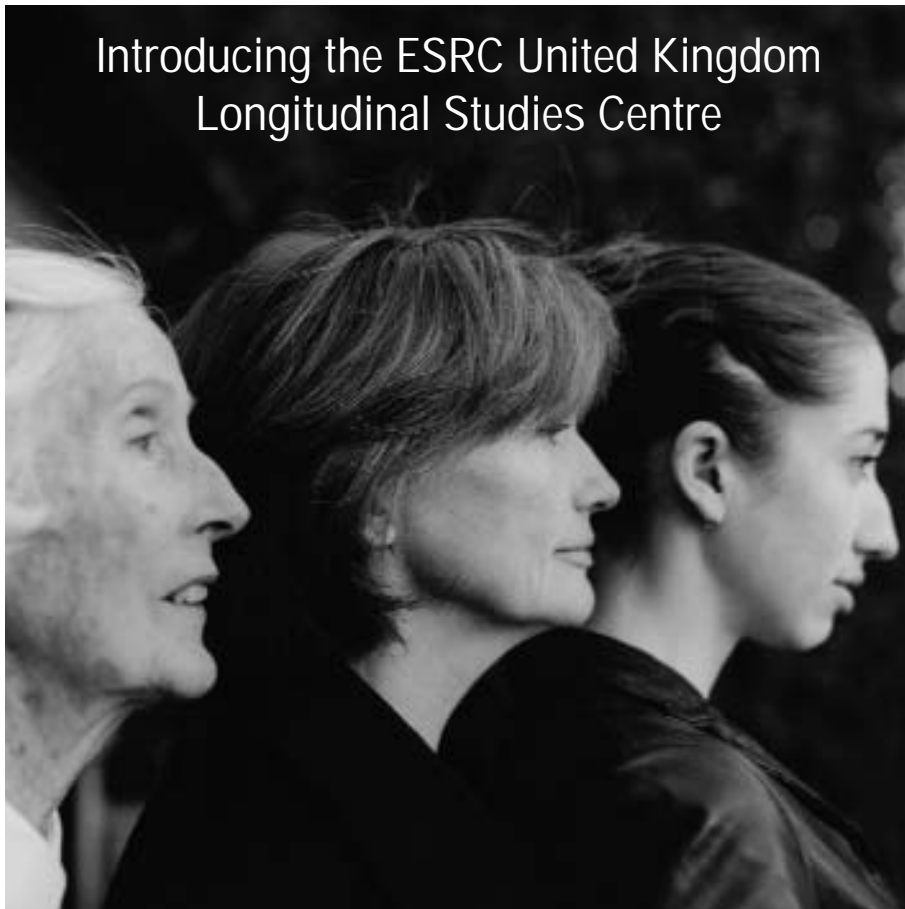


Introducing the ESRC United Kingdom  
Longitudinal Studies Centre



A national resource centre to promote  
longitudinal surveys and longitudinal research

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# Director's introduction

The UK Longitudinal Studies Centre (ULSC) is the national resource centre for promoting longitudinal research and for the design, management and support of longitudinal surveys. The UK's unique portfolio of longitudinal studies has made a major contribution to understanding society and to advances in the social sciences. The goal of the ULSC is to ensure the collection of longitudinal data of the highest quality to meet UK social research needs and to promote its widest and most effective use.

The ULSC was established in 1999 and is funded by the Economic and Social Research Council (ESRC). It is a part of the Institute for Social and Economic Research (ISER) at the University of Essex. ISER also contains the ESRC Research Centre on Micro-social Change and a range of other substantive research activities, making it one of the leading international centres for multi-disciplinary longitudinal research.

The UK is playing a leading international role in this fast developing field. The provision of a range of high quality longitudinal research resources is critical to this increasingly successful national research effort. There have been major

changes in subject matter and methodology in many areas of economic and social research, and an increasing capacity to contribute to the understanding and development of many areas of public policy. The results of the increased availability of high quality longitudinal data are still working themselves through the UK research system and its growing community of skilled and active users of longitudinal data. The ULSC has built a wide portfolio of activities and services covering all aspects of longitudinal survey research. These include:

- collecting and disseminating the British Household Panel Survey data;
- providing services in the design and management of longitudinal survey research;
- running a methodological research programme to improve longitudinal survey methods
- promoting the application of research methods appropriate for the analysis of longitudinal survey data;
- promoting best practice in the collection, management and production of high quality data for users;
- and managing longitudinal survey resources to enable easier access to longitudinal data, information and advice.



