

ESRC Framework to Enable Biosocial Research December 2014

Introduction	1
What is Biosocial Research?	1
Why does the ESRC engage?.....	1
What is the framework for?	2
Who is this framework for?.....	2
What will we do next?	2
Guiding Principles	2
Collaboration	2
Impact	2
International	3
Best practice.....	3
Building Partnerships.....	3
Building Resources	4
Building Capacity.....	6

Introduction

What is Biosocial Research?

Biosocial research is concerned with the dynamic interplays between biology, experiences and behaviours over the course of a person’s lifetime.

Encompassing multidisciplinary science, biosocial research brings together expertise from the biological, medical and social sciences. It aims to further enable understanding of the complex pathways and mechanisms that shape physical and mental health, social behaviours and outcomes, and genomic, neurological and physiological systems.

Biosocial research enhances the depth and breadth of insights drawn from research, thereby improving the positive impacts of research on policy and society.

Why does the ESRC engage?

The Economic and Social Research Council (ESRC) is committed to enabling the growth of exciting, innovative research, including biosocial research. This field has the potential to

increase the academic and societal impact of the research that ESRC funds. It is therefore essential that social scientists work together with biological and medical scientists to develop new areas of interdisciplinary research.

High quality biosocial research has, and will continue to inform and improve policy interventions in a broad range of areas, including tackling poverty and bringing about social change. Engagement in biosocial research that links the social sciences to biological and medical sciences is a growing priority for us.

What is the framework for?

This framework outlines the ESRC's vision to build partnerships, resources and capacity to overcome barriers and combat challenges to foster biosocial research.

Who is this framework for?

Our framework provides a clear statement of intent on how the ESRC intends to engage in support for biosocial research. In doing so, we aim to help social scientists to engage in high quality interdisciplinary work with biological and medical scientists, to enable them to address the pressing biosocial science questions of the future.

What will we do next?

In this framework we outline the three areas of partnerships, resources and capacity we aim to build on to enable high quality interdisciplinary research at the biosocial interface. We will develop a delivery plan to monitor and address the eight areas of work that we identify in this framework.

Guiding Principles

Collaboration

We recognise that interdisciplinary research that spans the social and biosciences requires meaningful collaboration between the disciplines. The range and depth of knowledge involved in exploring, say, genetic and epigenetic linkages to and from experiences and behaviours is unlikely to be achieved by a single individual.

Active collaborations between social, biological and medical researchers need to be supported and fostered, as these are the core relationships that enable biosocial research.

Impact

We expect that all the research we fund will be high quality and of scholarly distinction, but we are also committed to increasing its non-academic impact and benefit to the UK in public policy, economic prosperity, culture, and quality of life.

For example, the Welsh Government's recently developed Early Years and Childcare Plan draws on biomedical and socio-economic evidence from the British birth cohort studies; a biosocial area of research. The 10 year plan highlights findings from the cohort studies that show factors such as mother's health during pregnancy, child's birth weight, parents' education and employment, family's housing and socio-economic circumstances can have a lasting effect on children's cognitive, social and behavioural development.

International

The Research Councils UK International Strategy recognises that research is critical to solving grand challenges, and that increasingly, solutions will require work across boundaries, crossing disciplines and borders between nations. The ESRC aims to embed an international perspective in everything we do.

One such collaboration is the ESRC partnership with the US National Institute for Aging. Together, we ran a call for two-year research projects in the area of mid-life reversibility of early-established bio-behavioural risk factors. In order to speed the development of novel intervention strategies, applicants were encouraged to use existing human cohort data to identify circumstances that mitigate or exacerbate the effects of early adversity. Alternatively applicants could use human and/or animal models to test the feasibility of developing interventions aimed specifically at increasing malleability in adulthood of risk persistence mechanisms.

Best practice

We recognise that best practice on research ethics, data access and research integrity exists and the importance of adopting emerging best practice and guidance.

Our framework for research ethics is a living document which we are committed to developing over time. Updates to the document take into account the experiences of the ESRC, other research organisations and key stakeholders as well as future challenges arising from the wider ethics environment.

Building Partnerships

We will create opportunities for strategic partnerships to enable biosocial research

We recognise there is a need for stronger support and strategic alliances to help secure future funding for biosocial research and to foster opportunities for collaboration in a co-ordinated and strategically driven fashion.

Working with other research funders creates opportunities to cooperatively explore exciting questions and grand challenges. As a result, there is significant opportunity for social science at the biosocial interface.

We will develop activities aimed at building interdisciplinary and international networks, leading to substantial collaborations.

One such collaboration between major funders of public health research in the UK is the UK Clinical Research Collaboration. This partnership aims to develop a coordinated approach to improving the UK public health research environment. The resulting Centres of Excellence are designed to strengthen research into complex public health issues such as obesity, smoking and health inequalities. They bring together leading experts from a range of disciplines and work in partnership with practitioners, policymakers and wider stakeholders to tackle public health issues.

