and 'fresh thinking' to conceptualise different futures? How can evidence be marshalled, conventional policy and practice challenged, and new ideas developed to contribute to transformational changes in social policy? What challenges and risks does it bring for the research community in the design of future research and impact assessment?

Both leadership and the quality of science matter in the transformative development of social, economic and health policies and practice. It requires moving beyond supply-side models of knowledge exchange, to thinking about what effective collaborations could look like and how to create purposeful relationships and partnerships. Each 'sector' and system has its own complexities, incentive structures and ways of working that can constrain how evidence and policy interact – some of these barriers are explored in the publication. Supply-side models of knowledge exchange can be simplistic, underplay policymaking complexities, and fail to make an impact upstream - but knowledge exchange is being enriched by evidence on policymaking systems from fields such as political science and policy studies (Cairney and Oliver, 2018), and on how social learning takes place from fields such cognitive science and social psychology (Sloman and Fernbach, 2017).

Content

Chapter 1 explains the role of micro-data in understanding social change and the wider context for research-policy interaction. An overview of how evidence interacts with policy and the challenges of policy development is provided in Chapter 2. Chapter 3 sets out practical applications of how *Understanding Society* is being used in tackling contemporary economic and social issues. Chapter 4 gauges into the future and suggests ways in which social policy could be much more transformative.

The publication will be of interest to academic researchers, lecturers and students, across social science disciplines. For academia, it is not a practical 'how to guide' on the tools of engagement, collaboration and impact generation. The UKRI Economic and Research Council (ESRC) already provides an impact tool-kit to researchers[1]. Considerable further information and guidance are already available on this subject (see Fox et al, 2019), including systematic reviews on translating research into policy and practice (Breckon and Dodson, 2016; Oliver and Cairney, 2019; Campbell and Moore, 2018; and Evans and Cvitanovic, 2018). The publication will also be helpful internationally to those running longitudinal and cohort studies.

Policy readers, from across government departments and parliamentary bodies, to those who seek to influence policy such as charities, business organisations, professional associations, trade unions and campaigners, should also find information to further their knowledge about the application of longitudinal data and science to inform policy and practice. Hopefully, policymakers will be able to appreciate the unique aspects of longitudinal research from other forms of data and research.

Understanding Society has a Policy and Partnerships Unit that works with non-academic organisations and researchers to exchange knowledge, facilitate relationships and pioneer new pathways to generate impact. We welcome ideas to further research-policy collaborations. This publication draws on published academic papers and grey literature such as blogs, articles and think pieces as well as experiences of delivering impact activities – although current literature also flags up significant limitations of knowledge in this field.

Multiple impacts of social science

As a study providing vital data infrastructure for science and policy, *Understanding Society's* long-term benefits depend on different types of impacts: scientific, policy, capacity building and developing the next generation of quantitative researchers. The publication recognises that academic researchers using the Study are interested not only in generating policy impact but also achieving scientific impact through scholarship in their field, pursuing multi-disciplinary research, pioneering new research methods and use of integrated data, and stimulating public engagement.

These other forms of impact are beyond the scope of this publication. Public engagement can help frame evidence for wider social discourse, challenge subjectivity over factuality, facilitate more inclusive research and help understand how the public filter and interpret research based on their own beliefs. Public voices and personal experiences, supported by facts, can raise awareness of salient issues and powerfully bring them to life. While social media has opened up opportunities for public engagement in science, misinformation campaigns and populist rhetoric have also become integral to social and political discourse though the same medium. Nevertheless, today's conversations within and between social networks will shape tomorrow's reasoning and thoughts – public engagement in science and political discourse is becoming more important.

Availability heuristics help explain why some issues are more prominent in the minds of the public rather than others. Academics potentially have access to a wide range of channels and methods for public engagement – through blogs, podcasts, media engagement, public events and exhibitions, gamification, links with art and culture, community engagement and self-advocacy, citizen science, citizen juries, informal learning, etc.

[1] The toolkit is aimed at social science researchers applying for and receiving funding from ESRC: https://esrc.ukri.org/research/impact-toolkit/

However, the focus in this publication is primarily on 'business to business' relations rather than 'business to consumer' communications and engagement, while recognising how each is linked in stimulating social and political discourse and policy choices.

Policymaking across the UK nations

This publication hasn't examined differences in policymaking systems across the home nations. The focus has primarily been on the UK as a whole. The approach to knowledge exchange and the relationship between researchers and policymakers in the home nations will vary as it tends to be facilitated by proximity. For example, the Wales Centre for Public Policy collaborates with leading policy experts to provide ministers, the civil service and public services with evidence and independent advice.
The Scottish Government runs an annual Evidence into Policy fortnight, and while this is currently aimed at facilitating evidence sharing and collaboration between staff, it offers long term potential for development.

Definitions and terminology

Knowledge exchange (KE): knowledge exchange includes a diverse set of activities, processes and skills that enable collaboration between universities and partner organisations. There are many terms used to describe these activities, reflecting particular settings or design features, including knowledge management, knowledge mobilisation, knowledge transfer, knowledge translation and others (CRFR, 2014). Knowledge exchange and knowledge mobilisation are used interchangeably in this publication depending on terminology used across sources. Using social science across policy, practice development or public engagement can be achieved through a range of practical activities, for example, translating research, visual and audio communications, engagement events, policy briefings, 'challenge labs', co-produced research, fellowships, secondments and internships, and undertaking commissioned research. Knowledge exchange activities are often facilitated by knowledge brokers – intermediaries (organisations or individuals), that work across producers and users of knowledge. Brokers can vary in what they do, and their activities depend on different sectors and settings, but in general they can bring market intelligence, connections, research translation skills and knowledge of development or innovation processes.

Impact: Defined as the demonstrable contribution that excellent research makes to society and economy, it can arise from a measurable effect, change or benefit to how things work; on difference audiences, such as businesses in a specific sector or those with a particular type of illness; or indeed, in any geographic location whether local, regional, national or international.

Many factors besides evidence, influence decision-making and changes in policy. Insights from 'the science of using science' are helping to identify challenges and 'what works' in knowledge exchange for social sciences (Breckon and Dodson (2016); Oliver and Carney, (2019). 'Evidence-based policy' as a terminology is also a misnomer from the perspective of the researcher in portraying the nature of academic discourse (Hansen, 2019).

Some policy scholars now avoid using the term 'evidence-based policy', using other descriptions such as 'evidence-informed policy' as an alternative. This language shift allows continued thinking about the underlying desire to improve evidence use in terms of its rigour or quality, while avoiding the misconceptions about how policy processes work. The preference in this publication is to adopt 'evidence-informed policy' (EIP). Academic research, empirical research and (social) science are also occasionally used interchangeably.

Social policy: reference to 'social policies' in this publication is short-hand for policies designed to improve the lives of people and functioning of society. Social policy is concerned with the ways societies across the world *meet human needs for security, education, work, health and wellbeing*. Social policy addresses how states and societies respond to global challenges of social, demographic and economic change, and of poverty, migration and globalisation (Platt, 2020). Such policies cover services and support including child and family support, schooling and education, housing and neighbourhood renewal, income maintenance and poverty reduction, training and employment support, savings and pensions, health and social care, and civic and cultural participation.

The role of UK social policy in meeting human welfare needs depends on political values. For example, one position pivots around the issue of 'individualised' social policy compared to socialised or collective provision; a second around the relative weight given to the role and responsibilities of government, the family, civil society, the market and international organisations.

Policymakers: although commonly used for ease of communications in impact literature, references to policymakers can be a huge misnomer. This can cover a very wide group of functionaries and institutions engaged in the policy and knowledge management process – ranging from analysts, special advisors and policy designers within government to parliamentarians such as members of Select Committees, those engaged from outside the government, such as business, charities, think tanks, professional bodies, associations, service providers, trade unions and lobby organisations, and the myriad intermediary agencies and bodies involved in policy delivery, scrutiny, audit and knowledge brokerage.

Referencing individuals and organisations as decision makers or policy audiences is more appropriate, whether they intend to use empirical research for policy application, evidence synthesis, to drive social change or some internal purpose. A range of different terminology is used in the literature, not always defined, and for ease of not having to continually differentiate between types of policy audiences, the term policymakers has been kept to cover all those engaged in the policy process from across government, parliament, 'knowledge brokers', commissioners, regulators and tsars, and the wide range of other organisations and providers. Hopefully, it is clear when the reference is to the government.

EXECUTIVE SUMMARY

Understanding Society, the UK Household Longitudinal Study, is one of several large longitudinal studies in the UK that play a critical role in social scientific inquiry, policy and practice. Researchers and policymakers can use these data, which track the same people over time, to understand how macro-social and economic changes interact with personal changes at micro-level. Causes and consequences of change can be examined for individuals, families, groups and communities – over time and space.

The insights, ideas and challenges presented in this report are aimed at *building a more effective interface between researchers and policymakers*, enable the researcher community to think more strategically about generating impact, and apply knowledge and skills *to stimulate transformational changes in social policy through collaborations*.

Chapter 1 explains the role of data in understanding social change and the wider context for research-policy interaction.

- While scientists focus on what we don't know, or their research on areas of theory or understanding that are contested, policymakers, while interested in the latest thinking and evidence, are also interested in what we do know.
- The growing volume of data and analysis means that how research is framed, narrated and visualised is becoming more important to its 'discovery' and to address availability bias.
- By adding value to research outputs, its relevance and utility can be significantly improved to facilitate greater engagement between academia, government and other sectors.
- The idea of 'engineering' social or complex systems to improve services and outcomes has been gathering pace, and increasingly depends on inputs from multidisciplinary teams – but there are multiple ways to think about policy, such as examining problems in the round or using customer experiences and journeys to (re)design services.
- The fast-paced nature of policymaking means that time to reflect can be short, and while there will be peak demand for evidence on topical issues, for many researchers teasing out the implications of their research for policy requires looking at longer time horizons.

Chapter 2 is an overview of the challenges of policymaking and how evidence interacts with policy.

- Researchers and policymakers think about evidence differently, with policymakers seeking many types of information and inputs from stakeholders and different disciplines. Single studies will only tell part of this story.
- Policymaking is about effective problem-solving of public issues. For a government, it may be about action as much as inaction – deciding not to do something either because it doesn't fall within their priorities or it's not easy to solve without political consequences.
- More attention should be paid to how policies get started: the multiple influences, actors and processes that come together to shape policy, sometimes with a blurry line between those who make policy and those who influence it.
- Researchers should think about how evidence will be received, not least because policymaking is mediated through political ideas and beliefs. Implementation of policy is a critical factor in deciding between options. A well-executed average policy can be better than a poorly executed well-crafted policy.
- Greater demand-side insights are needed on how evidence is used in 'everyday working' in order to build more productive research-policy relationships and activities.
- On some issues, a lack of knowledge may not be the problem. Research which gives policymakers a new perspective on the problem will be more useful. New insights, rather than statistics, can be more valuable where there is already considerable public debate or ambiguity about the nature of a social problem.
- Evidence shows that there is plenty of room to scale up knowledge exchange with parliamentarians, but researchers' impact depends on improvements in communication and presentation.
- Directly influencing policy should be complemented with indirect processes, such as informing public debate where there is an increasingly wide range of channels and communication tools for public engagement and social discourse, including leveraging more powerful public voices and providing a human angle.

Chapter 3 sets out how *Understanding Society* can be used to tackle social, economic and health issues through a set of case studies.

- Researchers can use *Understanding Society*:
  - to study how relationships and behaviours change over the economic cycle
  - to examine long-run impacts of behaviours and policy
  - to study cumulative effects of events
  - to study small sub-samples of population
  - to examine the interaction of social and biological factors
  - to explain long-term trends
  - for international comparative research
- *Understanding Society* covers a variety of topics to help understand the different dimensions of life and how these interact. It helps understand the boundaries of social problems, where there may be a need for intervention on multiple fronts and joined-up action by departments.
- *Understanding Society*'s panel design lends itself well to looking at the effects of policy and offers a range of techniques to overcome some of the traditional challenges of policy assessment, for example, using quasi-experimental methods that mimic the conditions of randomisation. However, what constitutes success and how it can be measured is not always without controversy.
- Longitudinal studies with geographical data can help to improve the evidence base in questions of place-based policies – to tackle local and regional disparities, for example.

Chapter 4 looks to the future and suggests ways in which the use of evidence could lead to more transformative social policy.

- Knowledge exchange can have a more substantial impact on social policies, but the research community needs to think differently about the barriers to impact generation.
- There will always be research or experts with powerful insights, which 'cut through', but that approach on its own is much harder to package and scale-up to bring about more systemic policy learning and social change. Tackling researcher inequalities in access to impact opportunities also requires mobilising knowledge in different ways.
- Evidence will make a bigger difference if it is combined with shared intentions, creativity and design thinking. This is more likely to happen if relationships and teams are specifically built to try to 'move the dial', even if only a little at a time. Knowledge exchange is a team sport.
- Top-down public policies are not the only route to bring about change. Researchers working with commissioners, innovation agencies, social entrepreneurs, social investors, policymakers, service users and practitioners can open up plausibly creative and tangible ways to test ideas and design developmental projects.
- Taking early action to prevent or mitigate harm has been gaining traction but progress has been slow. Policymakers need to be able to prevent fires not simply be agile at firefighting. Longitudinal studies can uniquely offer insights into the potential for policy action 'upstream', to help modernise welfare and build the business case for 'social investment'.
- Reimagining social policies and bringing about change starts with individual and group action. It also requires occasional 'insurgency', 'adversarial collaboration' and continual reflection. The long-term benefit is a transformed relationship between universities, policymakers and practitioners.

CHAPTER ONE

MOBILISING KNOWLEDGE FOR POLICY

INTRODUCTION

Social science is engaged in understanding and explaining how the world works, for example, understanding issues such as mental health, housing, in-work poverty and productivity and what challenges these present for citizens, institutions and policymakers. This chapter provides an overview of the role of 'longitudinal science', and the current system to encourage and support research-policy collaborations in the UK, with challenges identified.

The sciences in general can be applied for a range of strategic purposes (Vallance, 2018):

- For policy (to help solve societal problems)
- For economic competitiveness and business innovation
- To build resilience and sustainability (e.g. climate change, epidemics, cyber and national security)
- For citizens (to enrich lives and keep people safe, for education, to promote transparency and informed social discourse, and for citizen science).

Social scientists highly prize causal knowledge, explaining social, economic or political phenomena. Besides being a direct driver of social change, social science also plays a critical role in facilitating the application of other types of sciences – hence the opportunities presented by working across disciplines. It is not only technological innovations but also social discoveries that are effective in social change, e.g. why the first 1,000 days in a child's life matters.

The range of strategic purposes of science should not be construed as mutually exclusive. Epidemics, for example, are social and economic as well as biological phenomena, and in the coronavirus crisis it is not just medicine and epidemiology that have become central to the public conversation, but behaviour and social science, too. However, while theories of medical or physical science are becoming more widely recognised, those of social sciences are often easier to ignore by decision-makers, due to their possible political, ideological or behavioural implications. As Grayling (2009) has noted: "perhaps it is the gap between the natural and social sciences, on one hand, and the humanities and literary culture on the other" that needs narrowing.

It is worth reflecting that science is not just another belief system. When conducted well, science provides a rigorous framework for measurement, learning from the past and making informed predictions about the future – albeit usually with an element of uncertainty. The intricacies and transient nature of social phenomena means that researchers continually seek to identify better data sources and innovate with research methods that improve their understanding and the reliability of their results. Human behaviour can be influenced by many factors and changes over time so it is not the easiest thing to predict (Kay and King, 2020).

When looking to science to answer questions, policymakers also often expect those answers to be certain. However, uncertainty is a normal part of science, as it is in policy decision making. The core value underpinning science is the idea of being open to the possibility of alternative explanations – even in cases where the majority of the evidence points to only one conclusion. Knowledge is fallible. Science is different from other professions because the results of research cannot be predicted in advance, and an ultimate end-point cannot be defined in the pursuit of scholarship.

Data does not speak for itself and must be interpreted – using assumptions, conceptual frameworks, models and research methods. Depending on these research design features and theories used to test or reflect reality, the same data can often generate differing results. Researchers are not immune from quantitative sophistry and elaborate statistical formulations that obscure reality (Stoesz, 2018). Clearly they have an obligation to society to take positions on questions on which they have acquired professional competence (Tirole, 2017), positions which could be wide ranging from technical advice and social learning to constructive criticism and challenging the *status quo*. Unsurprisingly, researchers may take up different positions based on their power and expertise - and values.

The impact agenda offers social scientists an opportunity to think more imaginatively about ideas that address systemic risks faced by society, including the daily concerns of citizens. Science has to earn respect for what it is proposing through not only quality and integrity but also by tapping into the power of narrative and carrying users with it. According to the Government's Chief Scientific Adviser, science should be seen not only as a *body of knowledge* but *critically* as an approach – integrating scientific investigation with political debate, social discourse and decision making. This is not without its reputational and ethical challenges for researchers (Cairney and Oliver, 2018).

THE POWER OF MICRODATA AND THE APPLICATION OF LONGITUDINAL SCIENCE

Macro-social and economic changes and events affect individuals, families and households, producing and interacting with changes at the micro-level, the main substantive concern of panel studies (Rose, 2000). There are many different ways to understand social change – for example, examining how different the lives of children are compared to their parents, exploring the effects of labour market changes on different groups in society, examining the accumulation of adversity, inequality or discrimination over time and space, or understanding the nature of modern family life and community cohesion. Understanding how and why society is changing also requires insights into continuity and stability in society – what *isn't* changing.

Longitudinal and cohort studies are integral to the 'microdata revolution' in social science – which is why many countries invest in panel studies. They can be used to track not just individuals over time but also firms or other small geographical units.

Their explanatory and predictive power comes from their unique design, which track the same people over time. The idea of how exposure to factors in life has long-term harmful effects, or provides protection and resilience, is generally well understood – with policy applications, for example, in the fields of breast feeding, early learning, tackling poverty and worklessness, public health, savings and pensions. They are a powerful tool for science and policy, sometimes helping to pre-empt welfare needs rather than cover risks once they have materialised.

Understanding Society is designed to collect data on a variety of topics of life in the 21st Century. It focuses on six priority topic areas: income, wealth, consumption and expenditure; health, wellbeing and health behaviours; employment; education; family; and civics, which covers participation in politics, volunteering, leisure and environmental protection. It surveys both adults aged 16 and over through its adult panel, and children aged 10 to 15 through its youth panel. As children get older they are asked to become part of the adult panel.

How does *Understanding Society* vary from a cross-sectional survey?

Cross-sectional surveys

Data from *different samples of people* collected, sometimes at different points in time. Provide snapshots of the population and observation of aggregate changes at societal level.

Understanding Society

Data from the *same sample of people* collected at different points in time, over the long term. Observes lives of individuals and households as circumstances change and events unfold; easier to identify their causes and consequences, within a lifetime and across generations.

Aggregate data at society level allow for cross-sectional comparative studies between groups, places and countries, as do longitudinal studies. However, there are many limitations to research on this basis and its usefulness in shaping policy. The main drawback of aggregate data is that it is usually difficult to untangle the factors whose impact one is trying to understand (Crato, 2017). Research based on cross-sectional data can tell us about associations but says nothing about possible causes or consequences over time. It is often easy to find evidence of a correlation between two things, but much harder to investigate whether one actually causes the other.

As a panel study of all ages with annual data collection[2], *Understanding Society* provides a picture of society at a specific period in time as well as change over time. Because of this, it is able to respond to both short-term and long-term policy challenges (Lugtig and Smith, 2019). The data can be used longitudinally and cross-sectionally.

UK population survey data

The UK is a global leader and innovator in longitudinal surveys. Individually, longitudinal and cohort studies vary in the extent to which they collect different types of data (social, biological, phenotype) and their coverage of health, social, economic and environmental questions (UK Data Service, 2020; DfE, 2015). They are critical to maintaining the UK's data infrastructure and leadership in social sciences.