Nick Buck

# Why longitudinal research?



The development of longitudinal studies over the last decade has underpinned advances in social science method and in understanding of major social changes and policy interventions. The UK has taken a particularly prominent role in the development of longitudinal studies, with its unique portfolio of birth cohort studies, the Office for National Statistics (ONS) Longitudinal Study of the Census and the British Household Panel Survey (BHPS). A number of other important studies have started in the last five years and will enhance this portfolio.

These studies provide an understanding of social change, of the trajectories of individual life histories and of the dynamic processes that underlie social and economic life. Their fundamental role in social science and policy research is the core rationale for the continued investment in longitudinal studies in the UK.

In common with most western societies, the UK is undergoing considerable socio-economic change. We have an ageing population, increasing diversity of ethnic background and rising levels of instability in both working careers and family life. Longitudinal studies collect data about different times in individuals' lives, and across generations, linking evidence from different points in the lives of parents and children. This capacity to follow individuals through time and observe how experiences and behaviour are influenced by the wider social and economic contexts in which they find themselves – and perhaps how they in turn influence those contexts – gives longitudinal studies a major role in understanding social change.

Longitudinal research can address issues in ways that are not possible with traditional cross-sectional approaches. It is particularly valuable in a number of research areas:

- when the focus is directly on change and the phenomena are themselves inherently longitudinal – for example, the dynamics of poverty, employment instability, social mobility and changing social attitudes;
- when investigating causal processes – for example, the effects of unemployment on mental health or of child poverty on later life chances;
- when controlling for the effects of unmeasured fixed differences between subjects;

- when studying longer-term social change, by separating out the effects of ageing, period effects and differences between cohorts;
- and when establishing the effect of a ‘treatment’ by following an experimental or quasi-experimental design or comparing periods before and after the introduction of public policy.
- Understanding the defining characteristics of people who experience repeated spells of unemployment and poverty – and their ‘scarring’ effects, which make it difficult for people to find work and/or escape poverty in the future. As the table indicates, lone parents and the elderly find it considerably more difficult than others to escape from poverty.

These advantages have been exploited for a wide range of important research findings. For example:

- Disentangling the effects on children of school and family background in order to understand social mobility and the effectiveness of educational interventions – and to identify the key points for intervention.
- Examining the effects of changing patterns of marriage, cohabitation and childbirth on the time children are likely to spend in lone parent families – and the effects on their later lives.

Expected number of years poor over next eight years for an individual falling into poverty

| Type of individual                                 | Mean number of years in poverty |
|--|---------------------------------|
| <i>Two adult household</i>                         |                                 |
| 1. Both working, no children                       | 1.3                             |
| <i>Lone parent household</i>                       |                                 |
| 2. Not working, 1 child aged under six             | 3.6                             |
| 3. Not working, 2 children, 1 child aged under six | 4.2                             |
| <i>Elderly household</i>                           |                                 |
| 4. Head aged 60-64, no one working                 | 3.5                             |

## Major UK longitudinal studies

A range of longitudinal studies of different types and supporting different kinds of economic and social research is available in the UK. The leading studies include:

- The British Household Panel Survey, which has a broad focus, covering the whole age range of the population. It supports analysis of both short-term processes – such as year-to-year changes in people’s experience of poverty – and longer-term life course mobility. It also places individual change within the social context of the household.
- The 1958 and 1970 birth cohorts, the National Child Development Study (NCDS) and the 1970 British Cohort Study (BCS70), which support research on the influence of long-term antecedents on subsequent outcomes, and on mobility across the life course.
- The Millennium Cohort Study of children born in 2000/1, which adds to this sequence and provides current evidence on influences on the development of young children.
- The English Longitudinal Study of Ageing, which focuses on the over-50s covering health, wealth, income and well-being.
- The British 1946 Birth Cohort Study, and the Avon Longitudinal Study of Parents and Children, which are among a number of leading studies with a primarily medical focus but which also provide wider social and economic research opportunities.
- The Department for Work and Pensions’ Families and Children Survey, and the Department for Education and Skills’ Longitudinal Survey of Young People in England, which are among the increasing number of government department longitudinal surveys designed to support policy research needs.
- The ONS Longitudinal Study and the Scottish Longitudinal Study, based on linking Census and registration data, which complement the above surveys.

# Maintaining high quality longitudinal data resources



Longitudinal research is at the leading edge of social research, requiring high quality data in which analysts and other users can have confidence. Through its expertise in the design and implementation of longitudinal surveys, the ULSC aims to set standards that ensure the collection and maintenance of high quality data resources.

The ULSC is internationally recognised as one of the foremost centres of expertise in the design and management of longitudinal surveys. We regularly provide advice, training and consultancy services covering all aspects of longitudinal survey design, data collection and research in Europe, Asia, North America and Australasia.

