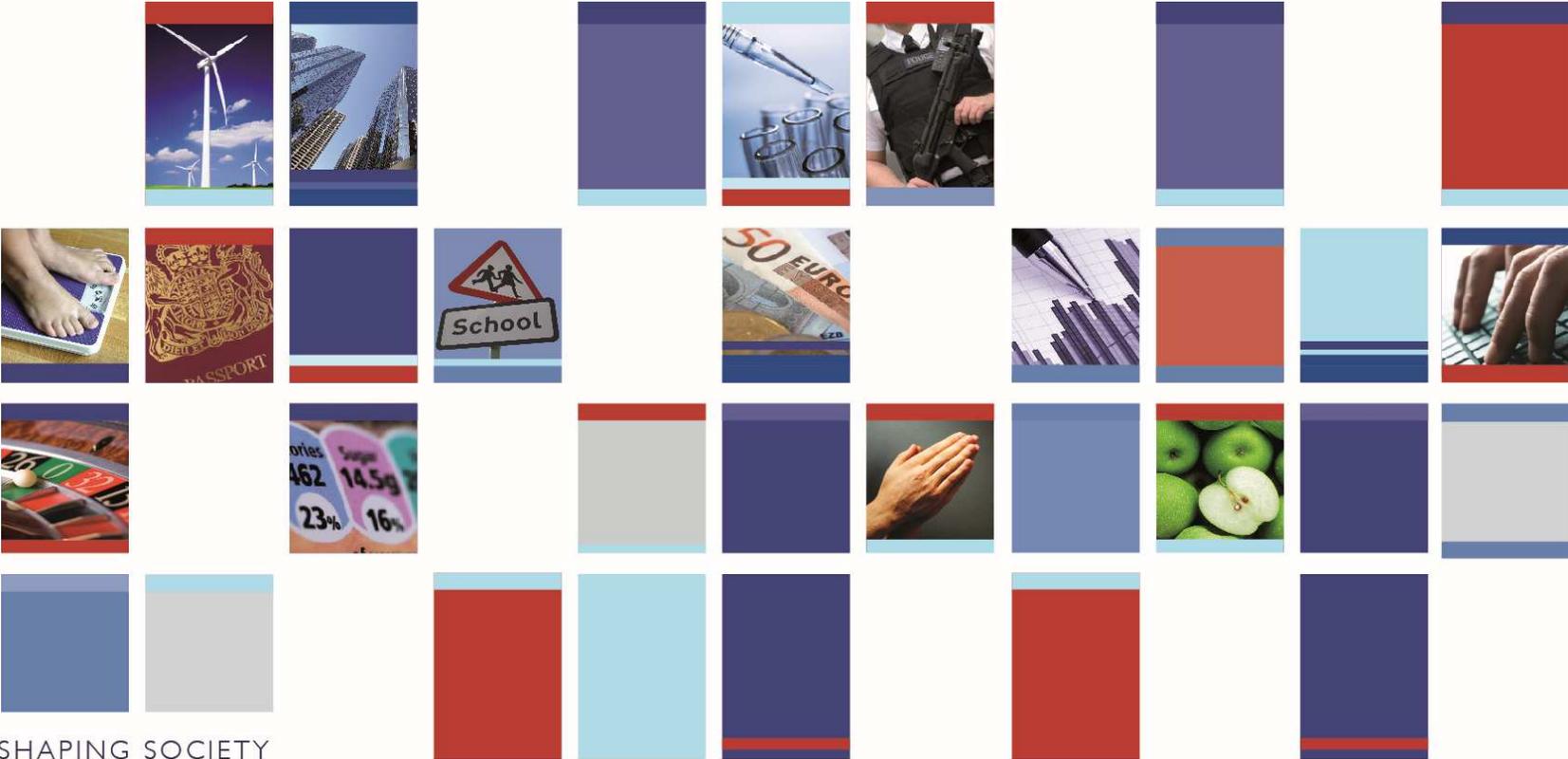


# Longitudinal Studies



# What is a Longitudinal Study?

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- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Survey that provides data about the same individual or household at different points in time
  - ▶ Cohort study: a longitudinal study of a cohort of people
  - ▶ Allows tracking of change over time at the individual or household level
  - ▶ More powerful than other types of over-time studies and surveys eg. repeated cross-sections
  - ▶ Reveal the complex pattern of changes at the individual/household level not just how the population as a whole has changed
  - ▶ Can be used to study changes in the lives of organisations and institutions as well as individual people