The main funder of social science data infrastructure in the UK is the Economic and Social Research Council (ESRC), which is a part of UK Research and Innovation. They fund a wide range of investments and studies that collect data about the UK economy and society. This includes longitudinal and cohort data, such as the 1970 British Cohort Study - following the lives of more than 17,000 people born in England, Scotland and Wales in a single week of 1970. Later investments include the British Household Panel Survey, the Millennium Cohort Study and *Understanding Society*.

Increasingly, research councils and scientific funders are looking across studies they fund for alignment of measures, innovations and skills development. For instance, CLOSER, funded by the ESRC and the Medical Research Council (MRC), brings together a number of world-leading longitudinal studies with participants born throughout the 20th and 21st centuries (see Appendix). Its platform brings data together in a consistent format – known as data harmonisation - enabling longitudinal researchers to compare data from different studies with greater ease, to reveal social changes and their implications for the future.

Reproducibility of research, transparency of data sources and tracking the use of data assets, also matter for good research practice and raising awareness of these assets, with the UK Data Service leading a #CiteTheData campaign.

More broadly, the UK's ability to lead in research and innovation depends not only on "excellent science with impact" but on continuing to invest in its research and innovation infrastructure (RII) and leadership. UKRI has undertaken an infrastructure programme, in order to create a long term (until approximately 2030) research and innovation infrastructure roadmap. The findings of the infrastructure programme are summarised in two reports – "Opportunities to grow our capability", and a "Landscape Analysis". The first report assesses the future infrastructure landscape and identifies needs, opportunities and key themes that could be a major benefit to the UK's capability to 2030. It is intended as a strategic guide to inform investment decisions for the next generation of infrastructure. The Landscape Analysis report provides a detailed picture of the UK's infrastructure and explores key issues in more depth.

UKRI's Strategic Prospectus outlines how it will create a research and innovation system that is equipped to tackle major environmental, social and economic challenges. Infrastructure in this context includes, for instance, not simply physical research facilities but also knowledge-based resources such as data, collections, archives and computing systems. Investment in technological innovation and physical infrastructure sit at the core of the government's Industrial Strategy and its associated 'grand challenges', but many of the challenges faced by society – from regional imbalances and poor productivity to better ageing and clean growth – will depend on this investment in data and social science infrastructure.

Data science today: asking the right questions

With an exponential growth in data sources, the adjective 'data-driven' has become popular to describe decision-making or solutions. However, this also means starting by asking the right questions rather than starting with the data (Pullinger, 2019). Such questions can have impact either by directly contributing to policy or by advancing our current scientific knowledge.

Stefaan G. Verhulst, co-founder of The GovLab, an action research centre based at New York University, asserts that "we tout solutions without considering whether we are addressing real or relevant challenges or priorities. We advocate fixes for problems, or for aspects of society, that may not be broken at all" (Verhulst, 2019). He identifies four types of questions that could change the approach to contemporary problems.

[2] In response to Covid-19, *Understanding Society* also instigated monthly individual level data collection, to be reduced to bimonthly to minimise the burden on the panel. This has been informed by pioneering ideas about 'event triggered data collection'.

Asking the right questions

- Situational analysis: Questions related to better understanding the trends and geographic distributions of phenomena.
- Cause and effect: Questions that can help better understand the key drivers and consequences of a situation. Which variables can make a difference for a given problem?
- Prediction [and nowcasting]: Questions that interrogate new predictive capabilities that allow stakeholders to assess future risks, needs and opportunities.
- Impact assessment: Questions that try to determine the results (positive or negative) of various interventions.

Source: Verhulst, GovLab, Apolitical (2019)

Data-driven decision-making is often labelled as business jargon for what scientists call evidence-based decision making. To be useful for science, policy or performance, all data – survey, administrative, business, consumer or digital - needs to be transformed through some form of cleaning, manipulation, codification or modelling (whether by humans or through machine learning) that approximates to reality under certain assumptions. This depends on many factors, including the limitations of data and models to reflect the complicated and sometimes unpredictable ways in which people behave and interact with each other or the world around them. Of growing concern are the biases inherent in data-driven technologies and their consequences for society (Centre for Data and Ethics, 2019).

The increasingly larger share of human activity now taking place through interaction with digital environments presents new opportunities and challenges for social science – opportunities in terms of using technology to collect information but also challenges in measurement and understanding the effects of technology itself on work, life and society. Much of human activity will continue to happen in physical spaces, and unlocking location data is equally important for research, innovation and policy. According to the recently established Geospatial Commission, there is a complex and fractured policy landscape surrounding the UK's geospatial data assets which needs to be tackled to deliver coherent national location data.

Doing high quality research can be difficult where new sources of data, irrespective of their quality or the biases they contain, are kept locked behind closed doors, whether by government departments or large commercial organisations and social media platforms (Przybylski and Etchells, 2019). Administrative data offer the prospect of large amounts of information being available at low marginal cost, and there has been a sustained development of these resources for research purposes, but progress on data integration remains slow for a variety of purposes (Smith et al, 2019; Benzeval et al, 2020). The hope is that the Digital Economy Act, which theoretically facilitates the linking and sharing of de-identified data by public authorities for accredited research purposes, and the creation of Administrative Data Research UK, will start to generate momentum.

In this era, doing science is becoming more complicated, particularly as researchers are faced with a growing 'burden of knowledge' (Jones, 2009) and more data, from different sources, each with their own unique characteristics, that take time to access, understand, quality assess, combine, analyse, store and share (if ethically feasible). Furthermore, the challenges of multi-disciplinary and mixed methods research are considerable where researchers need to master their own discipline, create the mental space for thinking about which discipline(s) to collaborate with and why, and learn to work productively with others. Some data and statistics, e.g. those produced by the government and public bodies are regulated to enhance trustworthiness, quality and value but many data sources aren't.

Challenges facing longitudinal and cohort studies

Longitudinal studies face several challenges, but two connected issues come to the fore (Rainsberry, 2019). How can the huge benefits of well-documented, consistent and open access information collection over time also respond to changing times – the impact of Covid-19, climate change, living in a digital world, understanding new types of work, cohesion and equality in society, etc.? How can the growing interest in combining wider types of survey data with administrative and 'big data' offer new opportunities to better measure how people interact with their surrounding socio-economic environment and services and to what effect?

Public administrative data, information created when people interact with public services, such as schools, the NHS, the benefits system or online, and collated by government, can be linked with rich survey data across departments. Usually such data can have limitations for population-based research because variables available tend to be determined by access, eligibility and service design. Data quality issues can lead to various sources of error (Benzeval et al, 2020). However, with data collection in public services moving more into the field of measuring operational performance, 'product' development and policy design (Boundy, 2017), the business case for research-policy collaboration on data is growing.

Although many new sources of data are not designed with research purposes in mind they can be harvested for use in social science and policy. New technology can be a transformative force in the adaptability of longitudinal studies, but that is not without its challenges (Jäckle et al, 2018). Some challenges may be about evaluating data quality and the scientific utility of new measures, while others might be about understanding potential biases arising from who takes part (Rainsberry, 2019). Technology can offer more timely data collection and swifter responses to major unforeseen events, but these developments also raise new questions, not simply about access and how to integrate data sources, but also about data quality. For example, researchers at *Understanding Society*, have been working on data integration projects with the organisations such as the Financial Conduct Authority to address issues of consumer finance/debt, seeking to join up employee/employer data to support research on labour markets and productivity, and develop know-how in more timely 'event-triggered' data collection.

The long-term approach being taken by researchers at *Understanding Society* is to maintain a *core representative survey frame*, supported by extending the content, exploring new opportunities to extend samples to specific 'vulnerable' populations, innovating in different forms of data collection and integration (e.g. transactional, administrative and environmental), enhancing users training and support and continuing to catalyse opportunities for impact generation.

By incorporating the collection of biological markers (these are measurable indicators of some biological state or condition) into surveys, it is opening new areas of research for social and public health social sciences. Its immigrant and ethnic minority boost samples enable research to be undertaken into specific groups and issues.

Respondent addresses can be matched to geocoded data facilitating socio-spatial and contextual analysis (Knies, 2017). The interaction between people and places, how community ties are changing, and the role of places in shaping people's economic, social and health outcomes is not a new area of study, but understanding at what scale neighbourhood effects operate and for whom is acquiring greater salience in the challenge to narrow UK's long standing spatial disparities. Work is also underway on finding ways to capture information on sample members at particular risk of dropping out from the study - such as non-resident parents when families break-up.

The UKRI Economic and Social Research Council's Longitudinal Studies Strategic Review 2017 has reinforced the importance of such studies. Specifically, it made proposals to take advantage of developments in technology, data availability, linkage and analytics – including the use of administrative data to help with issues of representativeness of the studies' samples (Davis-Kean et al, 2017).

FROM EVOLUTION TO SYSTEMIC CHANGES

In recent years the relationship between (social) science and policymaking has started to come into much sharper focus. Alongside this, the emergence of a data- and knowledge-driven society has meant that, for diverse organisations from public services and professional bodies to charities and business, research and development has become central to decision-making, understanding causal relationships, innovation and improvements in services and practices.

The UK Research Excellence Framework (REF) did not invent impact, although it has elevated the importance of research-driven action (Bayley, 2018). While the Haldane Principle[3] is a core tenet of British science – that researchers not politicians should make decisions about the funding of individual research proposals – the impact agenda in the UK has triggered a change in how research is conceptualised, and its benefits realised.

Research impact could be conceptual, instrumental or help build capacity for science, policy and innovation. Instrumental impact arises where research is applied in the development of policy, practice or service provision, shaping legislation, or altering behaviour. When research is contributing to understanding policy issues or reframing debates in a new way, the impact is more likely to be conceptual. Research Councils and research institutions are scaling up knowledge-sharing activities and seeking to encourage deeper and broader ways in which research can engage different audiences (reach) and be translated into 'real world' applications (significance). The government's ambition to increase R&D spending in the UK to 2.4% of GDP by 2027 from the current 1.7% further raises the stakes for effective collaboration.

The ESRC, like other research councils, has been investing effort and resources into a range of initiatives to strengthen knowledge exchange and support research-policy collaborations (as have other research funders). The result is a growing system of funding and research-policy collaborations, adding to the contribution of learned societies and professional bodies. The Knowledge Exchange Framework (KEF), being rolled out during 2020 among higher education institutions in receipt of knowledge exchange funding or those choosing to participate, is designed to help strengthen KE practices and leadership. In also seeking to also improve confidence among external organisations collaborating with higher education, much will depend on seeking out mutual benefits and how research supply and demand are 'synced'.

The social science research-policy interface is developing through institutional changes and growing brokerage activities, and now includes knowledge exchange networks, university policy and innovation units, cross-university collaborations on policy, strategic and specialist analytical teams within government departments What Works Centres and better

[3] Haldane principle is named after Richard Burdon Haldane, who in 1904 and from 1909 to 1918 chaired committees and commissions which recommended this policy. It has evolved over time since then. The Higher Education and Research Act 2017 enacts the principle in terms of decisions on individual research proposals best being taken following an evaluation of the quality and likely impact of the proposals.

access to evidence for parliamentarians. Placements between academia and policy organisations through internships and fellowships, and upstream funding to equip university students with knowledge exchange skills, is creating opportunities for researchers and policymakers alike.

Looking ahead, as the role of data and artificial intelligence in society and the economy continues to grow, this will present many opportunities and challenges: around issues of connectivity (including across virtual and physical environments), discoverability, interoperability, curation, ethics and privacy, modelling and simulation, visualisation technologies, social and economic application and skills development.

Demand signals

Given that the primary motivation of researchers is to advance knowledge and make discoveries in their chosen field, many scientists are actively focused on *what we do not know* in those fields and *testing contested ideas or theories* through empirical investigations. This could be both on substantive areas of research or improving data and methodologies for research. Researchers tend to work to a broader chronological perspective, with *questions of process and outcomes over the longer-term*, often on unresolved perennial issues (Daddow, 2019).

Policymakers on the other hand, while interested in the *latest thinking and evidence*, are often also very interested in *what we do know*. They are keen to access a body of knowledge, a cluster of evidence or expertise – rather than individual research findings to gain perspectives from different angles. For instance, policymakers want to understand which few of all the potential underlying parameters really matter, which have negligible effects, and which might simply be red herrings or currently unproven.

There are many information asymmetries in trying to better align the demand and supply of research across the very wide range of organisations involved in policy. New platforms seeking to link the demand and supply of expertise are emerging, and an obvious, and relatively easy to orchestrate, route is mutual participation in advisory groups and boards. To improve and scale up the interaction between researchers and government departments, the publication of 'Areas of Research Interest' – statements setting out the evidence needs of departments – provide a signalling mechanism of departmental evidence needs and long-term research plans (see Appendix).

A majority of the research needs identified in published ARIs fall within the ambit of social sciences. ARIs *are a catalyst for a more focused dialogue between academics and government departments but not a substitute for long-term relationship building*. As 'live' documents they are a bridge between demand and supply and will continue to evolve in line with lessons being learnt (Heckles, 2020). In particular, Covid-19 has been fast changing the evidence needs of policymakers compared to when the ARIs were initially published.

There are mutual benefits for academics and policy audiences, more broadly, in building a more dynamic system – not simply to inform policy but also to consider upstream challenges of what kinds of knowledge to produce and how to invest more wisely in research (Oliver and Boaz, 2019). Designed well, such interactions can facilitate reflection and precision, social learning, external scrutiny/sense checking and lead to more creative ideas. Researchers can gain insights on new questions for research, identify data gaps, develop their knowledge exchange and policy analysis skills, provide consultancy and run experiments to test how ideas might work in practice.

Policymakers can better factor in the state of current evidence in their deliberations, including *known unknowns*, and caveats that are normal in science (e.g. uncertainty, assumptions in modelling, correlation versus causality, reverse causality, small effects, weak measures, etc.). While known unknowns can be handled, unknown unknowns can bedevil the best of policy intentions.

The early focus on knowledge exchange has been on improving research supply (Meek, 2019). However, as noted by the Institute of Government, while each sector can scale up the two-way dialogue between academic and government departments (and other sectors), *more needs to be done to stimulate the demand for empirical research among policymakers – otherwise unrealistic expectations will be raised about the influence of research and academia on policy and practice*.

System constraints

The Institute for Government further notes that "individual academics are often not given time out of research, teaching and administrative responsibilities to engage with policymakers, and they are not rewarded in career terms for doing so". Policy engagement is not valued as a route to career development within universities (Sasse and Haddon, 2019), and although early career researchers are more open to the use of social media, collaboration and open science, the overarching importance accorded to journal publishing, the peer review system and the traditional ways of assessment still reign supreme (Nicholas, 2019). There is though certainly more support, guidance and funding now available to academics who want to see their research, individually or collectively, make a difference beyond having scientific impact.

Policy influence usually happens through long-term relationship building and gaining reputation as a subject expert – so it can sometimes be difficult to demonstrate impact by linking back to the original research.

The REF impact model doesn't work perfectly for policy impact – there are poor returns for high quality synthesis which is often exactly what policymakers need (Meek, 2019). There are exceptions. For example, with growth in primary research, some fields such as health and education have seen systematic reviews become part of scientific publications (Topp et al, 2018).

Neither can conventional forms of impact assessment, such as citation scores and journal impact measures, be used to measure societal impact of research. Not surprisingly, there is a growing interest in alternative forms of impact assessment that capture the complexity of the short- and long-term effects of research through alternative metrics, e.g. "science usability" (Rau et al, 2017).

Analysis about the profile of the lead academics involved in high-scoring REF impact case studies also reveals a very significant ethnic imbalance, and while the gender balance was better (at least for the unit of assessment examined), it was still not equal (Smith and Stewart, 2017). This raises a concern not just about equality but about whether different perspectives and potentially imaginative ideas remain untapped and how these could be marshalled to avoid 'group think'.

FROM LAYERS OF RESEARCH TRANSLATION TO DISTINCT COLLABORATIONS

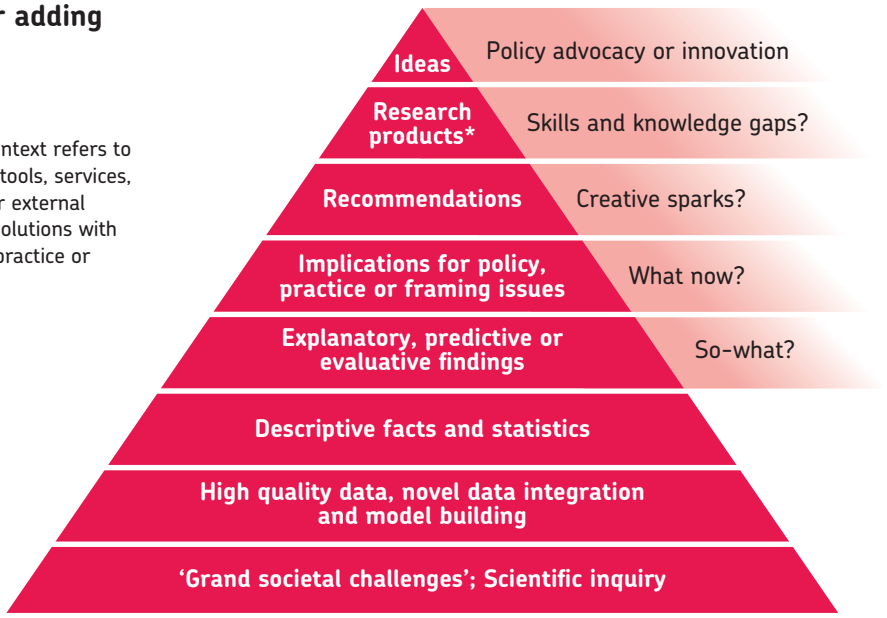
Impact can be achieved through many different routes. Some routes will be scripted, some will be opportunistic, but all involve decisions about the *right audiences* to engage and the best approaches to deploy (Bayley, 2018). However, the application of science can often come in unexpected ways (sometimes requiring lateral thinking about who might benefit from the research) so limiting the value of research to one organisation, one agenda – or even a single parliamentary policy cycle – doesn't always make sense.

Discoverability of data and research and good communications matter. With technology and social media now providing access to a 'wall of information and evidence', this growing volume means that how research is framed, narrated and visualised[4], and its timing, is becoming more important in capturing the attention of policymakers and bringing salient issues to their notice. In this environment, the translation of facts needs expertise to interpret and situate research in a policy landscape, with clear articulation of the problem being examined. Facts depend on accompanying 'policy narratives' to give them meaning (Craig, 2018) – and to prevent erroneous use of the evidence. Incidentally, the coronavirus has resulted in two beneficial shifts for science communications: the demand for high quality journalism has increased, and online working is enabling researchers to reach new audiences efficiently, e.g. through virtual events.

While applied social science can offer problem-oriented research, even the linear process of moving from data to application offers opportunities to *add value* through different layers of translation. The concept of adding value to a service or product is well understood in the commercial sector, continually driving to improve product/service functionality, make processes more streamlined, or to differentiate an offer from one's competitors (where these aren't just cosmetic add-ons!). The concept can also be applied to individual or collective endeavours to strengthen the evidence-policy interface.

A simplified model for adding value to research

* 'Research products' in this context refers to guidance materials, training, tools, services, etc. that can be developed for external use. Ideas are more precise solutions with the potential to drive policy, practice or innovation forward.



Significantly adapted from Dolan, A (HM Revenue & Customs)

[4] Researchers often end up learning about scientific communications on the job. Besides video and audio communications, there is a wide range of ways in which research can be visualised to reach broader audiences – figures and charts, drawings, comics, flowcharts, diagrams, data visualisations, interactive web content, etc.

In the more connected world of complex systems, the idea of 'social engineering' or 'social physics' has emerged to get to grips with understanding and engineering better social systems and joining up data on human circumstances, behaviours and outcomes. The idea of a lone researcher beavering away at a question was always a bit of a myth. Researchers and policymakers access huge amounts of knowledge through others and through the current context and experience.

There remains, though, the challenge of developing institutions, networks and tools that can combine heterogenous bodies of knowledge or make the use of systems thinking[5] more accessible. Research leadership development[6], more vital in the era of larger collaborative and challenge-orientated research projects that reach across traditional disciplinary and professional boundaries, will hopefully demonstrate the benefits of collaboration – both creating knowledge and using it to make better decisions.