The ULSC designs, runs and makes available as a research resource the British Household Panel Survey. This is an annual survey of a representative sample of over 5,500 households in the UK that has been running since 1991 and with additional booster samples in Scotland and Wales since 1999 and in Northern Ireland since 2001. The ULSC has direct responsibility for its quality.

The BHPS is one of the most successful panel surveys in the world. It is also one of the most heavily used social science datasets in the UK, with usage levels comparable to the major government cross-sectional surveys: more than 1,200 data users, including government researchers, with a high proportion returning regularly, for example, when new waves of data become available. The BHPS also has a growing number of overseas users.

As well as controlling all aspects of design, data collection, data management and documentation, we have an active programme of user support, including regular meetings of the BHPS User Group.

The ULSC has set high standards in the web-based documentation of datasets, establishing quality standards for all longitudinal survey procedures and producing quality profile standards for longitudinal surveys. We intend to develop these standards in other areas and to promote their application across surveys.

We aim to promote and publicise complementarities between the UK longitudinal surveys. To achieve this, we provide advice and information in order to influence design, measurement, processing and access procedures to maximise comparability and complementarity across surveys.

# Promoting effective use of longitudinal surveys

The methods used to analyse longitudinal data can be complex. They often require more sophisticated statistical techniques (such as panel fixed and random effects models or duration models) in order to exploit their advantages over cross-sectional data. A substantial part of the leading edge of innovation in statistical analysis methods makes use of longitudinal data. And even where complex modelling techniques are not being used, it is important that analysis takes proper statistical account of the study design.

Many researchers need to be introduced to these issues. This makes training and support for data users an important element in ensuring the widest use of these data. The ULSC provides this in several ways.

We run training courses in longitudinal research and analysis methods, including specialist courses, for example on the use of life history data. Some of these take place as part of the Essex Summer School, some as free-standing short courses, both on the Essex University campus and elsewhere. We also produce training materials such as web-based course notes, teaching data subsets, user guides and other training texts.

We run short induction courses in the use of BHPS data. We provide courses for government departments to support their researchers' use of the BHPS. We run these courses and provide related support in Scotland, Wales and Northern Ireland to ensure that full use is made of the enhanced BHPS samples providing opportunities for independent research on these countries.

The role of the ULSC is to take a strategic view of the needs for training in longitudinal research methods, to ensure the existence of appropriate training, meeting the needs of researchers at different levels. We also monitor the development of longitudinal analysis methods and support networks of researchers using leading edge methods. These activities are developed in collaboration with other initiative to build research capacity, including the ESRC National Centre for Research Methods.

The ULSC provides information about a range of datasets and other resources for comparative European research including the Consortium of Household Panels for European Socio-Economic Research (CHER), the European Community Household Panel (ECHP), the Cross National Equivalence File (CNEF), the Multinational Time Use Survey (MTUS) and the European Social Survey (ESS).

# Finding out about longitudinal research



The ULSC provides a range of resources to support researchers and those who want to find out about longitudinal research.

Longitudinal data and research have relevance for a range of different groups, including academic researchers, those involved in teaching and training, and researchers and policy-makers in central and local government and the public sector more generally. Longitudinal data also provide important lessons for businesses wishing to understand how economic and social change may affect them, and for a range of voluntary sector and charitable organisations. Most broadly, longitudinal research findings make an important contribution to public debate.

Some of these audiences may want to find out about datasets and other data resources in order to undertake or commission research. Others are more concerned with the findings of longitudinal research. The ULSC caters for the information needs of these different audiences with a range of different activities.

With the ONS, the ULSC has developed *Keeping Track*, a web-based database of information about longitudinal surveys (<http://www.iser.essex.ac.uk/ulsc/keeptrack>). This contains more than 300 studies and is now the leading international resource in this field.

We offer information, advice and bibliographic resources to help researchers to identify related work and for policy researchers to identify relevant evidence. We will provide materials that explain the distinctive character and importance of longitudinal research, and a regular *Monitor* series summarising research findings and providing new analyses.

We also organise and contribute to seminars and conferences that help to promote longitudinal research. These include the biennial BHPS research conferences, seminars focused on policy applications of longitudinal data targeted at analysts in government departments, special sessions in discipline-specific conferences and other events.

# Improving longitudinal surveys

The ULSC has responsibility for improving the quality, relevance and accessibility of longitudinal survey data. This involves the promotion of best practice as well as original methodological research to extend our knowledge of what constitutes best practice.