# Why are Longitudinal Studies important?

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Breadth and depth of information collected
    - Record and chart aspects of the progress of an individual or group of individuals across their life course
  - ▶ Measuring and understanding change
    - Collect information contemporaneously
    - Information on changes at individual/household level
    - Help us examine and understand change
    - Help identification of which factors impact on and influence people's lives and changes in them
  - ▶ Inform strategies for improvement
  - ▶ Helps evaluation the impact of social and economic changes and of policies to change social behaviour eg the promotion of healthier lifestyles

# Types of Longitudinal Studies

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- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ UK Decennial Census
  - ▶ Individual-level panel surveys - samples of individuals are tracked and interviewed eg. election panel studies
  - ▶ Household panel surveys - individuals are followed within the context of the households where they live and information is usually collected about the whole household eg. Understanding Society
  - ▶ **Cohort studies** - individuals from a particular age range are followed to explore their different trajectories as they age
  - ▶ Record linkage studies - administrative or survey data are linked across time
  - ▶ Quantitative and qualitative data

# ESRC's portfolio of cohort studies

- 
- ▶ Unique, world-leading longitudinal studies
  - ▶ The 'jewel in ESRC's crown'
    - 1958 National Child Development Study
    - 1970 British Cohort Study
    - Millennium Cohort Study
    - Next Steps (formerly Longitudinal Study of Young People (LSYPE))
    - Life Study
    - Understanding Society (households)
  - ▶ The Cohort and Longitudinal Studies Enhancement Resource (CLOSER)

# ESRC's objectives for cohort studies

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- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ To provide research data resources for use to address a wide range of research questions and disciplines
  - ▶ To ensure due process eg. data access and documentation
  - ▶ To support the development of methodology, and technology, and capacity and skills to use the data
  - ▶ To raise awareness, facilitate and promote use and increase impact of the data eg. CLOSER, SDAI

# ESRC Strategic Plan 2015

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- A decorative vertical bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Launched 14 January 2015
  - ▶ Delivery plan to follow
  - ▶ National data infrastructure including commitment to continuing support of longitudinal studies
  - ▶ Exploitation of data infrastructure
  - ▶ Training and capacity building in key strategic areas, leadership
  - ▶ Interdisciplinarity, collaboration

# Life Study I

- 
- ▶ Aims to become a world-leading research study used to understand and improve the lives of children and their families
  - ▶ Is large in scale and innovative in design – breadth and depth
    - an integrated sample of more than 80,000 babies, mothers and their partners (aged  $\geq 16$  years) to be recruited over a four year period via two different sampling strategies
    - Pregnancy component           ~63,000 births
    - Birth component                 20,000 births – nationally representative
  - ▶ Starting in pregnancy with a strong focus on the first year of life

## Life Study 2

- 
- ▶ Interdisciplinary:  
Socio-economic and biomedical measures and samples
  - ▶ Data linkage:  
Invite consent to linkage to a range of data
  - ▶ Will provide insights into pathways leading to life long health and the interplay between biology, behaviour and the broader social, physical and economic environment
  - ▶ Will inform health and social policies in areas of major importance to the lives of UK children

# Life Study 3

- 
- A vertical decorative bar on the left side of the slide, composed of various colored segments: red, light blue, dark blue, grey, light blue, dark blue, red, grey, light blue, dark blue, and red.
- Demographics
  - Identity
  - Parental and family health
  - Parental mental health, cognitive and non-cognitive constructs
  - Parental behaviour and lifestyle
  - Parental education
  - Childcare
  - Family relationships
  - Social networks and support
  - Parental employment
  - Financial situation
  - Pregnancy and birth
  - Child health
  - Child development
  - Child sleeping and crying
  - Diet and Nutrition
  - Infections and immunity
  - Parenting
  - Housing
  - Neighbourhood
  - Environment

# 1958 National Child Development Survey (NCDS)

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Follows the lives of 17,000 people born in England, Scotland and Wales in a single week of 1958.
  - ▶ Also known as the 1958 Birth Cohort Study
  - ▶ It collects information on:
    - physical and educational development
    - economic circumstances
    - employment
    - family life
    - health behaviour
    - wellbeing
    - social participation
    - attitudes.