Such approaches might require distinct teams or partnerships, akin to a team that would be assembled for a design, engineering or construction project, with multidisciplinary[7] expertise drawn from social sciences, humanities or other sciences, and supported by communications, impact or other specialists. There are of course alternative ways of thinking about policy while embracing complexity and 'team science' projects. For example, marketing approaches that focus on citizens and their journeys or experiences through a system, or a move from policy-as-strategy to policy-as-impact could also help engineer better policy design (Kimbell, 2015).

Using science to gaze over the horizon

The fast-paced world of policymaking means that dedicating time and resource to reflect is always at a premium. Policymakers live under the pressure of (three-year) spending cycles, and elections, driven by ideas that are broadly politically acceptable within the government of the day. Such ideas are often derailed by unexpected events. Thus, the rhythms of the social science and the policy cycle are not always easy to synchronise.

There is a risk that in due course policy audiences could be overwhelmed by the volume of research competing for policy attention, without being able to see how these fit into a picture (Smith and Steward, 2017). Add to this the already extensive activities of think tanks who have left their academic equivalents behind – and which "unlike policy analysts in government are unconstrained by departmental silos, the demands of having to run services and, crucially, the fear of asking embarrassing questions or delivering politically awkward answers to policy problems .... [and] unlike universities, free of the burdens of academic publishing, teaching and the rigors of applying for peer-reviewed research grants" (Talbot and Talbot, 2019).

Science advisers must also look ahead at hurdles the government will have to overcome in future. As Ian Boyd, Ex-Chief Scientific Adviser to the Department for Environment, Food and Rural Affairs, and a marine and polar scientist, has noted: "Most people in Whitehall departments, most of the time, are dealing with the immediate problem. They're only looking six months, a year or 18 months ahead. Most of my role is about looking from a scientist's perspective at what the world is going to look like in 10, 20 or even 40 years' time, and how we need to structure policy or the department itself to meet those challenges. Much of it is about bringing a scientist's intuition to problem solving" (Smith, 2018).

The overall contention is not that better use of scientific evidence by policymakers will permanently or even partially 'solve' some of the more deep-rooted and complex issues in society. This depends on a multitude of other factors, such as politics, resources, public support, stakeholder engagement, delivery, sustainability of action and external events. It can improve policymaking through insights, critical appraisal and reflection, prevent policy mistakes, enable policymakers to look beyond the immediate demands of a 'policy cycle', and build long-term cross-sectoral capacity for social learning. However, much of the current research on knowledge exchange for policy and practice focuses on research uptake and use – as opposed to empirically tested processes on the outcomes of engagement and collaboration (Oliver et al, 2014).

Curiosity-driven research, essential to avoid producing formulaic research and not to stifle innovation, can generate impact through social learning. The work of Professor Stephen Hawking, albeit in physics and cosmology, has arguably demonstrated that it is possible to communicate difficult ideas. So not all social science research should or will have direct or immediate application, with research frequently entering the policy arena through a process that has come to be called 'enlightenment' (Weiss, 1979). Here the benefits are indirect, providing concepts and theoretical perspectives that help provide a different construct or framework for thinking about long-standing societal problems and emerging issues. As Peter Drucker, the renowned management guru has noted, specialised knowledge can only be productive when integrated into a task or as Louis Pasteur, the famous chemist and microbiologist observed, there is only science and the application of science.

[5] There are different approaches and tools available to develop systems thinking. One definition is: 'A system is a set of related components that work together in a particular environment to perform whatever functions are required to achieve the system's objectives' (Donella Meadows). Issues such as obesity and poverty, for example, are more amenable to change through system thinking but keeping models simple is also important in practice. See summary of tools: https://medium.com/disruptive-design/tools-for-systems-thinkers-the-6-fundamental-concepts-of-systems-thinking-379cdac3dc6a

[6] See the UKRI Economic and Research Council's review of social science leadership: https://esrc.ukri.org/files/research/fit-for-the-future-researcher-development-and-research-leadership-in-the-social-sciences-review/

[7] The concepts and language about different types of disciplinarities can be confusing. Here is a useful blog: https://www.arj.no/2012/03/12/disciplinarities-2/. There are many others.

KEY POINTS

- While academic researchers focus on what we don't know, or their research on areas of theory or understanding that are contested, policymakers (while interested in the latest thinking and evidence) are also interested in what we do know.
- The growing volume of data and analysis means that how research is framed, narrated and visualised is becoming more important to its 'discovery' and to address availability bias.
- By adding value to research outputs, its relevance and utility can be significantly improved to facilitate greater engagement between academia, government and other sectors.
- The idea of 'engineering' social or complex systems to improve services and outcomes has been gathering pace, and increasingly depends on inputs from multidisciplinary teams – but there are multiple ways to think about policy, such as examining problems in the round or using customer experiences and journeys to (re)design services.
- The fast-paced nature of policymaking means that time to reflect can be short, and while there will be peak demand for evidence on topical issues, for many researchers teasing out the implications of their research for policy requires looking at longer time horizons.

CHAPTER TWO

THE POLICY MACHINERY: WHAT RESEARCHERS NEED TO KNOW

INTRODUCTION

What does policymaking involve and are there frameworks for thinking about how evidence interacts with other major factors in policy development? What role do ideas play in policymaking and how do they interact with evidence? This section delves into the policymaking process and provides a high-level perspective on policy dynamics – focusing on the UK. A rich vein of literature illustrates the inherent complexity involved in understanding the policy process. Given the limited scope of this publication, it does not attempt to examine different theories of the state or aspects of policymaking in detail but provides a pragmatic overview to researchers.

Distinctions between the roles of social science and policy are important to understand. Research can perform a wide range of functions including, for example:

- separating signals from noise and facts from opinions
- explaining possible underlying causes of problems
- identifying and measuring risks
- providing rapid reviews and evidence synthesis[8]
- explaining differences between desired policy effects and actual outcomes
- helping to identify what works or doesn't based on the current state of knowledge
- making predictions about the future based on models underpinned by certain assumptions.

But *how the world should be* is a democratic and value-driven process. Political parties exist to offer and pursue their distinct visions of what a prosperous, fair, healthy, open and sustainable society might look like. The aftermath of the 2008 financial crisis has brought into sharper focus 'who gets what, when, how and to what effect', with a substantial proportion of the population feeling frustrated with the lack of progress in their own lives.

The coronavirus is the biggest global event since the second world war. In what was already a dangerous context fuelled by grievances, cultural insecurities and identity politics, the risks of moving into crowd-pleasing policies rather than those which built on coherent public debate, evidence, rationality and reasoning, are never too distant. Will the coronavirus crisis lead to a greater appreciation of foresight and planning, and a sizeable shift in balancing short-term priorities against longer-term imperatives of building resilient health, economic or social systems?

A related issue is the causes and consequences of 'left-behind communities' and how institutions might need to change to reduce spatial divides in the UK (Gove, 2020). To identify how university research, innovation and engagement can be better aligned to the needs of areas experiencing significant disadvantage, a rapid review commissioned by UK Research and Innovation (UKRI), noted for example, ways in which researchers could work much more collaboratively at different geographic scales (National Coordinating Centre for Public Engagement, 2019).

Framing of a policy problem is inherently political, and a politician's prior belief affects how they interpret factual information (Baekgaard, 2019). Freedom for politicians to make choices, often informed by Special Advisors, though must include being accountable to the facts – otherwise how to improve society will head away from evidence-informed policy making and closer to generalities, gut feelings, myths and special interest groups with preferential access to decision-makers (Attanasio et al, 2018; Ball and Greenway, 2019). Political spin, sloganeering or manipulating and deflecting public discourse through carefully orchestrated stories mean that researchers need to be vigilant to how problems are defined, causes articulated, what solutions are proposed and what victories claimed.

Both sense and sensibility play a role in policymaking, as emotions enable politicians to sense citizens' concerns, fears, hopes or suffering. Emotions can help mobilise action, but they can also override reason. What is required, for example, when assessing collective needs, is to apply the same objective measurement yardstick to assess circumstances or evaluate outcomes by *comparing how different people fare in life rather than pitch one group against another in society.*

Types of evidence

Researchers and policymakers conceptualise evidence differently. For researchers, evidence facts that can be tested and have been produced through a scientific method – whether data analytics, mixed methods research, systematic review or another approach. Transparency about data used, how the results are derived and peer reviewed are integral to the process. Theories are subject to constant testing, disputation and replacement. However, there is a hazard that researchers, in employing elaborate statistical formulations, obscure rather than enlighten, and focus on the minutiae while other compelling public issues lack research attention (Stoesz, 2018).

[8] 'Principles for good evidence synthesis for policy' by The Royal Society and The Academy of Medical Sciences provide a short guidance on this: https://royalsociety.org/-/media/policy/projects/evidence-synthesis/principles-for-good-evidence-synthesis-for-policy.pdf

Policymakers, rightly, must seek many types of 'evidence' during the policy cycle which includes:

- expert opinion
- feedback from consultations
- local or practitioner/provider experiential knowledge and delivery feasibility
- previous experiential knowledge (subject to corporate memory)
- descriptive statistics
- explanatory or predictive analysis
- formative and evaluative lessons from pilots/programmes
- feedback from customer satisfaction surveys
- cost benefit calculations.

They will sometimes differentiate between 'evidence' and 'analysis' to distinguish research evidence from other forms of evidence – but not necessarily be able to differentiate between the value of different types of research.

Knowing what information and knowledge policymakers prefer to use can open up new opportunities for research and collaboration (Oliver et al, 2014). Policymakers may seek evidence for a variety of different reasons. For example, in agenda setting, advising political representatives, policy development, budgeting, policy implementation, building decision-making capacity or for demonstrating achievements through monitoring and evaluation (Williamson et al, 2019; Shaxson, 2019). What little documentation exists on what policymakers do on a daily basis suggests that building, testing and communicating 'policy narratives' - perspectives on which aspects of an issue matter and why they matter – is an important function (Shaxson and Boaz, 2020). Equally, like everyone else, policymakers are not immune from 'cognitive short-cuts' when collecting and examining information but policies do have to stand up to scrutiny and accountability - from Parliament, the media, stakeholder groups and colleagues from other parts of government.

In this publication, the primary focus is on the use of empirical research unless otherwise specified. Evidence taken from different 'angles' or from multiple sources needs to be weighed up before reaching final conclusions, and a single study, no matter how finely crafted, should ideally be seen as helping to build a picture, not tell the full story.

WHAT DOES POLICYMAKING MEAN?

There are many everyday uses of the term 'policy' but no widely shared definition. At its simplest it is about *effectively and fairly solving public issues*. This usually means breaking down a problem into its component parts and developing ideas about what to do. It involves making choices about *which problems to prioritise* and how those choices are arrived at.

Policymaking can be viewed as integral to 'governmentality', the state function of "incessant transactions which modify, or move, or drastically changes, or insidiously shift sources of finance, modes of investment, decision-making centres, forms and types of control, relationships between local powers, the central authority and so on" (Foucault, 2004)[9].

As a process, one working definition is "the sum total of government action, from signals of intent to the final outcomes" (Cairney, 2016). This includes, for example:

- influencing the development of policy, practice or service provision
- shaping regulation and legislation
- scale and effectiveness of public investment and expenditure
- influencing public behaviour
- assessing outcomes from public interventions and services.

Government has a wide range of levers at its disposal to pursue its priorities – regulation, legislation, annual public spending, investment, fiscal measures, environmental and social planning, and leadership and advocacy. It may not be equally competent across economic, social and environmental policymaking and governance, and recent years in particular have seen a drive to develop expertise in areas such as large-scale investment management, commercial procurement, project delivery and data science.

Its responsibility for tax and public spending (fiscal policy) is a powerful lever for change. The tax system does not just raise money: it influences the choices that people or businesses make, the services they consume or produce and the way they behave. Public spending in the United Kingdom has steadily increased from 12% of GDP in 1900 to 40% in the mid-1960s and for the past 25 years has fluctuated between 35% and 46%. There are also hundreds of tax reliefs for individuals, companies and charities. Some reliefs, such as the pensions tax relief, can be highly regressive, particularly in terms of intergenerational fairness, according to Michael Johnson, Research Fellow at the Centre for Policy Studies (Johnson, 2019). In recent years growing attention has also been paid to the scale of tax evasion, corporate welfare, tax fraud and simplifying complex tax rules.

[9] 'There is extensive literature on the role of the state, human rights, need for democratic reforms, governance and accountability, who governs Britain, etc.

Policymaking itself is shaped by political priorities, environmental constraints and, most importantly, political ideas. The politics of ideas matters in making policy choices. For Stone (2001), the struggle over ideas is the central essence of policy making, affecting all stages of the process. Political ideas (or 'ideologies' when embedded in political or social movements) provide a framework for political action, substance for public debate and contending notions of causality in the social world. Research evidence is mediated through political ideas, and in particular the policy paradigm in play at the time of decision making. With political ideas deep rooted, researchers need to be mindful that decisions will be guided by factors that go well beyond the use of evidence (Hardiman and Metinsoy, 2019).

Serious reformers are of course interested in both what the state tries to do as well as how it goes about doing it. As Michael Barber, who previously headed up the Prime Minister's Delivery Unit under Tony Blair, has noted:

> "Somewhere between Government strategy and implementation you find policy. Much of government goes straight to policy, forgetting strategy … but policy without strategy is rarely transformative; and policy without implementation is worthless."

Who makes policy?

The intuitive definition of policymakers is 'people who make policy' but a distinction needs to be made between key audiences and importantly the *role and power* that different stakeholders have: the government; parliament; civil servants; service providers engaged in the delivery of policy; and a vast range of 'stakeholders' outside government, including lobbyists, who are engaged in shaping and influencing policy. (Parliament needs to be differentiated between the backbenchers and the institutions and processes of the House of Commons and House of Lords).

While central government, in terms of the executive and parliament, sits at the centre of the policy process, it reserves certain powers for itself or delegates power and responsibility to other institutions for decision making, such as the devolved administrations, regulators or arms-length government agencies. In most cases information and ideas are processed through layers of people, therefore knowing who to engage with in government is essential. Some policy ideas may emerge from outside the government (e.g. via political and social campaigners, think tanks, etc.), with considerable policy innovation taking place through organisational learning within government (Hall, 1993).

The British political system is unique in one respect, in that it gives the government power to take divisive action, with little in the form of 'veto-players' – bringing a *deliberation deficit* (King and Crewe, 2013). It is regularly described as highly centralised, with intense partisanship, which acts as an enemy of deliberation. Strength and decisiveness can lead to both good as well as bad decisions!

Often public policy is played out as a zero-sum game, wherein the gain of one party or one group is played out at the expense of another, e.g. the wealthy and politically engaged against the poor and marginalised, and less likely to vote; one part of the country against another; old against the young, or providers against consumers (Stoesz, 2018). Virtually all policymaking carries complexity, risk and uncertainty about how it will 'play out' – often with very different perceptions between stakeholders about the costs and benefits (Gluckman, 2019). Hence, the process tends to be inherently political in nature, and researchers need to be aware of the risks of becoming political actors themselves. Setting out their role in relation to other actors or limits of their knowledge and expertise is thus important.

Outside of the Government or political party machinery, greater recognition needs to be given to the multiplicity of influences, actors and processes that always (necessarily) come together to shape policy (Bastow et al, 2014). A wide range of external organisations, based on their own economic interests, experiences, knowledge on the ground or professional expertise are engaged, directly as actors or indirectly through networks and associations, in the policy process:

- local government
- charities and independent charitable funders
- pressure groups
- think tanks
- service providers and consultancies
- businesses and employer bodies
- trade unions
- professional associations
- consumer groups
- lobby firms
- pan-European and international organisations.

Narrating research for policy communications

There is a growing understanding of human cognition and the identity, cultural or belief filters people use to process information. Whether one is talking about facts or emotional stories, the same mechanism seems to be in play. Being able to connect the past, present and future is also a feature of good storytelling (Roe, 1994).

Crow and Jones, recognising that important and complex issues need to be communicated well, offer a storytelling framework where content (e.g. living standards) is specific but the form is generalisable across different content:

Setting:	what's the context?
Characters:	define the 'victims', 'villains' or 'heroes' (e.g. victim can be a specific group; villain can be an issue such as smoking)
Plot:	explain the dynamics (what's going on)
Moral of the story:	what action is required, or policy solution offered?

Adapted from *'Narratives as tools for influencing policy change'* (Crow and Jones, 2018)

Many of these players bring legitimate interests, energy, different perspectives and ideas, and the ability to influence decisions. Equally, "there are blurry dividing lines between the people who make policy and influence policy" (Cairney, 2016), and in some cases revolving doors between various actors. Stakeholder engagement enriches policymaking, but such processes can also be skewed by vested interests with power and money, 'regulatory capture' and moral hazards – researchers need to be mindful of the subordination of facts and 'subtle corruption'.

Lobbying is particularly well developed in the UK compared to Western European nations and that's why it's infiltration of the corridors of power particularly relevant to decision-making (Miller et al, 2008). Interests may not necessarily be about fundamental policy questions, but transactional, administrative, and funding allocative decisions will also typically be top of mind. Lobbying organisations and think tanks are adept at employing former politicians or political staff who understand the political process and enjoy access to their former colleagues on the inside (David-Barrett, 2015). Industry lobbies can bring a concentrated voice, which always beats very diffused public interest voices (Coyle, 2020).

In this diverse institutional context, a key factor to contemplate is *how policy ideas get traction*. Personal troubles are played out within intimate social circles, while public issues are matters that involve wider society and institutions – but the dividing line is not always clear. While social concerns about obesity have been around for a very long time, it was the mounting evidence about its prevalence and consequences that started to move it into the public policy arena in the 1980s and 1990s. There are always policy ideas floating around across a range of issues, for example, through the activities of think tanks, researchers and analysts, elected officials, campaigners, formal commissions, parliamentary inquiries, civil servants, journalists and high profile champions. Kingdon (1995) has argued that which ideas get taken seriously generally happens when 'policy windows' open up – when the problem, politics and policies get connected. Equally, if these get decoupled the policy window may disappear, although it is not always apparent when this happens.

In the context of agenda setting, the power of mass media to influence a nation's agenda is well documented – on the basis that viewers or listeners learn how much importance to attach to particular topics, and the media draw attention to a limited group of issues around which public opinion gravitates (McCombs, 2014). Ministers, in particular, will be sensitive to be seen to be responding to these issues. Growing political polarisation means that even where there is compelling evidence of social, economic or environmental harm or opportunity, such information is increasingly seen through group identity, values, world views and ideologies (Mair, 2019).

In cases of complex or niche issues, there may not be an obvious community of interest who will run with an issue or instigate agenda setting. Campaigns, particularly for vulnerable groups without a voice, play an important role in the process, but with more affluent voting populations more likely to exercise their franchise compared to those who are poor, bringing about some types of policy changes requires sustained advocacy and resources over the long term.

Ambition, performance and lack of change

Every effective government will have a *limited number of priorities it is confident it can deliver politically* and address efficiently within expected resources – although none is immune from unpredictable external events or internal political disagreements that can blow it off-course. Transformational reforms in priority areas have to be balanced by 'carry on as normal' in other areas.

Within each priority, a government's scale of ambition may vary tremendously. "It is one thing to decide your priorities; it is another to decide how ambitious you want to be about them. How much change do you want, and how fast (Barber, 2016)?" In some cases the use of empirical evidence as justification (reinforcement of prior opinion) may be more typical than persuasion (conversion to a new insight or opinion) – and the pressures of the election cycle or desire for 'quick wins' can lead to actions which can be delivered within a parliament compared to desirable outcomes which are more distant.

The debate over the publication of a childhood obesity strategy (HM Government, 2016 and updated 2017) sparked just such a controversy when a more limited policy was published compared to the magnitude of the problem and expectations by stakeholders who had input into the agenda (Gregg et al, 2017) – although the government at the time argued that it was the start of a conversation. Priorities vary across different political administrations, or leaders in power, but they can also vary when ministerial changes take place.