The ULSC has a strategic role in identifying needs for methodological research. This takes place through desk research, consultation and workshops. Meeting these needs involves two sorts of activity:

- The ULSC's own programme of fundamental methodological research on the design and implementation of longitudinal surveys and the effective analysis of longitudinal data.
- Supporting and facilitating research outside the ULSC, for example, by encouraging funders to incorporate methodological research into their survey design or research programmes, and by advising on research priorities.

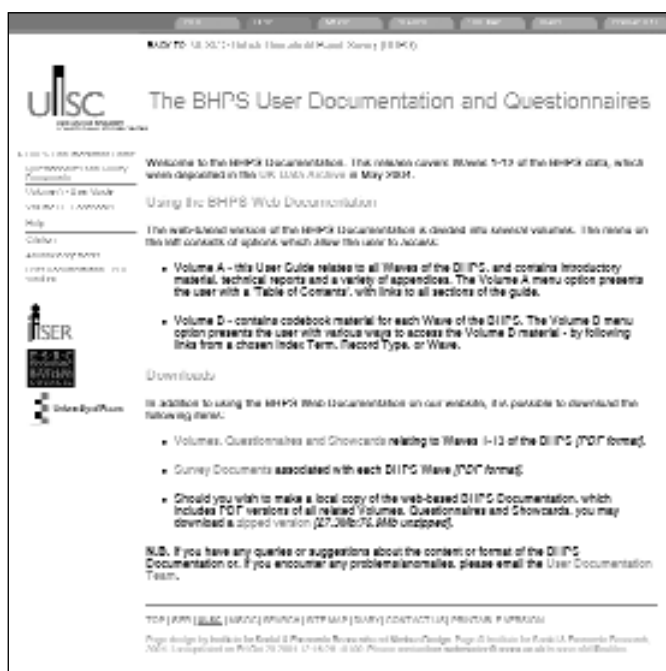
Examples of ULSC methodological research aimed at improving longitudinal surveys includes work on:

- the effects of dependent interviewing where previous data is fed-forward to respondents;
- the use of administrative data for validation of survey responses;
- the effectiveness of strategies aimed at minimising non-response;
- strategies for adjustments for missing data through weighting and imputation.

The ULSC promotes best practice in longitudinal surveys through publications, presentations and direct advice. We have published guidelines for the production of quality profiles for longitudinal surveys, guidelines for standardisation of response rate information and research on ways of collecting data on non-respondents. We will disseminate this work through presentations, seminars, newsletter articles, website information and a dedicated methodological conference.

In addition, we will continue to provide advice and input to specific surveys, to respond to consultation exercises and proactively to identify surveys where we can usefully offer guidance and information.

# Making data easier to use



The ULSC disseminates data resources that are both transparent to use and efficient for the data user. We devote significant resources to the transformation of the raw data that emerge from survey fieldwork into a user-friendly form appropriate to the complexities of longitudinal research and supported by high quality documentation.

We have sought to define the attributes of 'data usability' for the special characteristics of longitudinal materials. Usability has three dimensions:

- transparency – features ensuring that users make sense of what is in the dataset;
- efficiency – features minimising researcher time devoted to data preparation;
- and validity – features leading to the minimisation of statistical error.

Our aim is to set standards for deposited data in terms of the dimensions of usability and to collaborate with producers in ensuring the standards are met.

Our work in this area includes the Cohorts Enhancement Project, providing access to restructured data and improved documentation for the NCDS, development of the BHPS front-end which will provide a tool for downloading user-defined subsets of BHPS data and the production and documentation of internationally comparative datasets.

The ULSC collaborates with the UK Data Archive in the specialist longitudinal service of the Economic and Social Data Service (ESDS). ESDS provides access and support for an extensive range of economic and social data, both quantitative and qualitative, spanning many disciplines and themes. The longitudinal service include web-based download, specialist user support, training and workshops and a range of value-added data enhancements for longitudinal data.

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The ULSC is part of the Institute for Social and Economic Research (ISER), a department of the University of Essex. ISER undertakes a wide range of social and economic research in addition to ULSC activities. Recent publications by ISER researchers include:

Richard Berthoud, Jonathan Gershuny (2000), *Seven Years in the Lives of British Families*, The Policy Press.

Richard Berthoud, Maria Iacovou (2004), *Social Europe: living standards and welfare states*, Edward Elgar Publishing.

Nick Buck, Ian Gordon, Peter Hall, Michael Harloe, Mark Kleinman (2002), *Working Capital: life and labour in contemporary London*, Routledge.

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Jonathan Gershuny (2000), *Changing Times: work and leisure in postindustrial society*, Oxford University Press.

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Stephen Pudney, Ruth Hancock, Holly Sutherland (2004), 'Simulating the Reform of Means-tested Benefits with Endogenous Take-up and Claim Costs', ISER Working Paper 2004-04.

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