# 1970 British Cohort Study (BCS70)

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ The BCS70 follows the lives of more than 17,000 people born in England, Scotland and Wales in a single week of 1970
  - ▶ Since the birth survey in 1970, there have been 8 sweeps of all cohort members at ages 5, 10, 16, 26, 30, 34, 38 and 42
  - ▶ Next (Age 46) is planned to be a biosocial sweep, co-funded with MRC
  - ▶ Over the course of cohort members lives, the BCS70 has collected information including:
    - Health
    - Physical, educational and social development
    - Economic circumstances

# Millennium Cohort Study (MCS)

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- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ A multi-disciplinary research project following the lives of around 19,000 children born in the UK in 2000-01.
  - ▶ Tracks Millennium children through their early childhood years and plans to follow them into adulthood.
  - ▶ Collecting information on the children's siblings and parents.
  - ▶ Diverse topics covered include:
    - parenting, childcare and school choice
    - child behaviour and cognitive development
    - child and parental health
    - parents' employment and education
    - income and poverty
    - housing, neighbourhood and residential mobility
    - social capital
    - ethnicity.

# Next Steps (formerly Longitudinal Study of Young People in England)

- 
- ▶ Next Steps is a large scale panel survey following the lives of around 16,000 people born in 1989-90.
  - ▶ Study began in 2004, DoE, when the cohort members were aged 13 -14, with yearly interviews until age 19-20 in 2010, to explore experiences over the past academic year.
  - ▶ LSYPE was set up to :
    - gather evidence about transitions from secondary and tertiary education or training to economic roles in early adulthood
    - Enhance ability to monitor and evaluate effects of existing policy and provide a strong information base for future policy development
    - contextualise the implementation of new policies in terms of young people's current lives
  - ▶ The study has collected information about: education and employment, economic circumstances, family life, physical and emotional health and wellbeing, social participation and attitudes.

# Understanding Society

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ A study about 21<sup>st</sup> Century UK life and how it is changing.
  - ▶ Capturing information about social and economic circumstances, attitudes, behaviours and health.
  - ▶ 100,000+ people (adults and 10-15 year olds)
  - ▶ 40,000 households in England, Wales and Northern Ireland
  - ▶ 5,040 postal codes
  - ▶ Incorporates the British Household Panel Survey – the UK’s first socio-economic household panel survey launched in 1991

# Cohorts and Longitudinal Enhancement Resource (CLOSER) I

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Launched on 1 October 2012
  - ▶ A consortium of the UK's leading birth cohort and longitudinal studies:
    - Avon Longitudinal Study of Parents and Children (Children of the 90s)
    - 1970 British Cohort Study
    - Hertfordshire Cohort Study
    - Life Study (the new birth cohort)
    - Millennium Cohort Study (Child of the New Century)
    - 1958 National Child Development Study
    - 1946 MRC National Survey of Health and Development
    - Southampton Women's Survey
    - Understanding Society
  - ▶ Aims to maximise use, value and impact of these studies both within the UK and abroad.