Policies should ideally be proportionate to the scale and long-standing nature of the problem, with desirable longer-term social change often peppered with marginal policy gains in the shorter term. More creative solutions in solving social problems often emerge when there is greater appreciation of the causes driving a problem and *how to incentivise and mobilise action on different fronts*, i.e. a fundamental challenge of implementation and institutional fitness for purpose. Throwing resources at poorly understood problems or failing to adapt the incentive structures, culture or institutions can equally waste taxpayers' money – with the risk that issues resurface.

In his critique of the Whitehall machinery, Cummings (2014) argues that MPs continually gravitate between 'launching gimmicks and coping with crises', with an internal belief that major change is impossible even if it were necessary. He observes that top 'priorities' change with regular frequency, and even timescales of five years between elections are too short to make a measurable impact on many hard problems that require much longer timeframes.

Attempts at marginal change may be driven by genuine ministerial desire to demonstrate early decisive action and generate a few 'quick wins' (which is how organisations often work in practice). However, underpowered solutions or 'micro-policies' can fail to achieve the desired impact if out of sync with the nature of the problem, and lead to public or political discontent. Those working to deliver public services can simultaneously be exhausted by the constant superficial tweaks to systems and services that don't result in any change (Snow and Greenspoon, 2020).

Making policy happen – all about delivery

"One of the greatest mistakes is to judge policies and programmes by their intentions rather than their results." So said Milton Friedman, 1976 Nobel Laureate in Economics, in an interview on *The Open Mind* (PBS, 1975). Policies and programmes can have mixed results for a wider range of reasons. This can further feed into political wrangling, rather than constructive criticism, and make them vulnerable to reductions in stakeholder or fiscal support in a way that could further exacerbate the problem they were originally designed to address.

The critical importance and challenges of *how to implement a policy* are often underestimated by those outside government – and within government. Non-implementation can be as much of an issue as unsuccessful implementation. Often a well-executed average policy can be better than a poorly executed well-crafted policy. Policies can be at risk of underperformance or failure for many reasons:

- poor targeting or take-up
- poor resourcing
- optimism bias or failure to recognise how people will reach to the policy
- attention-grabbing interventions or short concentration spans
- too wide or very narrow goals
- design issues and constant adjustments
- bad execution
- too much focus on analysis and not enough on practicalities
- provider/professional capture
- weak alignment with other policies with funding not following to the frontline or limited stakeholder buy-in
- a fast-changing environment
- or just bad luck.

Indeed, the challenges and shortcomings of delivery in a wide range of policy areas have been well documented (King and Crewe, 2013), and developments in the 'science of delivery' have sought to produce a model for government that is better at executing policies with precision (Barber, 2016). What this shows is that, even with greater use of evidence in policy design, progress on outcomes can't always be certain without robust delivery mechanisms on how that policy will be funded and delivered. The gap between research and successful commercial development is sometimes known as the 'valley of death' and though this sounds over-dramatic, the space between policy design and delivery can be similarly challenging (Meggs, 2018).

In her ethnographic case study of civil servants in England's Department of Health and Social Care (Maybin, 2016) provides interesting insights into the *how* and *why* of knowledge use. Mid-ranking civil servants in this study were at pains to emphasise that they tend to be engaged in 'making policy happen' and objected to being referred to as 'policymakers'.

To quote:

> "The key planks of policies were established by ministers, special committees and selected outsiders (think tanks, respected academics and prominent 'expert' individuals from particular industries or sectors). Their task was not to come up with the solution to some societal problem; it was to instead *take ideas or proposals brought by others and turn them into workable policies*."

Similarly, in examining the value of the Policy Lab, trialled by the Cabinet Office to test design approaches to policymaking and support civil service reform, Kimbell's ethnographic research (2015) examines the processes adopted by the Policy Lab. Reflecting on the personal experiences of policymakers, the report identifies some interesting insights:

> "I'd call myself a policy designer rather than a policymaker … I feel more credible now … Before it was about having the killer statistics. Now it's about having the killer insight."
> *Senior Policy Adviser*

> "… the space was structured to make people think 'what if?' Let's ignore those big elephants in the room, this could be really difficult and take 5-10 years to do, it was breaking down [the problem] and making it much more tangible, so for people who may normally start by saying 'That'll never happen', the process swept that out of the way."
> *Deputy Director, Ministry of Justice*

The rise of 'agile' and 'experimental' government

The capacity of the government to be more agile in response to events and public needs has attracted considerable interest and action, particularly in the context of major events such as the dotcom crash in 2000, financial crisis in 2008, climate emergency, and Covid-19 – but also in response to securing changes on challenges such as diversity, digital transformation and the ability to deliver programmes on time and budget.

There has also been a growing accent on public and social innovation rather than uniformity to try and figure out more quickly what works or is likely to work (Nesta, 2020). The language of 'what works' typically assumes the discovery of generalisable solutions, and while this may be common in fields such as clinical medicine, it is often harder to apply to social policy interventions that have to be embedded within social environments (Parkhurst, 2017).

Empirical evidence on what could work can be supplemented by departments and other organisations through persistent experimentation. Experimentation at policy development phase is certainly not new to government or other organisations, while post-implementation reviews and evaluations on impacts and costs of interventions also provide a valuable tool for policy learning and assessing intended and unintended effects and costs. However, a National Audit Office report (2013) on ex-post evaluation practices in government found a range of shortcomings, including some evaluations not being of sufficient quality to give confidence in the effects attributed to policy because they didn't have a robust counterfactual (that is, a measure of what would have happened had the policy not been activated) (National Audit Office, 2013).

Positively, the creation and growth of What Works Centres has provided a stimulus in generating greater interest in testing what works and helping civil servants understand experimental methods. This might be through experimental or quasi-experimental methods and randomised control trials. The network of What Works Centres, which cover several policy domains from early learning and better ageing to economic development and wellbeing, provide practical advice on the available evidence on different interventions – drawing on and interpreting research that is often technical in nature, buried in academic journals and working papers (Gold, 2018). Similarly, the creation of the Behaviourial Insights Team (now spun off as a social purpose company operating nationally and internationally) seeks to bring behaviour science and "expertise in designing creative, low cost and scalable solutions" to enable governments and other organisations to "adopt a more realistic view of human behaviour than they have in the past" (BIT, 2020).

In the absence of real-world experimental or quasi-experimental evidence, which in social situations is difficult to generate for ethical, financial or practical reasons, longitudinal studies such as *Understanding Society* afford a route to exploit opportunities for natural experiments. This is when part of the population gets exposed to an intervention, creating a treatment and control group (see Chapter 3). They help overcome issues relating to bias (e.g. people self-selecting into particular choices or programmes) and unobserved heterogeneity (variations or differences among people such as ability or effort which are not measured).

Democratic use of evidence

Policy may be about government action as well as inaction – the power not to do something – although inaction is a policy choice that can result in social, economic and environmental harm or increased future risks where assessed needs are ignored. Inaction by governments maybe the result of big and complex political issues, set aside in the 'too difficult' box, which are not easy to solve without political consequences (Clarke, 2014) – developing a coherent policy on social care being a case in point. Lack of positive change in people's lives, if left to fester, ultimately has political consequences and can reduce trust in institutions and the working of democracy.

Most policy involves making choices. However, in many cases this will also generate winners and losers, an issue that is rarely spelt out by governments. As Johnson (2017) has argued, "we need the best evidence possible about the actual likely effects of the different choices. That's a huge issue in its own right." Ethical (or value) judgments are required over how to trade off the interests of one group against those of another and not pretend that everyone's a winner. Judgments can be hard both to make and to explain where benefits and costs are perceived to be inequitable between groups and places.

The risks of poor decisions being taken can be significantly reduced where such decisions are made through open debate, and facts marshalled to weigh different ideas and their implications – providing a *democratic and deliberative use of evidence* – whether such discourse takes place through parliament, pressure groups, media or stakeholder engagement. In this context, evidence usually relates to means (i.e. science as a process), not ends (Perry et al, 2010). Its purpose is to tell those making important choices the best way to achieve their aims – or point out why a proposed solution is unlikely to generate the desired results they are seeking.

It can often be hard to assess policies purely in terms of success or failure as such notions can be subjective, even with objective benchmarking and measurement. Public indifference or opposition can also be indicative of policy failure irrespective of the science behind it (Daddow, 2019). Independent evidence about the impact on winners and losers may emerge only gradually over time. It is thus critically important for a government to have clearly defined goals for what it wants to achieve, so progress or pitfalls can be explained, and policy scrutinised.

Engaging and communicating with Parliaments and Assemblies

The ultimate forum for the democratic articulation of choices and values in the UK is Parliament, where elected and appointed Members debate, legislate and scrutinise government business and policies in general. The separation of parliament and the executive is a fundamental feature of the political system in the UK, with similar separation at other levels of government, including the devolved administrations. However, there continues to be ongoing debate about the credentials of Parliament and whether the UK remains an exemplar of executive dominance, where the Parliament occasionally barks and nips its master but rarely bites (King and Crewe, 2013).

There are different ways in which Parliament can exert influence on the actions of executive government, from stimulating debate, pushing issues up the policy agenda to generating ideas and providing 'opposition capacity'. Recent analysis of institutional dynamics suggests that reforms to shift the balance between government and parliament have significantly expanded the opportunities for influence within the legislature (Matthews, 2018; Russell and Benton, 2011). "Committees have gradually extended their remit beyond the narrow consideration of the work of the relevant government department and its associated public bodies to include wider matters of public concern" (House of Commons Liaison Committee, 2019).

Analysis of Research Excellence Framework 2014 case studies showed active engagement by academics with Parliament (Kings College, 2017). Of the 6,679 case studies submitted, 265 mentioned 'select committee', with the vast majority (70%) coming from social sciences. The breadth and depth of knowledge exchange activities varies across legislatures. However, going beyond REF-defined impact, those engaged recognise that knowledge exchange is bringing mutual benefits: it allows legislatures to widen their evidence base and enhance their capacities, while academics are able to contribute to policy debates, learn about legislatures and enhance their professional skills (Beswick and Geddes, 2020).

A report investigating the use of research in Parliament among MPs and Peers, Members' staff and Parliamentary staff, and the Parliamentary Office for Science and Technology (POST) found that, of the factors that were important in whether a piece of research was read or used, *credibility of the source* and *relevance* scored most highly (Kenny et al, 2017). It also found that "people in Parliament generally did not distinguish between different types of research" and that "academic sources were criticised for being poorly presented and overtly technical", and that academic research "was not cutting through" in terms of written or oral evidence when compared with, for example, the scale of voluntary sector involvement. This offers an opportunity to scale up knowledge exchange but will require improvements in communications and presentation. A Knowledge Exchange Unit, recently established, is now supporting great exchange of information and expertise between researchers and the UK Parliament.

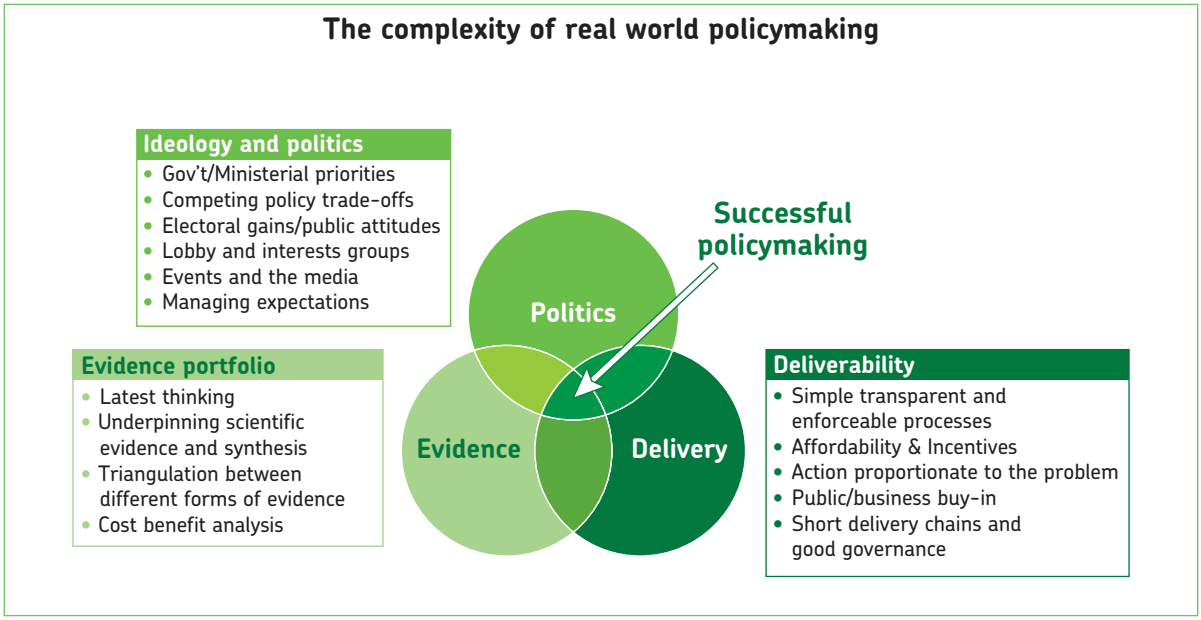
FROM GOVERNMENT PRIORITIES TO POLICY DESIGN

There are various models of the policy cycle that seek to show the process of policymaking. Policy analysis as problem-solving requires considering potential impacts (e.g. between options or against a counterfactual) as well as the cost of alternatives (resource implications). It typically involves various stages:

- agenda setting/championing an issue
- problem definition
- appraisal of alternatives and predicting their effects
- choosing an effective solution and setting objectives (within resource constraints)
- delivery (particularly process) / mobilisation of partners
- evaluation.

While these stages are a useful starting point for understanding the process, in their report, *Policy making in the real world*, the Institute for Government (IfG) argues that, "the ROAMEF stages model (rationale, objectives, actions, monitoring, evaluation and feedback) presents a naive view of policymaking. Some of its constituent parts are necessary for the making of good policy, but its suggestion that policy can be made through a series of logical, sequential steps, with a clear beginning and end within a finite period, is a dangerous over-simplification" (Hallsworth et al, 2011).

Rather than present a linear model of policymaking or a system map for policymaking – where causal pathways are difficult to substantiate and time horizons for policy changes difficult to predict – a framework with component parts provides one useful way to understand how evidence sits alongside other important aspects of policy. Identified in the IfG report, it has been modified to add greater definition and understanding. Being able to understand this wider context can help researchers better articulate how their evidence might matter or enable them to frame it in a way that is more likely to be considered by policymakers.



Adapted from: Hallsworth at el (2011), *Policy Making in the Real World* (2011), Institute for Government and Civil Service Reform Plan (2012)

Evidence does not replace the need for judgement, though (Barber, 2016). Policymakers will be seeking to understand the boundaries, opportunities and constraints they face in addressing any major issue. When making decisions under uncertainty or in response to rapidly unfolding events, empirical evidence will often interact with 'political instinct', past experience and rule of thumb. Equally, the pursuit of new ideas and innovation may mean that there is limited or inconclusive evidence to call upon at the time of decision-making.

Policy studies tend to capture the effects of 'bounded rationality' as opposed to 'comprehensive rationality' in decision-making. There is growing literature on the role of cognitive short-cuts in decision-making, i.e. use of causal stories, beliefs, emotions, habits and familiarity with issues (Kahneman, 2011). Where empirical evidence is corroborated with other sources of information (e.g. personal stories) or through other influencers, it is likely to carry more weight.

Where 'knowledge deficit' is not the issue, more evidence will not lead to research take-up or improve the quality of decision-making. A better tactic is to frame the evidence to address wider ambiguities and provide a lens through which the evidence can be understood. Such ambiguities may be the result of different actors competing to draw attention to their side of the problem, making the process inherently political, or disagreements on how to interpret the world (Cairney and Oliver, 2018).

Role of Civil Service policy profession

While it may not be particularly scientific or representative of future civil service reforms (around 'people, digital and better outcomes', for example), a wordcloud from a workshop mapping the role and activities of the policy profession within the Civil Service provides a useful insight into different aspects of policymaking – as viewed by the profession. Advising ministers, stakeholder engagement, problem solving, cost-benefit analysis, legislation and communications all play a crucial part – with analysis and evidence, implementation and project management as second order functions.

Source: *Twelve Actions to Professionalise the Policy Profession (identified by workshop participants)*, 2013

Understanding the context, developing the policy options, getting a decision and making it happen lie at the heart of a specific policy challenge (Policy Profession Board, 2013). Articulated more precisely, the Department for Education has designed five practicable policy tests of what good policymaking could look like to make sure policies are deliverable and lead to improved outcomes.

1. **Purpose**: What's the point? Are you absolutely clear about what the government wants to achieve?
2. **Role**: What's it got to do with us? Are you absolutely clear what the Government's role is?
3. **Evidence**: Who made you the expert? Are you confident that you are providing world-leading advice based on the very latest expert thinking?
4. **Creativity**: Are you being predictable? Are you confident that you are providing the most radical and creative ideas available in this policy area...including doing nothing?
5. **Delivery**: Will it actually work? Are you confident that your preferred approach can be delivered?

Source: Chris Wormald, *Department for Education*

Ultimately, given our current form of governance, where the top echelons of the civil service do not change in line with governments of different political shades, advising ministers gets the most weighting in this mapping. Empirical evidence from researchers that can be transformed into ideas, stimulate intellectual curiosity amongst politicians, support civil service creativity (e.g. through open innovation) or contribute to clarity about what the government can or shouldn't do may carry greater weight.

Professionalising policymaking and service delivery

There is acknowledgement within government that civil servants engaged in policy need to be developed as a policy profession and that the 'cult of the generalist' needs to be balanced with appreciating the value of expertise on substantive issues – a longstanding challenge. Notwithstanding the pockets of excellence and high performing teams across the Civil Service, when it comes to looking at how the civil service can deliver better public services for citizens, in the prospectus for reform (Civil Service, 2020) the top five issues identified in order were cross-team collaboration, training and learning, communications, tools and infrastructure, and compensation and benefits.

Central to past attempts at reforms have been improving policymaking and ensuring better use of evidence; better understanding of the political and democratic context; and better planning and clarity from the outset as to *how policies will be delivered*. What is unique about the next wave of reforms is to work out how government can operate as a 'whole system' – hence the desire for better cross-team working.

In particular, skills and knowledge in crafting submissions to guide ministerial decisions that present tightly structured hard choices and evidence-rich arguments is vital to effective government. There are moves afoot to bring in the collective expertise of analysts to help make better decisions and improve outcomes, "which will require everyone regardless of their professional background to know what good analysis and evidence looks like" (Office for National Statistics, 2018). In a data-driven environment, a growing challenge is to realise the potential of data held by government and available externally – both for policy research and to improve services that can be digitised. This depends on maximising the contribution of the analyst function – statisticians, scientists, engineers, economists, social researchers, actuaries, and operational researchers working within government.

Decision making can suffer from a range of cognitive bias, with an established literature about some common mental short-cuts that can lead to sub-optimal choices. These include, for example, availability bias (overestimating importance of events due to information on the subject) and bandwagon effect, to confirmatory bias that focuses on information that aligns with existing preconceptions. Senior decision makers in departments are expected to understand and make better use of the professional support and specialist services.

Ultimately, the bottom line is whether civil servants "come to be seen by ministers of whatever persuasion as the experts, whose advice you need and ignore at your peril, on how to translate political objectives into effective change?" (Rutter, 2013). Equally, the need to rebalance competency between policy and delivery in favour of the latter is well recognised within government, as is the need to change structure and organisation to be better able to coordinate resources from across Whitehall to deliver core priorities (Gove, 2020).

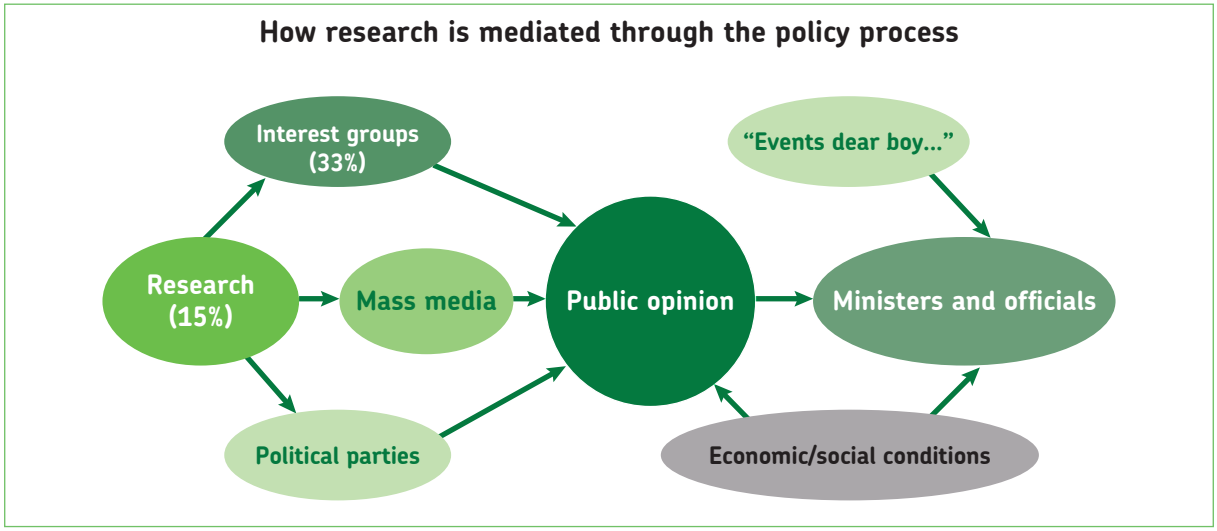
PUBLIC PREFERENCES AND EMPIRICAL EVIDENCE

The simplistic caricatures of rational scientists 'battling' politicians seeking easy answers rarely give sufficient consideration to the role of the public in policy debates or the complexity of politics. Both empirical research and normative assumptions and justifications play a role in policymaking. Notwithstanding the drive to improve policymaking through 'what works', there isn't a 'technical fix' to bridge the well-recognised empirical knowledge and normative divide.

Most researchers will be distant from the nuances, twists and turns, inherent (political) negotiations and balancing act between stakeholders common to the policy process. Evidence, no matter how widely endorsed by scientists, can fall on deaf ears – as the pace of progress on climate change has demonstrated, and where in spite of political commitments, action has been running behind the science.

One model of impact, that seeks to conceptualise how research might be mediated through the policy process, recognises that it is mediated as much *indirectly* through different actors and channels as *directly* through engagement with civil servants and politicians (Sayer, 2020). Depending on the issue in question and context, this means working with a range of sectors, including engaging the public, will be relevant to impact generation.

Knowledge exchange and impact can also be mediated though places. With the emergence of the modern placed-based agenda, and the need to build local institutional capacity to support locally-tailored solutions, in some cases local and regional impact could acquire greater salience (see McCann, 2019). UKRI is currently supporting a number of engagement projects where community partners and local organisations have few opportunities to engage with research and innovation.



Source: Gormley, W.T., (2011) Science Vol 333, 19 August 2011, www.sciencemag.org

Persuading policymakers

A model, developed through a study of the U.S. federal policymaking process, found that researchers, academics and consultants were judged to be "very important" by only 15% of "knowledgeable respondents" (including congressional staff members, civil servants and others), with 51% regarding them to be "somewhat important" (Gormley, 2011). In contrast, 33% of respondents viewed interest groups as "very important".

In this context of connecting empirical and normative questions, some political scholars emphasise the political nature of the policy planner's work and stress the role of *persuasive arguments in practical decision making* (Stone, 2012). According to them, policymaking involves an ongoing discursive struggle over the definition and conceptual framing of problems, public understanding of the issues, and shared meanings that motivate policy responses. The role of social science is not only to help resolve social and economic problems, but to communicate the nature and scale of problems to undecided segments of society or persuade those segments of the issues' importance.

TACTICAL AND STRATEGIC APPROACHES TO INFLUENCING POLICY

The policymaking arena can be an extremely crowded place, so academic researchers need to think carefully about their appropriate target audience and the different pathways through which evidence can inform thinking and decision-making. For example, the Cabinet Office provides simple but helpful tips of the dos and don'ts of influencing policymakers.

Influencing policymakers

DO

- Be proactive in establishing networks and use multiple routes to influence
- Make offers explaining how you could collaborate or contribute
- Be specific about how your ideas and proposals might be applied
- Be succinct and clear in your communications – no jargon!
- Be patient and persistent

DON'T

- Focus only on your own research
- Assume that officials have expert knowledge
- Ignore the policy context
- Assume your advice will be perfect – be ready to iterate
- Focus on too much methodology; we're usually more interested in implications

Cabinet Office

One area that has received less critical attention is which knowledge exchange activities are comparatively better for *social learning* and how does that learning influence the thinking, behaviour and action of policymakers? The *social side of evidence* is critical in getting evidence used (Dumont, 2019). Not surprisingly, the power to influence depends not just on reason and argument but also trust/respect and appealing to emotion, e.g. not simply explaining how something works but also why it emotionally matters.

While there are a range of basic theories and tools for knowledge exchange, researchers can also borrow ideas from the field of *policy advocacy*. This has a distinct pedigree from knowledge exchange practices. It offers various theories of change, strategic and tactical, that seek to explain how and why a policy change may or may not occur. The intention here is not to explain all the competing theories and approaches. A short explanation of a few selective approaches is provided to illustrate different courses of action (Stachowiak, 2009). There is mapping of different practical activities that can be undertaken but evidence is poor on which activities are most effective in influencing policy (McKinsey&Company 2009). Importantly, rather than simply trying to pursue short-term impact opportunities, they point to whether playing the long game is more likely to leverage public policy.

Strategic theories

'Policy Window' theory: This theory of agenda-setting tries to clarify why some issues get attention and others do not. These policy windows tend to occur when there is social recognition and understanding of the problem, increased political will to act and policy options that are seen as technically feasible. For example, it could be argued that the long-standing disparity between physical and mental health finally came to the fore in 2016 and 2017. Recognising policy windows and having the capacity to act with speed are instrumental when such opportunities emerge.

'Coalition' theory: based on the idea that change happens through coordinated activity among individuals and organisations, usually outside government, who have similar core policy beliefs and are prepared to work together. Coalitions can reach out to unlikely allies and champions and pursue multiple avenues for influencing change to find a route that will bear fruit. For example, the Fair Education Alliance is a voluntary association of education organisations, businesses and charities seeking to improve fairness in the education system; Action on Sugar is a group of specialists concerned with sugar and its effects on health who work to reach a consensus with the food industry and Government over the harmful effects of a high sugar diet.

Tactical theories

***'Messaging and frameworks'*:** based on behaviour economics and the idea that people develop different preferences based on the ways in which options are presented. How issues and choices are framed, and messages developed, and the communication methods used could influence the target audience differently. However, such an approach is less likely to influence change as a standalone activity (e.g. a single event) compared to when embedded into a broader conversation or communications campaign.

***'Diffusion'*:** this seeks to understand how 'change agents' or 'opinion leaders' communicate and diffuse new ideas (whether this is a conceptual idea, an engineered policy proposal, call for a new programme, a product or some other form of intellectual property). Such an idea is more likely to be adopted if it is relatively easy to comprehend, perceived as better than the ideas it supersedes, and is compatible with the values, beliefs and needs of potential adopters. Both the degree to which new ideas are visible and communicated, and the perceptions of the change agent, can influence take-up or the rate of adoption by the target audience. Like all new ideas, some will be adopted and others rejected by the targeted (policy) audience.

KEY POINTS

- Researchers and policymakers think about evidence differently, with policymakers seeking many types of information and inputs from stakeholders and different disciplines. Single studies will only tell part of this story.
- Policymaking is about effective problem-solving of public issues. For a government, it may be about action as much as inaction – deciding not to do something either because it doesn't fall within their priorities or it's not easy to solve without political consequences.
- More attention should be paid to how policies get started: the multiple influences, actors and processes that come together to shape policy, sometimes with a blurry line between those who make policy and those who influence it.
- Researchers should think about how evidence will be received, not least because policymaking is mediated through political ideas and beliefs. Implementation of policy is a critical factor in deciding between options. A well-executed average policy can be better than a poorly executed well-crafted policy.
- Greater demand-side insights are needed on how evidence is used in 'everyday working' in order to build more productive research-policy relationships and activities.
- On some issues, a lack of knowledge may not be the problem. Research which gives policymakers a new perspective on the problem will be more useful. New insights, rather than statistics, can be more valuable where there is already considerable public debate or ambiguity about the nature of a social problem.
- Evidence shows that there is plenty of room to scale up knowledge exchange with parliamentarians, but researchers' impact depends on improvements in communication and presentation.
- Directly influencing policy should be complemented with indirect processes, such as informing public debate where there is an increasingly wide range of channels and communication tools for public engagement and social discourse, including leveraging more powerful public voices and providing a human angle.

CHAPTER THREE

UNDERSTANDING SOCIETY AND ITS USE IN POLICY

INTRODUCTION

Panel data allows users to look back across different people's life experiences or across generations for clues to social, economic or health outcomes. By examining the chain of events in people's lives, it provides insights into the pathways and mechanisms related to positive or negative outcomes. Some trajectories begin early, continue through adolescence, and persist into adulthood. Others may start later in life and continue into retirement. However, with widening life spans and 'choice biographies', the traditional model of understanding people's lives through the pre-defined life stages such as childhood to adulthood and retirement are no longer adequate to understand the dynamics of modern lives and families.

From a scientific perspective, there are numerous ways in which *Understanding Society* can be used to undertake research, for example (Fumagalli, L., 2018):

- to study how relationships and behaviours change over the economic cycle
- to examine long-run impacts of behaviours and policy
- to study cumulative effects of events
- to study small sub-samples of population
- to examine the interaction of social and biological factors
- to explain long-term trends
- for international comparative research.

In this chapter, the focus is on different types of policy applications and instrumental impacts, with case studies demonstrating a variety of uses of *Understanding Society* data and research. A number of practical applications are highlighted covering:

- problem diagnosis
- benchmarking and monitoring progress on behaviours and outcomes
- modelling and forecasting
- assessing the effects of policy treatment (including cost-benefit analysis)
- placemaking, devolution and 'levelling up'
- international comparative research.

Different disciplines tend to favour different statistical techniques, so having long panels of repeat measures allows advances in knowledge across disciplines – about both topics and methodology. While some issues and problems are persistent and continue for years with little sign of ending any time soon, progress in other areas means that they are certainly less serious now than in the past. 'Continuity and change' convey a common understanding of most public policy issues.

The breadth of *Understanding Society* applications demonstrates its value to the social science and policy communities. Nevertheless, across UK's longitudinal studies more effort is needed to make sure these data resources are used effectively and to their full potential, according to a review of quantitative analytical training needs (Maddock et al, 2019). From a policy perspective, greater use of the data in simulations, cost-benefits analysis, spatial research, and long-term policy impact assessments could be valuable to decision-makers.

UNDERSTANDING ISSUES, DIAGNOSING PROBLEMS

Diagnosis is a critical part of the policy process because the nature of problems can change over time for a variety of reasons:

- because the nature of the issue itself is changing over time (e.g. period effects)
- how it is 'distributed' or concentrated among particular individuals and groups in society is changing over time
- or indeed individuals change their behaviour over time independent of external factors (e.g. as they get older).

Individuals of course respond to social risks differently – measuring who is at risk, and the severity and duration of effects is essential to understanding social problems.

Almost all real problems are difficult to specify completely and perfectly. Decision makers rarely know enough about the nature of the problem they are seeking to address, but the understanding of a problem also maybe very different between stakeholders. It is not only lack of information, such as the relationship between outcomes and processes, that can be the problem, but also a limited capacity to imagine alternative or radical futures (Kay, 2011). In this context, the process of continual discovery and adaptation applies as much to the world of policy as it applies to other fields of decision making.

Not surprisingly, policymakers can and do disagree on the causes and consequences of key problems – but ordinarily a body of data accumulates from work by academic researchers, government agencies, and other sources that strongly point to evidence. In order to examine policy, research questions have to be closed rather than open-ended – which means framing them in ways which include or exclude key domains in order to 'solve' them.

Identifying causes and consequences usually involves looking at the structural relationship between different factors, and isolating the effects of a specific event, characteristics or behaviours to understand its net effect. However, disentangling the cause and effect of a particular problem can be complicated by the many other things going on in people's lives.

The reality is that many things can determine these issues. Human agency, time and space, and lives interwoven with those of significant others can play a part – or social problems may be related in ways that are not yet fully understood. Equally, policies could be inter-related, and a change in one domain may affect another. Sometimes this can be positive: better learning outcomes when you are younger means you are more likely to want to re-train when you are older. On the other hand, keeping older people in work has good economic and wellbeing benefits, but could also reduce the amount of free childcare available to younger parents, which would otherwise allow them to go back to work.

Depending on the causes driving a problem, and the significance of each driver, the policy prescription could be quite different. When dealing with more complex social problems with feedback loops, the task of analysing the problem becomes even harder, with the causes and consequences often difficult to disentangle. For example, there is a strong correlation between debt and psychological distress, which suggests that the problem here could be bidirectional. Looking at another example, identifying the factors that drive people into in-work poverty and the factors that enable people to escape could be quite different, with both types of analysis important in scoping the problem. Evidence of the critical importance of investing in the human capital of young children, and how job-protected parental leave enhances children's health, has to be set in the context of the effectiveness of policies that support both care and stable employment (Ruhm, 2000; Tanaka, 2005).

A common challenge for policymakers is to be able to differentiate between temporary and longer term effects. Problems often get resolved when people find the right service, support or their own solution, but problems that persist, such as long-term unemployment, ill health, poverty, housing affordability or similar issues can have major consequences over time for different groups – sometimes through the impact on children. Issues conceptualised in terms of inflows, stocks (reservoirs) and outflows provide a dynamic picture rather than a snapshot at a point in time, and open up opportunities to examine different types of interventions – from prevention to management and cure. Using *Understanding Society* to examine intergenerational effects can help identify the existence of vicious circles from one generation to the next.

The concept of 'revolving doors' is also not new to policy. This is where issues may be temporarily resolved but surface again for a variety of reasons. When risk factors vary across large geographical regions at a fixed moment in time more than at a fixed location across time, large scale cross-sectional studies, if they exist, could also be useful.

Using different methods, panel data with repeated observations help to examine contemporary issues (not feasible with cross-sectional data):

Using changes over time to untangle associations

The direction of association between employment and health is crucial to many policy debates but difficult to investigate. Using repeat employment measures in *Understanding Society*, Chandola and Zhang (2017) showed that returning to a poor-quality job was worse for physiological chronic stress than remaining unemployed. Curnock et al (2016) showed that moving from disability benefits to work improved physical and mental health, while moving to unemployment benefit only resulted in improved mental health. Steele et al (2013) investigated the dynamic association between unemployment and health to investigate direct and indirect selection effects (using the British Household Panel Survey (BHPS)). They found that moving from unemployment to employment improved mental health, but this effect was reduced by indirect selection (i.e. unobserved confounding) but not direct selection (reverse causation).

Natural experiments

Policy treatments can offer up 'natural' opportunities to compare their effects on similar groups. This could be because a policy is phased across space or time, involve cut-off points for treatment, or is misallocated across groups. For example, there is considerable debate about whether the association between housing tenure and health is the result of tenure being a proxy for wider material resources or as a result of the tenure conferring social status. Using the right-to-buy policy, which led to a change in tenure but not housing change, Popham et al (2015) showed no association between tenure as a status and mental health (using BHPS).

Understanding Society interviews take place on a rolling basis as fieldwork is conducted throughout the year. Using this, Rabe et al (2015) identified children's interviews before and after their school's Ofsted report to show that parental investment in children increased after an unexpectedly good Ofsted report. This suggests that investment by parents complement Ofsted inspections. Using data on increases in neighbourhood broadband speeds linked to UKHLS and BHPS youth interviews and data on education attainment from linked data from the Department for Education, Faber et al (2016) found that jumps in the available broadband speed have no significant effect on student time spent online, time spent doing homework or the propensity for using online resources for homework.

Investigating causality (using fixed effect and/or instrumental variables (IV) modelling)

People and their behaviours are different, and when examining treatments effects, it is important to control for unobserved differences between people. Panel data can be used to control for 'time invariant unobserved heterogeneity'. Fixed effect models with panel data are a key way of addressing time invariant differences. With long runs of BHPS, this approach has been in different domains to better understand key social issues. It is believed that the contexts in which people live influence their political beliefs, but analysis of BHPS shows that there is significant selection into areas, which outweighs local contextual effects (Gallego et al 2016). Blanden et al (2012) investigated how earnings returns on education evolve in the medium and longer run. They found that adult learning has a causal effect on women's subsequent earnings but, for men, any apparent gain is due to selection. Oswald and Powdthavee (2008) examined adaptation to disability over time, and found people with disabilities revert to their previous level of mental health by 30-50% depending on the severity.

Shared responsibilities and joint policies

Understanding Society's multi-topic content and linked data are important in developing the business case for joint action between different teams, departments, agencies or structures of government to work together better. Such evidence can help identify the scope of actions required and whether intervention on multiple fronts could be more productive, or collaboration the primary route to address a problem effectively.

Understanding Society, for example, is being used to examine the relationship between health and employment, or different modes of commuting and wellbeing. In the latter case, transport planners can look beyond simply moving people from A to B most efficiently and consider whether particular travel modes can be optimised to generate health and wellbeing benefits. However, policies may still be constrained by the hard task of influencing departmental priorities, and negotiating and apportioning cost/benefits between departments or agencies.

Can changes in commuting improve wellbeing?

The Commuting & Wellbeing Study (Chatterjee et al, 2017) examined the impacts of commuting on the wellbeing of over 26,000 employed people living in England between 2009/10 and 2014/15. There is growing recognition that traditional measures of economic growth (like GDP) do not necessarily imply improving quality of life across the population. Neither do employers want workers starting their day stressed or exhausted by their commute. So how can benefits from growing investment in transport projects, changes in working practices and public health campaigns be maximised?

Understanding Society made it possible to examine how changes in subjective wellbeing from one year to the next are related to changing commuting circumstances. For instance, the study examined whether individuals with longer commute times suffer from higher stress levels and reduced leisure time, and consequently report lower personal wellbeing overall. By comparison, do those that start walking to work feel that their physical health improves and stress levels reduce, and hence report better wellbeing overall? A Steering Group, convened by the Department for Transport, brought together the Department of Health, Department of Communities and Local Government and the What Works Centre for Wellbeing, with research aimed at both policymakers and delivery agents working at a local level across transport, employment and public health.

Findings

Theme 1 – The impacts of longer commute times on employee wellbeing
Every extra minute of commute time reduces job satisfaction, reduces leisure time satisfaction, increases strain and reduces mental health

Theme 2 – Commutes that increase job satisfaction and employee retention
Working from home, walking to work and shorter commute times increase job satisfaction, and shorter commute times make it more likely that an employee will stay with their job

Theme 3 – The benefits of active commuting
Walking and cycling to work increases leisure time satisfaction and walking to work decreases strain. Cycling to work is associated with better self-reported health.

Theme 4 – Insights for public transport
Bus commuters feel the negative impacts of longer commute journeys more strongly than users of other transport modes. Shorter duration commutes by rail are more strenuous than longer duration commutes by rail.

The findings also identified differences between groups. One unanticipated finding was the clear link between longer duration commutes, commuting mode and job satisfaction. An important message for employers is that job satisfaction can be improved if workers have opportunities to reduce the time spent commuting, to work from home, and/or to walk or cycle to work.

Chatterjee, K., Clark, B., Martin, A. & Davis, A. (2017). *The Commuting and Wellbeing Study: Understanding the Impact of Commuting on People's Lives*. UWE Bristol, UK.

BENCHMARKING AND MONITORING PROGRESS

Related to the direct data use rather than the application of research findings, *Understanding Society's* longitudinal panel is ideal for regular reporting of progress towards policy goals. Barber (2016) argues that "priorities and ambition are necessary for transformation, but not sufficient. It is also necessary to define more precisely what outcome is intended" (and where targets also come in). The use of *Understanding Society* to create indexes or incorporate variables into a set of measures helps to assess outcomes as well as needs.