## CLOSER 2

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- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Cutting-edge work on harmonisation of measures and data linkage
  - ▶ Search platform to survey metadata of each sweep of each study
  - ▶ Training and capacity building events
  - ▶ Impact activities
  - ▶ Stimulate interdisciplinary research
  - ▶ Provide shared resources for research
  - ▶ Share expertise in longitudinal methodology

# Projects supporting UK Longitudinal studies

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- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ UK Data Service
  - ▶ Secondary Data Analysis Initiative
  - ▶ National Centre for Research Methods
  - ▶ Longitudinal Effects, Multilevel Modelling and Applications (LEMMA 3)
  - ▶ International Centre for Life-Course Studies
  - ▶ Research Support Unit for the ONS Longitudinal Study for England & Wales (CeLSIUS)
  - ▶ Conducting a genome-wide association study (GWAS) in the English Longitudinal Study of Ageing (ELSA)
  - ▶ Longitudinal Studies Centre - Scotland
  - ▶ UK Census Longitudinal Study Development Hub

# How do government and practitioners benefit from household panel surveys?

**Understanding Society has been used to:**

- ▶ **Identify 15 indicators of poverty** resulting in a toolkit for local authorities to better target resources to tackle poverty
- ▶ **Contribute to the ONS well-being measure for the nation.**
- ▶ **Help charities make policy recommendations.**
- ▶ **Inform strategy of Royal National Institute for the Blind (RNIB)** to improve wellbeing for visually impaired people
- ▶ **Tackle persistent poverty through work** by informing welfare reforms by the Department of Work and Pensions
- ▶ **Social justice - supporting families** by enabling government to track effectiveness of measures to improve social outcomes



# How do government and practitioners benefit from birth cohorts?

## Evidence from **British birth cohorts** has, for example:

- ▶ been extensively cited by Welsh Government in its first Early Years and Childcare Plan (July 2013)
- ▶ described UK social mobility for APPG report (May 2012)
- ▶ informed DWP and DoEs' Child poverty strategy (2011)
- ▶ Contributed to Cabinet Office' social mobility strategy (April 2011)
- ▶ informed the Fair Society, Healthy Lives report aka the Marmot Review (February 2010)



# Innovation in longitudinal studies



▶ Life Study

- Participation of fathers
- Data collection in pregnancy
- Scale: world's biggest cohort
- Biosocial metrics

▶ CLOSER

- Develop and share best practise
- Search platform

▶ Understanding Society

- Scale: world's biggest household survey
- Innovation panel
- Ethnic minority boost sample
- Biosocial metrics

# New opportunities

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Data linkage
    - Administrative Data Research Network (ADRN)
    - Potentially include social media, business data
  - ▶ Interdisciplinary
    - Potential of bio-social data
    - ESRC Biosocial Framework + delivery plan
  - ▶ Training, knowledge exchange and impact
    - Building capacity to analyse longitudinal data, with particular focus in the areas of bio-social and data linkage
  - ▶ New technology
    - For data collection

# Data Linkage

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ ADRN consists of an overarching **Administrative Data Service**, and 4 **Administrative Data Research Centres**.
  - ▶ Health, education and economic data
  - ▶ Set up safe places to access the data and procedures for researchers to work with de-identified administrative data
  - ▶ Train scientists to work correctly, securely, ethically with this data
  - ▶ Work with government to access data and influence legislation
  - ▶ Work with the public to inform and involve them

# ESRC - Enabling Biosocial Research

- 
- A vertical decorative bar on the left side of the slide, composed of several horizontal segments in red, blue, and grey colors.
- ▶ Biosocial Framework launched late 2014 (on website) to guide our future activity and investment in biosocial research
  - ▶ ESRC commitment to enabling the growth of exciting, innovative research, including in the biosocial research field
  - ▶ Vision: to implement a number of enabling measures to encourage high quality collaboration between the social, biological and medical sciences to help overcome inherent constraints to interdisciplinary research
  - ▶ Delivery plan to follow
  - ▶ Already integrated into cohort studies such as Life Study and BCS70 bio-sweep

## Other ESRC investments

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The ESRC funds research centres, grants and other mechanisms, including:

- ▶ The Deafness Cognition and Language (DCAL) Research Centre, based at University College London
- ▶ ESRC Centre for Corpus approaches to Social Science (CASS), University of Lancaster
- ▶ The ESRC International Centre for Language and Communicative Development (LuCiD), Lancaster, Liverpool and Manchester

# Questions?