Policymakers use outcomes not only to define success (i.e. the desired end result) and benchmark the current state of affairs, but also to mobilise partners towards common objectives. They can be of potential interest to devolved administrations, other government departments, local authorities, parliament, academics, journalists and the voluntary sector.

From a parliamentary, democratic and policy impact perspective, defining outcomes also enables those charged with scrutiny to hold the executive to account and undertake inquiries into performance and results.

In a policy context, an outcome at its simplest can be thought of as the change that is expected as a result of an intervention, and can be measured using a set of indicators. While the idea that governments should precisely define what outcomes they are seeking is widely accepted, the idea of setting targets has generated considerable controversy and debate over recent years. This debate has focused on whether they distort behaviour, stifle innovation, or embody top-down management when other forms of collaborative leadership and management may be more appropriate, or if wrongly specified, become a political hostage to fortune, e.g. the Coalition Government's high level pledge to reduce immigration to "tens of thousands."

Improving lives: helping workless families

Use of theory of change models for policy are often accompanied with indicators to track whether interventions are making a difference or not (which is a good thing!). For its strategy on helping workless families, the Department for Work and Pensions published "nine national indicators and underlying measures to track progress in tackling the disadvantages that affect families' and children's outcomes, as borne out in our evidence and analysis. These indicators have been carefully developed and rigorously tested with external academics. While the measures may not be immune from external influences, as a suite they underline the strength of this Government's long-term commitment to improving the prospects of disadvantaged families".

The nine national indicators included "those aimed at six parental indicator areas with supporting measures to track worklessness and the associated disadvantages and three outcome indicator areas with supporting measures for children and young people", combining a mix of statutory and non-statutory measures. The statutory measures are those where Government has a statutory duty to report data for England annually to Parliament on parental worklessness and children's education attainment at age 16.

Two of these indicators – reducing parental distress/conflict and improving poor mental health – use *Understanding Society* data for specifying indicators:

Parental distress/conflict:

- Proportion of children in couple-parent families living with parents who report relationship distress
- Proportion of children in separated families who see their non-resident parents regularly

Poor mental health:

- Proportion of children living with at least one parent reporting symptoms of anxiety and/or depression

Source: Department for Work and Pensions (2017)

Specifying outcomes should be an iterative and consultative process with stakeholders and experts, but what constitutes success and how it can be measured is not always without controversy. For example, the issue of moving away from measuring child poverty using family income towards measuring 'root causes' of child poverty.

In order to generate well-defined metrics, it is important to have evidence on the relationship between interventions and their likely impact on an outcome. Where policymakers don't have much control over the process, the chances of success can be limited. Conversely, an organisation delivering consistent outputs can still fail to achieve an outcome if there is poor targeting and interventions fail to reach the intended population.

While indicators can be specified using large scale cross-sectional surveys or administrative data if relevant measures exist, the unique value of *Understanding Society* is the ability to track change over time at individual and household level – and use statistical methods to evaluate policy effects (see section below on the anticipated and unanticipated effects of policy).

Tracking progress on outcomes and behaviours

The Social Metrics Commission (SMC) is an independent body formed to develop a new approach to poverty measurement that better reflects the nature and experiences of poverty that different families in the UK have. It has created a framework that not only includes the incidence of poverty but also captures the depth of poverty, the persistence of poverty and the lived experience of those in poverty. Both persistence of poverty and some domains of lived experiences use *Understanding Society* data. Using the European Commission definition of persistence as being in poverty for two years out of three, the SMC's latest report (2020) found that:

- the number of people experiencing persistent poverty has largely remained unchanged at 11% of the UK population (around half of those in poverty)
- people in black and minority ethnic families are between two and three times as likely to be in persistent poverty than people in White families
- 2.4 million people (4% of the population) are in both deep and persistent poverty, where deep poverty is defined as those 50% below the poverty line.

The Study's data is also used in regular reporting of child wellbeing by The Children's Society in their influential annual Good Childhood reports. Across Waves 1-6 of *Understanding Society*'s measures of child life satisfaction, the reports have found a decrease in happiness with life as a whole across this period.

Government and devolved administrations use *Understanding Society* data as indicators of outcomes. The Welsh Government has a legal requirement to report on child wellbeing as a part of The Well-being of Future Generations (Wales) Act 2015. Wellbeing, as measured by the Strength and Difficulties Questionnaire (SDQ), was 3% higher in Wales than across the UK. In addition, the Scottish Government uses environmental behaviour measures in *Understanding Society* in their regular reports as part of the Low Carbon Scotland: A Behaviour Framework.

MODELLING AND FORECASTING

Modelling has become an indispensable tool for policymakers over the decades. A model is a mechanism for analysing or investigating some aspect of the real world. It is similar to but simpler than the system it represents – with a good model representing a judicious trade-off between realism and simplicity. A key feature of a model is manipulability.

Their use extends across many areas, e.g. demography, welfare, health, local economic development, transport, etc. They play an important role in the modern state today, with many types of model that assist with policy simulation, forecasting, planning public services and predicting changes in the natural environment (HM Treasury, 2013). They are particularly relevant to areas of policymaking which can benefit from simulating what would happen if policy design changed, such as tax reforms or pensions, or from modelling demand for health as the population ages. *Understanding Society* data can be applied in the use and development of these different types of model.

A primary motivation for building *microsimulation models* is to be able to analyse the distributional effects of policy changes among individuals and households (micro-units). This can help study the behaviour and performance of an actual or theoretical system. While they constitute a unique tool for ex ante policy analysis (that is, based on forecasting rather than results), they can equally be used for ex post evaluation. In *Microsimulation and Policy Analysis*, Sutherland et al (2014) provide a good overview of the opportunities and challenges of microsimulation, but summarising these are beyond the scope of this report.

Of paramount importance is bringing clarity to what kinds of decision a model needs to support or how business critical it is. A quality assurance review by HM Treasury (2013) of modelling in government, identified particular weaknesses such as:

- limited or poor quality data
- unrealistic assumptions and optimism bias
- inadequate sensitivity and scenario analysis.

Models can be used to explore the effects of policies at sub- and supra-national level, e.g. EUROMOD, the tax-benefit model for European Union members. Given the complex plethora of taxes and benefits in the UK, designed to meet multiple social policy objectives, an open and much more accessible UK tax-benefit model (UK MOD) is currently under development by the Centre for Microsimulation and Policy Analysis (CeMPA) at the University of Essex. This will also enable variations in policy to be simulated for England, Scotland, Wales and Northern Ireland.

Modelling the impact of pension changes

The United Kingdom currently spends approximately £97bn on the state pension, representing 4.6% of GDP in 2018/19. This is projected to rise to 7.1% of GDP by 2066/67. A number of reforms have been undertaken recently in the hope of keeping state pension expenditure sustainable.

Proposed changes to both the state pension and private pension rules are fully costed as part of the policy development process. This work is undertaken by the Department for Work and Pensions (DWP), using a range of tools including a financial model called Pensim 2. In recent years, the model has been used to investigate changes to state pension age, the single-tier pension,[10] auto-enrolment,[11] and to model changing patterns in average contributions. The model itself is based on an artificial sample of 60,000 individuals which precisely mirrors the make-up, income and likely life events of the UK population. It is an artificial sample because no dataset containing all necessary parameters exists, and the underlying population data which the model runs on is so extensive that it is only refreshed every few years.

The latest update to Pensim 2 was only possible thanks to data from the British Household Panel Survey (BHPS). This allowed national insurance and pension contribution data to be meshed with the Family Resources Survey data to generate an extruded dataset representing the UK population. As James Rees of DWP explains: *"The value of the BHPS has been because it has acted as a bridge enabling us to stitch together two otherwise unmatchable data sets. Without it we either would not have been able to assemble the underlying artificial population dataset or it would have taken substantially more time and effort which may have rendered the whole project uneconomic."*

Informing pensions policy

The October 2013 Single-Tier Pension Impact Assessment Report[10] demonstrated that, with certain assumptions, introduction of the single tier pension could reduce the pension burden by 0.6%. The 2015 evaluation report[11] produced by the DWP used Pensim 2 to demonstrate that automatic enrolment could:

- significantly reduce the numbers of people facing inadequate retirement incomes
- largely remove the problem of people not saving for a pension while in work
- and increase median private pension incomes in 2070 by between £20 and £261 per week.

[10] DWP. (2013). The single-tier pension: a simple foundation for saving

[11] DWP. (2015). Automatic Enrolment evaluation report 2015

Microsimulation can be complex, because it can require making assumptions about how individuals behave in response to policy changes. Such models are often categorised as 'static', 'behavioural' or 'dynamic' (Harding 1996a).

The first type applies purely deterministic policy rules on microdata in combination with data adjustments such as re-weighting. The characteristics of the micro units stay constant. Static microsimulation models usually illustrate the impact of policy change only for today's world, perhaps at most looking four or five years into the future by applying standard static ageing techniques.

Behavioural models use micro-econometric models of individual preferences to estimate the effects of policy changes on behaviour – for example, how labour supply could be affected by a tax-benefit change.

Dynamic models, on the other hand, 'age' the sample members through time, changing their characteristics in response to natural processes and the probabilities of relevant events and transitions (Li and O'Donoghue, 2013). Dynamic microsimulation models extend the time frame of the analysis in order to address the long-term distributional consequences of policy changes, widening the perspective of the effects of policies to encompass the individual lifetime, and addressing questions about intra-personal redistribution over the lifecycle (Harding, 1993).

Models can be supplemented with microdata from *Understanding Society* to provide key characteristics of the population of interest. This can extend the kind of analysis feasible with household panel data, for example, by incorporating household budget constraints and replacement rates into panel labour supply analysis – or simulating impact of policy change on longitudinal measures such as poverty persistence or lifetime earnings. Equally, the phenomenon of structural population ageing – where a relatively smaller proportion of taxpayers may come to support a relatively larger proportion of retirees in decades to come – means researchers and policymakers can look at the consequences of ageing over decades into the future, factoring in life stage transitions based on panel data.

ANTICIPATED AND UNANTICIPATED EFFECTS

Policymakers develop an understanding of the merit, worth, and utility of a policy through critical review and formal evaluation. They are central to identifying what works, by how much and for whom. They can inform the need for change or policy redesign by highlighting the effects of treatment against both intended and unintended outcomes. As Gove (2020) notes, government needs to be rigorous and fearless in its evaluation of policy and projects, and organisations such as HM Treasury become more effective in not only assessing the costs of a policy but also its social value.

A quantitative evaluation can provide evidence of whether a change in outcomes is observed, but good evaluation also needs to find out whether the change can be attributed to the intervention in question. Evaluating policy is challenging – with questions over feasibility, cost and the counterfactual (i.e. what would have happened had the policy not been activated). Typically, the counterfactual, essential for establishing causality, depends on having a comparison or control group. (Many policy interventions cannot be randomised between individuals in the need to develop comparison groups.) On occasion, however, policies can be evaluated by measuring the change in a target population's circumstances or behaviour before, during and after a policy.

Policies generally operate at the systems level and – when well-designed – can influence complex systems in ways that can improve the intended outcome(s) within a target population. At its simplest level, assuming a particular trajectory of a person or family's life, did the set of interventions change the course of that trajectory to deliver a different destination? However, the complexity of human behaviour means that effects can't always simply be understood in terms of a series of actions and reactions, but with feedback, non-linearity, tipping points and all the other characteristics of complex systems.

Understanding Society's panel design lends itself well to looking at the effects of policies on outcomes (although policymakers are also very interested in process and implementation). Typically, the panel design enables before and after studies. Policy evaluations in some respects differ from program evaluation in terms of their sheer scale, degree of control, scope of data required, complexity and stakeholders involved.

The multi-topic content of *Understanding Society* offers the possibility of using a wider range of measures of success and identifying unintended consequences and positive or negative spill-over effects. Increasingly, there is growing emphasis towards multi-disciplinary research, where the impact of policy might require analysis from economics, sociology, environment/geography perspective, psychology and political science.

Is UK Stamp Duty distorting labour and housing markets?

Most developed countries impose a tax on transactions of property and land. This tax – 'stamp duty' in Britain, and 'land transfer tax' in North America – increases the transaction costs associated with the sale of a property and therefore increases the costs of moving for homeowners. This cost increase can be expected to negatively affect the propensity to move, and thus the tax is prone to having adverse effects on housing and labour markets. Individuals may be less willing to accept new jobs that are not within commuting distance, or they may decide to hold on to a current job that is a less good match than another available job further away. Similarly, households may not live in the type of dwelling and the location that most closely match their preferences. Given these potential adverse effects, the effects of this tax are highly policy-relevant. To date, however, little is known about the nature of the moves (short vs long distance or housing vs job-related) that are most strongly adversely affected.

The stamp duty on transactions on property and land was introduced in the UK during the 1950s. The research focused on the system of stamp duty on residential transactions that had been in place until 3 December 2014, when significant reforms were introduced, including the devolution of Stamp Duty Land Tax (SDLT) to the Scottish Government from 1 April 2015. There was a major drop in residential transactions in the aftermath of the Great Recession of 2008 but numbers have gradually increased since and transactions numbered 1.13 million in 2013/2014. More recently, receipts from stamp duty have surged to a record high thanks to rising house prices, higher rates on sales at the upper end of the market and the new surcharge on buy-to-let/additional properties.

Research by Christian Hilber and Teemu Lyytikäinen estimated the effect of the UK SDLT on different types of household mobility using the British Household Panel Survey. Exploiting a discontinuity in the tax schedule, it isolated the impact of the tax from other determinants of mobility. Using homeowners self-assessed house values, a comparison was made on either side of the point where the tax rate jumps from 1 to 3 % (£250,000). The findings show that a higher SDLT has a strong negative impact on housing-related and short-distance moves but does not adversely affect job-induced or long-distance mobility. Furthermore, there was little evidence to show that stamp duty adversely affects moves triggered by major 'life events' such as divorce or retirement. Overall, our results suggest that transfer taxes may mainly distort housing rather than labour markets.

Hilber. C and Lyytikäinen. T (2017), *Transfer Taxes and Household Mobility: Distortion on the Housing or Labour Market?*, Discussion Paper, Spatial Economics Research Centre, London School of Economics.

Longitudinal researchers deploy a range of techniques to overcome some of the traditional challenges of policy evaluation. Common methods include difference in difference; regression discontinuity; and statistical matching (see definitions below) – or even using the general population as a counterfactual. Using quasi-experimental methods, researchers mimic the conditions of randomisation so any measured difference can be attributed to the intervention.

The difference in difference method typically involves a before and after study, comparing two groups where the outcomes of interest have historically moved in parallel. Here, there is no comparison group. Instead, the trends of the two groups over time are compared to provide an estimate of the overall impact of policy.

In a regression continuity design, participants are assigned to comparison groups based on a cut-off in a pre-intervention measure. For example, those only just eligible are compared to those not quite eligible on the basis that any difference between these two is likely to be explained by the intervention.

In statistical matching, participants in the treatment group are matched with non-intervention participants to create a counter-factual on the basis that the two groups do not differ significantly on all relevant or known variables.

Urban regeneration in Northern Ireland

Neighbourhood Renewal (NR) was launched in Northern Ireland in 2003 to revive the social, economic and physical fabric of 36 deprived communities, characterised by a legacy of sectarian conflict. This study evaluated the impact of the policy on health over a decade. A merged panel of secondary data from the British Household Panel Survey (2001–2008) and *Understanding Society* (2009–2012) yielded longitudinal information on respondents for 12 years. Gretta Mohan, Alberto Longo and Frank Kee conducted a controlled before and after investigation for NR intervention areas (NRAs) and three control groups—two groups of comparably deprived areas that did not receive assistance and the rest of Northern Ireland.

Using linear difference-in-difference regression, the researchers identified the impact of NR on mental health, self-rated health, life satisfaction, smoking and exercise. Subgroup analysis was conducted for males and females, higher and lower educated, retired, unemployed and home owner groups. A small, non-significant trend towards a reduction in the gap of good self-rated health and life satisfaction between NRAs and controls was observed. A 10% increase in probability of rating life as satisfying was uncovered for retirees in NRAs compared with the rest of NI. Smoking in NRAs declined on a par with people from control areas, so a NR influence was not obvious. An observed steady rise in undertaking weekly exercise in NRAs compared with controls was not statistically significant. NR also did not have a discernible impact on mental distress.

Overall, the research identified that area-based initiatives may not achieve health gains beyond mainstream service provision, though they may help safeguard against widening health disparities.

Mohan et al. (2017), *Evaluation of the health impact of an urban regeneration policy: Neighbourhood Renewal in Northern Ireland,* Journal of Epidemiology and Community Health.

Cost-benefit analysis

Empirical evidence can provide insights into alternative ways to conceptualise and tackle problems. Such evidence can be more influential if it can identify and measure the costs and benefits associated with particular policy ideas. Cost-benefit analysis (CBA) involves a systematic approach to estimating the strengths and weaknesses of alternative policy options in terms of their economic, social and fiscal value (including the option of not taking any action/the counterfactual). How to allocate resources between different activities is a key function of government, and a central challenge for policy decision-makers. Compiling a business case for government spending requires approval by HM Treasury where Treasury has not already delegated particular spending authority to departments. The value of inputs and outputs associated with alternative policies can thus be one factor that influences decisions.

The most challenging part of CBA is finding choices which reveal the trade-offs and equivalencies in preferences. *Understanding Society* is more likely to reveal preferences based on actual behaviour because of its longitudinal panel design. For example, the valuation of the benefit of cleaner air could be established by finding how much less people paid for housing in more polluted areas – or more in cleaner areas where the housing is identical in characteristics and location.

Some interventions are intended to produce immediate results, while others are intended to produce longer-term results. In the latter case, effects may take years to unfold – for example, the longer-term effects of early interventions, health prevention policies or major infrastructure schemes. Longitudinal panel data can not only help assess supply-side and dynamic effects of particular policies, where field trials are not feasible, but also longer-term effects.

However, with policy pressures to turn analysis around quickly, major projects can be pushed through and analysts may not have the flexibility to take a long-term perspective, particularly when it comes to identifying good evidence on causal effects (e.g. infrastructure projects). A report by the Institute for Government (Atkins et al, 2017), *How to value infrastructure: Improving cost benefit analysis*, argues that – with billions of pounds going into infrastructure investment – the Government cannot afford expensive mistakes and unnecessary delays. The report recognises that CBA, when used properly, can improve decision making but also identifies that it is sometimes used by ministers to justify decisions that have already been made. It calls for clearer guidance for analysts, based on more and better data and greater transparency about the way Ministers make difficult infrastructure decisions.

Faster broadband: educational benefits?

Governments around the world are currently committing substantial amounts of public funds to increase broadband speeds and develop their digital infrastructure. In the UK, the Government was investing over £1bn in providing superfast broadband coverage to 95% of households by 2017. These policies are motivated by claims that high-speed internet is now crucial to achieving policy objectives in two key areas: growth and education. A study by Benjamin Faber, Rosa Sanchis-Guarner, and Felix Weinhardt provided evidence on whether improved broadband speeds actually improved educational outcomes. Many of the most common online activities of students (e.g. research for homework, online games, streaming services, downloading music, etc.) require faster connections, but it is an open question whether upgrades in information and communications technology (ICT) increase learning productivity.

To estimate this effect, the researchers used English administrative data to link test scores for primary and secondary school students to available internet speeds at their home addresses. Data from the Youth Questionnaire of *Understanding Society* was used to investigate the impact of available ICT on study time and computer use of children aged 11 to 15. The research did not simply look to see if children in houses with better broadband speeds do better at school – this might simply be a case of correlation (influenced by other factors) rather than causation. To identify the causal process, the study exploited the random jumps in available broadband speed that are a feature of DSL-broadband technology. Different exchange areas cover boundaries that can have different speeds on either side of these (invisible) borderlines. By looking at residents on either side of these boundaries, who were very similar on most characteristics, the study was able to compare home addresses with low and high broadband speeds, including the effects of substantial changes in broadband speeds.

The results show that jumps in the available broadband speed have no significant effect on student time spent online, time spent doing homework or the propensity of using online resources for homework. As neither test scores nor the number of study hours are affected by available ICT, it can be concluded that study productivity is not affected either. There may be other benefits of faster broadband – including generally improving access to ICT in schools or households where it is not available – but these findings suggest that it is not critical to educational success, and presents perhaps a less native scenario for the development of rural communities in educational terms.

Faber, B., Sanchis-Guarner, R., and Weinhardt, F. (2016): *ICT and Education: Evidence from Student Home Addresses*, Paper No CEPCP480, Centre for Economic Performance, London School of Economics.

A major challenge for assessing the costs and benefits of alternatives is when the outcomes of activities are measured using different units – which make comparisons extremely difficult. For example, how does one compare a 5% reduction in the rate in smoking, with a 1% decrease in unemployment rate? "To date, policymakers have attempted to compare different outcomes by assessing them in units of money. But this only works as a measure of benefit when the preferences of the population can be inferred from private choices. … However, government and charitable activity exist mainly because of public goods and externalities, where private choice reveals little" (Layard, 2016).

An area of active research interest is whether the benefits of major policies and investments can be measured in terms of outcomes that ultimately matter to most people – an improvement in their quality of life. *Different dimensions of wellbeing – such as personal wellbeing, financial wellbeing, mental wellbeing and community wellbeing – could be relevant to different policy areas.* It is not the intention here to rehearse the current debate on the pros and cons of using subjective wellbeing (for example, overall life satisfaction adjusted for inequality) as an additional component of CBA.

The science of wellbeing is in its early stages, with policy makers interested in how a particular policy can help contribute to people's wellbeing. The HM Treasury Green Book (2018) notes that "individual and society's wellbeing is influenced by a number of interrelated factors including health, relationships, security and purpose. At the long-list appraisal stage of policy options … it may help to identify interventions which have an impact on wellbeing or another outcome which is affected by wellbeing."

Interventions that affect consumer behaviour

In retail financial markets, given the complexity of products and lack of complete and transparent information, as witnessed by mis-selling of mortgages, payment protection insurance, investments and payday loans, consumers often end up making decisions that are not in their best interests or which worsen their financial situation. Examining how regulation can improve financial markets depends on identifying and reducing consumer harm. This requires estimating the extent to which consumers' decisions diverge from their best interests, which can be challenging.

In order to facilitate this, the Financial Conduct Authority, has produced an Occasional Paper (Lee, 2018) which sets out guidance that can be used to estimate and assign monetary values to the consumer benefits resulting from regulatory interventions. There are common approaches used for assessing optimal or potential benefits such as identifying revealed preferences (based on actual behaviour of consumers) or stated preferences (what consumers say they want). In offering an additional approach to valuing consumer benefits, the paper sets out how subjective wellbeing measures in *Understanding Society* could be used to examine the relationship between financial behaviour and wellbeing and whether, according to our own wellbeing, we have made good financial decisions as consumers.

Given the breadth of disciplines involved, cost-benefit analysis can present a dilemma for social scientists, many of whom are not economists or trained in CBA. The scope, consistency and quality of data on government spending published on data.gov.uk are poor, and while governments publish policies, they do not publish information on alternatives considered and rejected. The New Economy Manchester, an organisation established to deliver policy, strategy and research advice to promote economic growth and prosperity in Greater Manchester, has developed a (lower cost) cost-benefit analysis model and guidance (in partnership with HM Treasury) for local agencies running public sector programmes, with accompanying data on valuing outputs, but such initiatives are an exception.

PLACE-MAKING, DEVOLUTION AND 'LEVELLING UP'

The wide range of geographical identifiers and linked geographical data available in *Understanding Society* means that researchers and policymakers can incorporate different geo-spatial classifications into their research, going beyond the simple debates of urban versus rural and north versus south[12]. Through a Special Licence, the Study provides access to information about the areas in which panel members live, taken from more than 20 published tables describing small areas, and more than 600 unique data items relating to key services (such as employment centres, primary schools, secondary schools, further education, general practitioners, hospitals, food stores, and town centres). *The representativeness of the Understanding Society sample at regional level also means it can be used for comparative research across the home nations and regions, including explaining convergences and divergences.*

Changes in the clustering of industries, demographic transitions, residential mobility and migration mean that places have their own dynamic. Where we grow up and live matters. Places shape identity and matter for a whole host of practical reasons – political participation, housing, family and social networks, work, cultural and civic life, care, and health and wellbeing, to name a few.

The EU Referendum revealed deep geographical differences across the country. If this divide is symptomatic of deeper-rooted problems, transforming places in the broadest sense will become even more central to policy and devolution.

A place has a complex social life, which, for the most part, is (historically) rooted and defined by the people who live and work there – 'linked lives' tie people into kinship and social networks extending well beyond the household. By examining linked lives through time and space, while considering the impact of structural conditions on people, new developments in longitudinal analysis allow researchers to re-think the role of place in mobility and immobility (Coulter et al, 2015).

The concept of place-based approach to policy remains a paradox at the heart of national-local government relations (at least in England). On one hand, local government is expected to provide leadership on place-making, while much of the funding it receives is controlled by central government or primarily for service delivery. No doubt politics and how power is distributed are a factor shaping central-local relations, as are media stories about the 'postcode lottery', but devolution can provide an opportunity to remodel and simplify government itself (Barber, 2016).

[12] Please see the Understanding Geographical Mobility Data Note. This aims to showcase potential research questions that can be explored using individual residential mobility histories over time.

The Welsh Government is trying to do that, for example, through its *Wellbeing of Future Generations (Wales) Act 2015*. This is an attempt to make public bodies, listed in the Act, "think more about the long term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach" to the wellbeing of people in Wales.

Uniquely, devolution offers an opportunity to test and evaluate policies more robustly. This is because the UK acts as a 'living policy laboratory' for social, economic and health policy innovation. It provides an opportunity for natural experiments that arise when one region decides to pursue a unique policy. This exposes people in one part of the country to an intervention not experienced by others, which it could be argued resembles random assignment.

Reforming Council Tax in Scotland

In Scotland, there has been growing debate about devolution of tax, welfare and spending powers, with political parties committed to different positions on what they would do with additional powers. Dr David Comerford, University of Stirling, and Dr Stuart McIntyre, University of Strathclyde, have been examining the opportunity for land and property tax reforms in Scotland. The ability to link *Understanding Society* to different administrative datasets, and it being a representative sample of the population in each of the four nations of the UK, enabled the researchers to estimate the impact of changes to domestic property tax (Council Tax) on the Scottish population.

According to the authors, while Council Tax is a form of property tax, it is poorly designed. They evaluated the rate at which a flat rate property tax, calculated as a proportion of property value, would have to be levied to replace the revenues from the current Council Tax, and then examined the impact upon households. Relative to Council Tax, who would be the winners and losers?

Using an administrative dataset of housing transactions from the Registers of Scotland, combined with housing stock data from the Scottish Neighbourhood Statistics database, they first estimated the total value of residential property in Scotland, which enabled an evaluation of the property tax rate needed to replace the current Council Tax revenues. Their analysis found that a flat rate property tax of around 0.7% of property values is required to maintain total tax neutrality. Denmark, for example, which has a flat-rate domestic dwellings property tax, charges 1% of property value (subject to a threshold with a higher rate of 3% above the threshold).

The researchers then evaluated the impact of replacing the Council Tax with a flat rate property tax in a representative sample of Scottish households using *Understanding Society*. They found that replacing the Council Tax with a flat rate property tax would have more winners than losers, and reduce the Gini coefficient – a key measure of inequality – thus promoting greater fairness.

The research fed into the report by the Commission on Local Tax Reform. The work of the Commission was intended to inform new policies on local taxation, which were put to the electorate in the Scottish Parliamentary election in May 2016. Although the Commission's report was equivocal, and avoided an explicit recommendation for a flat-rate property tax, proposals for a version of this subsequently featured in the 2016 Manifestos for both the Scottish Green Party, and the Scottish Labour Party.

Source: *Commission on Local Tax Reform*, Technical Appendix, Analysis by Comerford, D. and McIntyre, S. (2016).

Thoughtful observers recognise that people's sense of place has changed over recent decades but understanding *how* place matters in the context of the economic, technological and demographic change is an ongoing challenge. 'Place effects' often cause confusion conceptually and raise complex measurement challenges. When one examines the geography of change, are these simply artefacts of social-economic or demographic differences reflected in places, or are there factors at play in neighbourhoods, cities, rural communities and regions above and beyond such population heterogeneity? Evidence-based approaches to tackling deep-rooted social and economic problems are hindered by the challenges of identifying a causal relationship between residential location and individual outcomes – because of the non-random selection mechanisms by which people decide where to live.

Neighbourhoods, ethnicity and wellbeing

Is it a good idea for ethnic minority groups to live in concentrated areas of neighbourhoods, towns and cities? Some argue that this prevents integration and stops the UK from becoming truly diverse, while others highlight the protection it can provide minority groups from issues such as discrimination, and its positive impact on minority members' health and wellbeing.

To date, no studies have looked at how living in such areas might affect the subjective wellbeing of the different ethnic groups who make up those communities. Very little research has been carried out on how ethnic minorities subjectively value their lives, with just a few small-scale studies producing variable results.

Research by Gundi Knies, Alita Nandi and Lucinda Platt explored for the first time in the UK whether the make-up of a neighbourhood is linked to the life satisfaction of ethnic minority groups. It was funded by the New Opportunities for Research Funding Co-operation Agency in Europe (NORFACE), a network of 15 national research funding organisations in Europe and elsewhere, and was part of a more wide-ranging migrant diversity and regional disparity in Europe research programme.

Initial findings reveal considerable variation in life satisfaction and neighbourhood contexts across ethnic groups.

- All minority ethnic groups in the study have lower life satisfaction than the white British majority. This is linked in part but not entirely to factors such as lower socio-economic status, and more taxing family situations.
- The ethnic composition of their neighbourhoods does affect the happiness of minority ethnic groups, except in the case of African minorities.
- The white British majority feel happier in more homogenous neighbourhoods. Whether this is to do with the composition of the neighbourhoods or other features of such ethnically undifferentiated areas is not clear.
- Apart from African minorities (who tend to be more recent migrants), life satisfaction within ethnic minorities is not improved by living alongside more members of their own community, though there is some variation by generation.

Knies, G., Nandi, A., and Platt, L., (2016), *Life satisfaction, ethnicity and neighbourhoods: is there an effect of neighbourhood composition on life satisfaction?* Social Science Research, Volume 60, Pages 110-124.

Beyond selection effects, some drivers of place effects may be obvious. For example, institutional variations such as poorer transport infrastructure or differences in childcare provision could explain variations in labour market participation and access to employment. Others may be harder to explain, though. In some disciplines such as health research, place effects often appear to have the status of a residual category, an unspecified 'black box' of somewhat mystical influences on health which remain after researchers have controlled for a range of individual characteristics (Macintyre, Ellaway and Cummins, 2002).

The question of how place shapes individual wellbeing, for example, has been the focus of much scholarly and political debate. Such evidence matters not only in order to optimise the mix of place-based and people-based policies, but also to identify which place-based factors to influence in order to have a significant impact on wellbeing.

One way to tackle the challenge of untangling people and place effects is to observe individuals and neighbourhoods at multiple points in time. That way, people are observed when they move and in of the configured models, which can account for the characteristics of people and places that do not change over time. The Nuffield Trust, as part of a suite of three projects, is just attempting to unravel people-place effects with a focus on wellbeing, ethnicity and migration.

INTERNATIONAL COMPARISONS

Comparative research and international evidence can provide insights into how well countries and cultures are performing in specific policy areas. Where domestic actors are exposed to policies already established in other countries, this can create an opportunity to engage with them through formal or informal networks – leading, occasionally, to policy transfer (although international practices can rarely simply be imported fully boxed).

A number of countries run household panel studies similar to *Understanding Society* (e.g. Germany, USA, Australia, South Korea, etc.). Furthermore, the Cross-National Equivalent File (CNEF) 1970-2013 contains equivalently defined variables from across eight longitudinal studies, reaching out to researchers across a large number of countries. This presents an opportunity for policymakers to use international evidence and assess how it is performing in specific policy areas compared to other similar nations. There is concern, though, about the growing emphasis on 'British exceptionalism' emerging from some quarters, not necessarily backed by facts on Britain's strengths and the challenges it faces, or on its similarities with, and differences from, other nations (Centre for European Reform, 2017). This could constrain borrowing ideas from other countries and international cooperation. On the positive side, it can result in counterfactual thinking and avoiding group think (Giacometto, 2019).

Increased earnings inequality: is the spread of hours worked to blame?

Differences in the amount people earn have been and continue to be a matter of considerable political debate. Such earnings inequality has been on the rise over the past 30 years in most industrialised economies. Understanding the causes behind earnings inequality is thus crucial for policy. More recently, the emergence of the 'gig' economy, with zero-hours contracts, has further raised concerns about their impact on earnings.

This research investigated the relevance of hours worked for earnings inequality. It examined how differences in the number of hours worked affects the patterns of earning inequality between 1989 and 2012 in the UK, US, Germany and France. How many hours people work in a particular country can affect the spread in earnings.

The research found that earnings inequality was consistently high in the US and UK, and low in France, while Germany experienced a substantial increase over the period. The analysis found that in the US and France, hours worked appears to be fairly concentrated, while in the UK and Germany they are more unequal. The findings indicated that a greater spread in hours worked magnified the distribution of wages, but its impact varied substantially across countries and over time. In the UK, about 40% of overall earnings inequality is accounted for by spread of hours worked, showing a strong positive association between hours and wages. In France and Germany in the early 1990s, individuals with low hourly pay compensated by working longer hours, but this was not the case in recent years.

The individuals with the lowest wages are also becoming increasingly constrained in their hours worked, though the causes behind the change in the hour-wage correlation are unclear – it could be related to the weakening of trade unions over this period, or employers imposing constraints on the number of hours worked.

In Oct 2016, the Government commissioned an independent review of modern working practices: the Taylor Review, which reported in July 2017.

Checchi, D., Garcia-Penalosa, C., and Vivian, L. (2016)

KEY POINTS

- Researchers can use *Understanding Society*:
  - to study how relationships and behaviours change over the economic cycle
  - to examine long-run impacts of behaviours and policy
  - to study cumulative effects of events
  - to study small sub-samples of population
  - to examine the interaction of social and biological factors
  - to explain long-term trends
  - for international comparative research.
- *Understanding Society* covers a variety of topics to help understand the different dimensions of life and how these interact. It helps understand the boundaries of social problems, where there may be a need for intervention on multiple fronts and joined-up action by departments.
- *Understanding Society's* panel design lends itself well to looking at the effects of policy and offers a range of techniques to overcome some of the traditional challenges of policy assessment, for example, using quasi-experimental methods that mimic the conditions of randomisation. However, what constitutes success and how it can be measured is not always without controversy.
- Longitudinal studies with geographical data can help to improve the evidence base in questions of place-based policies – to tackle local and regional disparities, for example.

CHAPTER FOUR

THE OPPORTUNITY FOR MORE RADICAL ENGINEERING

INTRODUCTION

Given the enormous challenges facing UK society, this final section reflects on how more 'creative' pathways could be developed with the potential for great social and economic transformation. Although politics is often defined as the art of the possible, policy thinking can be distorted by just focusing on what is possible. The challenges faced by the UK are in some respects not unique, but the coronavirus crisis does provide an opportunity to 'build-back better'. Risk-taking by policy makers is integral to bringing about transformational changes, but these also have implications for the future direction of research-policy collaborations.

Securing more transformative social changes will require moving beyond research translation and communications to thinking about how knowledge can be mobilised and applied more creatively in policymaking and over what timeframe. In light of Covid-19 and other underlying trends, individual and household circumstances, behaviours and social norms, and market structures will continue to change in ways that will require more timely understanding of effects and better use of evidence. Equally, problems with structural underpinnings[13] can present continuities that take a great deal of policy and stakeholder effort to address, and are unlikely to be resolved in the near future without new thinking or sustained effort.

In the same way that academic-business collaboration has been transformed over the last two decades, Sasse and Haddon (2019) argue that the relationship between universities and policymakers could similarly be transformed. A couple of caveats though need to be applied to this opportunity: that the intensely partisan landscape of the policy world is not a priori well-suited for constructive social learning; and models of knowledge transfer from the world of business may not 'travel' effectively across to the more complex decision-making involved in making policy choices.

In due course there will be many lessons to learn about the effectiveness of the research policy interface during the Covid-19 pandemic and in managing its aftermath. This chapter presents three specific propositions for mobilising knowledge to shape the future direction of social policies. The emphasis here is not on increasing the uptake of evidence (quantity), rather it is on developing better uses of evidence (quality) with the aim of improving decision making.

Investing greater effort, in some cases over the long term, to understand problems in new ways and build up alliances can carry additional risks for researchers, as there will not always be clear assurances that this investment will pay off (Cairney and Oliver, 2018). Research funders and universities can help minimise these risks by supporting 'proof of concept' models that are needed for more complicated or longer-term collaborations to encourage greater diversity and ambition in designing impact plans.

- Scaling up conceptual impact: stimulating greater diversity in thinking and new ways of seeing
- Supporting social and public innovation: developing creative spaces to learn and identify new solutions
- Evidence for early action: using longitudinal science to strengthen the business case for 'long-termism'.

THE NEED FOR MORE TRANSFORMATIONAL CHANGE

Before exploring each of the propositions, it is worth setting out wider imperatives for more transformational social change. There are many, but these imperatives are more salient to social policy and were even apparent before the coronavirus crisis. The crisis does provide a catalyst for more radical thinking but equally, continually trying to neutralise social crises is difficult to sustain as an approach to policy. However, a huge shift will be required in policy priorities and effective delivery. It is possible that this shift could be signalled by public demand for greater resilience in health and care services, improvements to social security as many people experience the system for the first time, better appreciation of personal health and nature, and given the unprecedented level of state intervention across economic life, a reset on nudging the economy in a different direction.

Equally, recessions and their aftermath create winners and losers, and how the effects are experienced will have a significant bearing on the unfolding political landscape. Political parties represent different kinds of economic values and approaches to economic management but challenging economic orthodoxy will be central to shaping the nature of the 'bounce back' and long-term social legacy from the crisis.

[13] Johnson-Hanks et al (2011), define structural underpinnings as durable forms of organisation, patterns of behaviour or systems of social relations, and also highlight Sewell's minimalist yet broad definition which is useful: 'the recurrent patterning of social life'.

Rethinking the nature of economic progress: The economy has a powerful influence on people's lives. In the coming years, resurrecting the economy will no doubt take precedence over many other issues. However, sluggish economic performance, growing divergence in wealth, flat-lining productivity, rent seeking behaviour and a false binary between the market and the state raise fundamental questions about the future direction of economic policy. It is invariably a mix of government action, private markets and non-governmental organisations that determines economic outcomes (Coyle, 2020).

In his book *More human: Designing a world where people come first,* Hilton (2015) argues that problems, whether to do with wage stagnation, housing, skills or the relative cost of healthy and nutritious food compared to processed food, are a signal that something more fundamental has been going wrong with policy. Many other issues can be added to these examples such as the gender pay gap, racial inequality and employment for people with physical disabilities or learning difficulties. An unrelenting focus on the economy, which has obviously brought many benefits over the decades, and the single biggest priority for any government, is not getting to the root of some of these issues. Deploying economic growth as the mainstay of social policy seems to be running out of steam.

With calls getting louder for a new approach to setting economic goals and designing structures, unsurprisingly, the supremacy of Gross Domestic Product (GDP) as the ultimate or only measure of socio-economic progress is being challenged – its close correlation to notions of wellbeing notwithstanding. Some question how effectively domestic policy can counteract the worst effects of globalisation and technological change, but with countries taking very different routes to managing deindustrialisation and technological change, domestic policy does matter (Sandbu, 2020). From nationally driven wellbeing strategies to stakeholder business models, there are weak tentative signs of new ideas for prosperity that can also create social value and protect the environment.

Modernising welfare: Scholars of comparative social policy differentiate the great leap in welfare following the second world war – through health, housing, education and welfare benefits – from policies that have emerged since the 1980s (though some identify three distinct phases). Arguing that the great leap in the 'social state' has already taken place, there is a call for a new welfare philosophy better suited to the 21st century (Stoesz, 2018). With two major crises within just over a decade, and the possibility of future shocks, what changes are needed to build a new and more resilient welfare society?

From a different vantage point, in *The Future of Social Policy – Changing the Paradigm*, Piachaud (2015) argues that the dominant post-war paradigm, which at that time rightly emphasised the role of public services, continues to disproportionately influence policy thinking, sometimes at the 'expense' of creating a welfare society – with employers/business, family and community institutions a critical part of the mix, even if the state remains an important catalyst, coordinator, and safety net. 'Welfare' and 'state' have become too closely aligned.

Different concepts are emerging – from dynamic welfare models that can respond to an increase in the number of transitions people have to master over their lives, to models that promote 'inclusive growth', including generation of 'good' jobs and fairer distribution of work. One welfare philosophy, proposed by Hemerijck (2013), differentiates between "flows" (activation and labour market transitions), "stocks" (education and human capital) and "buffers" (safety nets for social protection), with "social investment" layered on top of these components.

Examining issues through a life course lens could provide new possibilities: for example, parenting and early interventions depend on stronger families; employers are central to developing human capital, addressing the needs of the working poor, tackling underemployment and generating good jobs; and staying well in retirement, a concept that hardly existed before the industrial revolution, on more active communities. What perhaps this points to is the need for pioneering, evaluating, legitimising and developing a new welfare society narrative, and set of robust systems which are broader than the National Health Service and compulsory education.

Mission-driven government: Incremental tinkering with policy is failing to respond to the combination of ageing populations, underfunded services, rising citizen expectations and low public sector productivity (Micklethwait and Wooldridge, 2014). Some argue that in this era of complexity, interdependence and technological revolution a 'command and control' model for government is no longer a workable model across all policies (Bennett and Yiu, 2019). The authors call for a more 'mission-driven' government which conducts, convenes and facilitates through funding, infrastructure, data sharing and devolution of powers. Each mission would be supported by data, research, cross-cutting teams operating across silos and embracing technology to support experimentation and decentralisation.

Conversely, the UK will face huge operational challenges for the foreseeable future due to the Covid-19 crisis, and that could change how the government operates forever, with further investment in operational and technological capabilities in key areas of policy. Nevertheless, complex needs of people or changing problems can't be solved from the centre, even with agile government, and there should be greater expectations, capacity and resources across different layers of government and stakeholders to find solutions or develop services within policy frameworks.

There are some unique structural challenges to more transformational policymaking in the UK. Political scientists have made considerable headway in building a more comprehensive picture of the connections between the features of a political system and the drivers of policy outcomes (Coelho et al, 2015). Some reflect governance and institutional shortcomings (e.g. the Westminster winner-takes-all model), evidence of policy reinvention and recycling, high level of centralisation in the UK and the disproportionate weight of marginal constituencies/voters in the political process. When combined with a focus on short-term outcomes, the result is "a failure to set out and monitor long-term strategy and plans adequately, leaving some policy areas vulnerable to piecemeal change" (Norris and Adam, 2017).

On the research side, some advocate the need for problem-driven or solutions-oriented science (Watts, 2017; Western, 2016), where the historical emphasis in social science on the advancement of theories over solving practical problems isn't the only way to progress science. Another way to advance is to start with a problem and ask what theories, methods and data must be brought to bear to solve it. Such 'challenge- or mission-' driven research could also make it easier to forge interdisciplinary teams, potentially generate a wider set of research ideas and outputs (i.e. knowledge, services and products for others to use), and expand the influence of social science.

Proposition 1
Scaling up conceptual impact: stimulating greater diversity in thinking and new ways of seeing

Looking for new ways to address problems and avoiding group think depends on reconfiguring *how problems are defined*. Problem definition can be an intractable problem. As social processes feed into each other, outputs from one can become inputs to others. In this structural framework, it is not always clear where the problem centres lie, and even where the boundary of a problem is well-defined, different policies can inadvertently interact with each other (or with unexpected events) to produce much less certain outcomes than expected.

Many modern problems are variously described as 'wicked', 'fuzzy' or 'complex[14] – outcomes can be driven by multiple possible causes in a system, with little opportunity for doing experiments. Duncan Selbie, when Chief Executive of Public Health England (being replaced by the National Institute for Health Protection) has argued that health inequalities, which haven't changed despite the doubling of health care spending in the last 20 years, really requires leveraging the activities of other departments and organisations to affect change (Leftly, 2016).

> "Policy problems no longer arrive in neat department-shaped boxes. They require intense 'joined-up' government and cooperation between regional, national and international levels".
>
> David Mair, Head of Unit, Knowledge Management, DG JRC, European Commission (2017)

Where joint working between teams, departments and institutions is the way forward, well-crafted cross-cutting evidence can enable institutions to pursue collaborative strategies. Indeed, the role of 'systems or symphonic thinking' is slowly being appreciated in research and policymaking circles, particularly where population-level changes are needed. There are good examples of joint working by departments, and the coronavirus crisis will provide new lessons about what sort of institutions, networks and tools are needed, but cross-cutting strategies struggle to maintain momentum. Some common challenges are:

- who controls the policy and which Minister is responsible?
- how much funding and resource should each department contribute?
- what burdens will the new policy place on their respective delivery chains?
- what happens as fresh departmental issues start cropping up and resources have to be reallocated?
- how can accountability be assured, and public value demonstrated on complex issues?

In Scotland, there is greater effort to try to link policies to outcomes – with a set of outcomes and indicators to guide design of policies and measure progress. It is an attempt to set out how the government would work over a decade to improve services and create sustainable economic growth. The framework has been placed on a legislative footing and regarded by the Organisation for Economic Co-operation and Development (OECD) as one of the most developed outcomes-based approaches by any government in the world (Johnstone, 2019).

In a critique of decision making in government, Cummings (2019) argues that policymaking processes have not evolved to understand complex systems, 'argue with evidence' and imagine alternative outcomes. Static representation of information continues to be the default rather than creating more visual and interactive tools (e.g. simulations) to examine multiple sources of data – tools that can ideally be used by non-scientists to investigate problems, test competing explanations against evidence and make choices[15].

[14] Such problems may have a number of attributes: the interconnected nature of the problem with definitional challenges; our knowledge is incomplete or contradictory; large economic burden with solutions seldom both the best and the cheapest; resolution may be temporary and imperfect; the number of people and opinions involved; they are often intertwined with wider opinions about fairness, public good, etc. which could be difficult to measure.

[15] Models of micro-simulation and more dynamic decision-making mediums, using interactive technologies, provide examples of how such tools or mediums could aid real-time decision making: see for example: UKMOD an open source tax and benefit micro-simulation model and https://dynamicland.org/#project.

New ways of seeing will require more integrated data. There is no shortage of data being collected and held by government departments and sponsored agencies, but the challenge is access, quality assurance, linkage, extracting value from the data, and maintaining a high ethical and privacy threshold. A centre for data policy, the Centre for Data Ethics and Innovation, now exists in government. The work of Administrative Data Research UK (ADR UK), in partnership with the Office for National Statistics (ONS), to strategically acquire and curate administrative data and make these available to researchers in a secure and de-identified way, could generate dividends. Individual researchers can broaden knowledge by way of unfamiliar topics to help foster new ideas.

However, the issue is not simply one of data integration – it will also require more intensive knowledge curation, as well as diverse actors who bring different voices and responsibilities, and that stimulate divergent as well as convergent thinking. Social scientists spend time thinking critically about the conceptual understanding of problems, causal drivers and the limits of current policies. They are ideally placed to facilitate helpful conversations, present evidence-based arguments, propose alternative frames of thinking and questions for viewing particular issues and brainstorming policy ideas.

Such work will never be certain enough to suggest any specific policy, but it can help to build models that frame policies (Basbøll, 2018). Their research will be policy-relevant but not policy-prescriptive (Shaw and Robinson, 2004). It could even indicate what might work but not be certain enough to suggest what would work. If researchers are impelled to tell stories that answer individual questions to help improve or adapt specific policies, that may continue to form the 'bread and butter' of knowledge exchange activities but charting a path to new ways of collaborating and learning socially is becoming more critical.

Proposition 2
Supporting social and public innovation: developing creative spaces to learn and identify new solutions

Top-down public policies are not the only route to bring about change. The sense that public services and private systems are giant machines to be finely tuned by expert policymakers at the top is fading (Brown, 2019). At the same time, existing funding commitments can sideline more promising ideas. The pace of technological change, the desire for more responsive and effective services, and calls for further devolution are generating a growing interest in 'bottom-up' transformation and working across sectors. Nor is it necessary for policymakers to pin down everything at once. Instead, they can incorporate creative spaces for adaptation into the design of policies.

Although an ambiguous concept, an increase in social and public innovation has the potential to alter corporate strategies and staff motivation, as well as public and private governance (Have and Rubalcaba, 2016). Some see it as a new way of driving and implementing social change, while for others it is primarily aligned with new social practices created from intentional and collective action (Cajaiba-Santana, 2014).

Could *Understanding Society* data and research offer insight into attitudes, behaviours and lived experiences that can support social innovation and investment in public services? Could researchers working with commissioners, innovation agencies, social entrepreneurs, social investors, policymakers, service users and practitioners open up plausibly creative and tangible ways to test ideas and design developmental projects?

Some universities and research councils have developed 'challenge labs', sand-pits and hackathons which bring different players together to tackle strategic problems more creatively. In social and public service innovation, "research isn't necessarily a substitute for experimentation and entrepreneurship. Interventions in the real world are the main ways in which opportunities, solutions, and the potential desired and undesired outcomes are discovered" (Seelos and Mair, 2014). According to the authors, research in this context is not designed to provide recipes and concrete answers, but researchers can help separate assumptions and myths from fact and break through cognitive blocks.

In 2015, the Higher Education Funding Council for England (HEFCE) invited universities and community groups to pump-prime pilot projects that could lead to direct societal impact. The anticipation was that the pilots would deliver insights into how universities might incorporate social innovation methods into their work and demonstrate a changing role for academics. Co-creating and co-designing projects was a central part of the process. A couple of projects were able to secure additional funding to progress onto testing actual services, and many created a legacy in the given timescale and resource. However, in addition to operational constraints, probably the most substantial barrier was seeking ongoing funding following the design process (Brown, 2017).

Lack of development resources and absorptive capacity, which allow organisations to assimilate new information and apply it, can thus be a major constraint. The Government Grand Challenges, as set out in the Industrial Strategy (HM Government, 2019 b) in areas such as ageing and clean growth, provide new opportunities in some policy areas. There is growing information on how public and social innovation methods work (EPSRC, 2019; Bound and Mulgan, 2019), with a wide range of practical tools on design thinking. However, longer-term demonstration projects and sharing lessons will be important for these immersive activities and simulations for social learning. UKRI's initiative on enhancing place-based partnerships in public engagement will further help develop research and innovation capacity through local collaborations.

Proposition 3

Evidence for early action: using longitudinal science to strengthen the business case for 'long-termism'

Conventional social policies tend to be an assorted 'pick and mix' of interventions from the cradle to the grave. In today's more dynamic setting, the 'pick and mix' approach to social policy, while attractive in political terms as it facilitates short-term policy 'fixes', is fiscally becoming less tenable over the long term. There is ample evidence to show the scarring effects of adverse life events, e.g. adverse childhood experiences, persistent low income, onset of mental health, break-down of a relationship, going into debt, etc. Policy interventions can feel like 'whack-a-mole', where a problem addressed in one area pops up elsewhere in a different guise at a later stage.

Social risks have become more heterogeneous, diffused and harder to predict. With longer lives and elongated transitions between life stages, policy choices about when and where to allocate public resources are harder without robust evidence, as they must be spread across different needs, groups, regions, stages of life and unexpected events. Taking early action to prevent or mitigate harm has been gaining traction but progress has been slow, particularly in tackling long-standing inequalities (Social Metrics Commission, 2019). One reason is that preventive discourses on domestic policy tend to dominate in only limited areas: crime, child and adolescent behaviour, family problems, alcoholism and drug use, immunisation and screening, numerous physical and mental health conditions, cognitive learning, educational achievement, early years intervention, and passages into employment (Gough, 2013).

Demand pressures mean that the priorities of those in immediate need consistently trump those who may be at risk at some stage in the future. This will particularly be the case in response to immediate needs as a result of the coronavirus crisis. For prevention or 'upstream' policy, action is usually long-term, more complex to control, less visible, harder to measure and more likely to involve controversial choices, making it more difficult to make progress without building coalitions (Cairney, 2017; Coote and Harris, 2013). Some actions to reduce social risks in society may be opposed by those who regard it as 'social engineering'.

What matters in addressing this paradox is how policymakers become better at preventing fires rather than simply agile at firefighting and being reactive. This means balancing short-term needs with longer-term investment. This in turn depends on how investment is defined, its level, its sources, its effectiveness in leveraging other resources, and the capacity for focusing both on current delivery priorities and transformational opportunities. For example, according to a recent report by Public Health England (2020), "evidence suggests that switching to active travel for short motor vehicle trips could save £17bn in NHS costs over a 20-year period, with benefits being accrued within 2 years for some conditions. The largest cost savings would come through reductions in the expected number of cases of type 2 diabetes (annual cost to NHS from diabetes is £9bn)". An investment to stimulate other modes of travel would create new commercial opportunities but not necessarily for the car industry, so these effects would need to be factored in.

However, there has been progress on new fronts: from auto-enrolment on pensions which has seen prevention policy extend into the financial sphere to the radical new Job Retention Scheme, designed to prevent major job losses in the coronavirus crisis. Addressing climate change will require prevention policy to further extend into new spheres – and as people live longer, there is greater awareness of the need to lead more years of healthier life free of non-communicable diseases. Devolution is also creating opportunities to do things differently. In Wales, for example, the Well-being of Future Generations (Wales) Act 2015 requires public bodies to think about the long-term impact of their decisions, to work better with each other, people and communities, and to prevent persistent problems such as poverty, health inequalities and climate change.

With longitudinal studies a unique source of data and evidence for early action, a combination of multidisciplinary research and coalition building could move the dial on early action and evidence for social investment. Multidisciplinary research, a growing feature of the UK research base, particularly matters in this field, not only to identify when and for whom early action matters, but also to make assessments of public value in a different way. This requires pulling together larger teams with diverse disciplines and knowledge exchange skills.

A FINAL WORD

The insights, ideas and challenges presented in this report are aimed at building a more effective interface between researchers and policymakers, to enable the researcher community to think more strategically about generating impact, and how to apply knowledge and skills to stimulate transformational changes in social policy through collaborations. For researchers this also brings a tension between balancing research impact in the short-term and the potential to play the longer-term game – although they are not necessarily mutually exclusive.

This report, while not designed to offer a blueprint, makes the case that this is more likely to happen if relationships and teams are purposefully constructed to try to 'move the dial', even if by a small margin at a time. Translating empirical research and new insights into policy influence and ideas isn't simply a linear or individual sport, but increasingly a team sport. Where evidence, generated through scientific inquiry with its reasoned steps of thinking, can be combined with shared intentions, 'creativity' and design thinking, it will make a bigger difference.

There will of course always be robust or 'clever' research papers that coincide with evidence demand, or experts with powerful insights who will cut through individually, but that approach on its own is much harder to package and scale-up to bring about systemic social learning and social change. Tackling inequalities in researchers' access to impact opportunities also requires mobilising knowledge in different ways.

Reimagining social policies and bringing about change starts with individual and group action. It also requires occasional 'insurgency', 'adversarial collaboration' and continual reflection (Snow and Greenspoon, 2020). In trying to drive social change, there are both opportunities and risks on the journey ahead!

APPENDIX

DEPARTMENTAL AREAS OF RESEARCH INTEREST

You can now identify an individual department's research interests through their areas of research interest (ARI) statement. ARIs provide details about the main research questions facing government departments. They also include information on departmental research systems, research and data publication policies, and research and development strategies. How 'research questions' are defined is very broad. These are not static statements of research needs. They provide opportunities for dialogue about the direction for policy research. Some set out how researchers can get in touch with the relevant colleagues in the department. There will also be thematic collaboration opportunities where government seeks to work across departments to generate insights and identify evidence gaps.

An analysis conducted in early 2019 of published departmental research questions compared with *Understanding Society's* questionnaire content found a good overlap between research demand and the supply of data – though as expected this overlap varies significantly across the departments.

Government Department	Number of ARI contributions through UKHLS	Total ARIs	%
Department for Business, Energy & Industrial Strategy	5	28	17.86
Cabinet Office	7	77	9.09
Department for Digital, Culture, Media & Sport	10	57	17.54
Department for Environment, Food & Rural Affairs	5	44	11.36
Department for Education	11	20	55.00
Department for Transport	21	214	9.81
Department of Health and Social Care	2	7	28.57
Department for Work & Pensions	21	36	58.33
Ministry of Housing, Communities & Local Government	5	46	10.87
Ministry of Justice	0	76	0.00
Foreign & Commonwealth Office	2	21	9.52
Non-Ministerial Departments			
Food Standards Agency	0	11	0.00
Health & Safety Executive	2	6	33.33
Total	**91**	**643**	**14.15**

ARIs should ideally lead to a more strategic approach to departmental research and development programmes and a more sophisticated dialogue with academia. An early stage review of the experience of universities engaging with ARIs, by the University Policy Engagement Network (UPEN), reached a number of headline conclusions:

- ARIs are an important bridge between demand and supply, and will help shape longer-term research programmes as well as match current research to immediate questions
- They are the start of a conversation, not an end in themselves, and the conversation should include refining and shaping the question
- Curating the conversation requires careful work: ARIs cover large and diverse research areas and engagement could rapidly become unwieldy. This is an area for experiment using different formats and mechanisms.
- Financial and other incentives need to be aligned to recognise and reward engagement with ARIs. This is an issue for funding bodies, for universities, and also for government departments who often assume that there is no opportunity cost to engagement
- It is vital to look cross-departmentally as well as across disciplines. ARIs provide a means to identify where bits of government are looking at the same issue through different and disconnected lenses.

(Sourced from: https://www.upen.ac.uk/what_we_offer/reports/UPEN_ARI_Report.pdf)

LONGITUDINAL STUDIES IN THE UK (CLOSER)

The UK is home to the world's largest and longest-running longitudinal studies. CLOSER brings together world-leading longitudinal studies, with participants born throughout the 20th and 21st centuries. It aims to widen this partnership over time.

The partnership seeks to maximise the use, value and impact of longitudinal studies both at home and abroad. Bringing together these studies, the British Library and the UK Data Service, CLOSER works to stimulate interdisciplinary research, develop shared resources, provide training, and share expertise. In this way, it is helping to build the body of knowledge on how life in the UK is changing – both across generations and in comparison to the rest of the world.

CLOSER's initial 8 partner longitudinal studies are:

- **Hertfordshire Cohort Study** (University of Southampton)
- **MRC National Survey of Health and Development** (University College London)
- **1958 National Child Development Study** (University College London)
- **1970 British Cohort Study** (University College London)
- **Avon Longitudinal Study of Parents and Children** (University of Bristol)
- **Southampton Women's Survey** (University of Southampton)
- **Millennium Cohort Study** (University College London)
- ***Understanding Society*: the UK Household Longitudinal Study** (University of Essex)

There are numerous other bespoke or more targeted local, national and international longitudinal studies, or studies with short panel features. With an increasing need and desire for longitudinal studies to work together, the CLOSER consortium is expanding, and now includes 11 new members:

- **Born in Bradford** (Bradford Teaching Hospitals NHS Trust)
- **English Longitudinal Study of Ageing** (University College London)
- **Generation Scotland** (University of Edinburgh)
- **Growing Up in Scotland** (The Scottish Government)
- **Health and Employment After 50** (University of Southampton)
- **Longitudinal Study of Young People in England cohort 2** (UK Government, Department for Education)
- **Next Steps** (University College London)
- **Northern Ireland Cohort for the Longitudinal Study of Ageing** (Queen's University Belfast)
- **ONS Longitudinal Study** (Office for National Statistics)
- **Whitehall II Study** (University College London)
- **Wirral Child Health & Development Study** (University of Liverpool)

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