We will encourage the coordination of research interests to combine different disciplinary approaches to research and analysis

We aim to build on existing relations between the Research Councils, as well as other key research funders so that new opportunities for collaboration between research disciplines can be fostered.

An example of cross-council collaboration includes the Lifelong Health and Wellbeing initiative which provides a platform for coordinating ageing research. The initiative acts as a dedicated route for funding multidisciplinary ageing research that delivers the shared aims of the programme.

We will also explore mechanisms to broker collaborations between institutions and between social, biological and biomedical scientists.

An example of this is the recent partnership between the National Institute for Health Research and the ESRC, which has awarded £20 million to six research projects to significantly add to our understanding of dementia. Amongst other things, the research will look at how we can better prevent dementia, and improve the quality of life of those with dementia and their carers. One of the awards will develop a publicly available tool to help meet the future needs of dementia patients and their carers, and a model will be developed from this which will enable us to better predict the future costs of dementia.

Building Resources

We will work to maximise the value of existing biosocial research data

We and other research funders have invested in a rich and diverse range of resources for biosocial research and we recognise there is a need to ensure that social scientists realise the huge potential of this biosocial data.

For example, in the ESRC funded International Centre for Life Course Studies in Society and Health researchers investigate processes throughout the life course that relate the development of personal and professional skills to health and wellbeing and to patterns of employment and social participation. The research is possible due to the unique longitudinal birth cohort studies that have been carried out in the UK and the availability of comparative international data.

We also aim to maximise the impact and benefits arising from biosocial data and foster opportunities for collaborative funding, within and outside the UK.

Our investment in the Secondary Data Analysis Initiative (SDAI) is an example of how we help to ensure that use of data resources is maximised. The SDAI aims to deliver high-quality, high-impact research through the deeper exploitation of major data resources created by ESRC and other agencies. The initiative has enabled researchers from any social science subject area to undertake small, focused, impact-generating projects using any pre-existing dataset, with the latest phase having a specific focus on ESRC-funded data resources, including the biosocial datasets within our largest studies.

We will ensure resources for biosocial research continue to be world class

The ESRC invests in biosocial data collection and analysis, in particular as part of our longitudinal studies. We believe that continued investment in enriching such data resources is necessary to further enable biosocial research.

One such data resource, Understanding Society, is a major household panel study that provides valuable new evidence to inform research on issues of importance to a wide scientific and policy community. The study collects biomedical measures and samples to enable new research on the social determinants and impacts of health in a household context. This opens up exciting prospects for advances at the interface between social science and biomedical research.

Additionally, we will work with other funders to identify where there is a perceived shortfall in biosocial data resources available to enable the research community. This will enable us to address the complex research questions that link to our strategic priorities and to extend the scientific boundaries.

Together, with the Medical Research Council, we have invested in the largest UK wide Birth Cohort Study to date; the Life Study. A truly biosocial resource, this study aims to collect both socio-economic and biological data from thousands of children and their parents. This exciting new study will start collecting data from late 2014 and provide a world class resource for future biosocial researchers.

We recognise it is vital that the UK research community is in a strong position to maximise the research potential offered by linking electronic health records with other forms of routinely collected data and research datasets.

In partnership with the Medical Research Council and Wellcome Trust we are working to ensure the UK builds critical mass and expertise in health informatics research. We jointly invested in e-Health Informatics Research Centres (Farr Institutes) and have established four centres of excellence in research. Using e-health records is part of a shared vision to promote linkage of electronic data for research.

We will also explore the huge potential of new forms of 'big data' and capitalise on the potential benefit from multidisciplinary coordination and collaboration.

We will adopt best practice around data collection, storage, access and analysis

We recognise that best practice exists in our community and the importance of adopting emerging best practice and guidance. This is key in order to help tackle the wide range of issues raised by the collection, storage, access and analysis of biosocial data and to build on and adopt expertise that already exists.

We have collaborated with the Medical Research Council, Cancer Research UK and the Wellcome Trust to establish an Expert Advisory Group on Data Access, to provide strategic advice on the emerging scientific, legal and ethical issues associated with access to data for human genetics research and cohort studies.

We will continue to engage with future discussions with funders and adopt as appropriate best practice and guidance, and ensure that our funded researchers do too.

The Medical Research Council and the Wellcome Trust have produced a framework, endorsed by ESRC, to support researchers' decisions about individual feedback of health related findings.

Building Capacity

We will enable sustained and constructive dialogue and knowledge exchange between social and biomedical scientists

We recognise there is a need to ensure social scientists have the skills and training to engage with the biosocial research agenda. There are communication barriers hindering collaboration between social scientists and biomedical scientists interested and working in this area. These include challenges of language, working practices and policy, visibility and availability of data, fostering opportunities for the research, and understanding the concerns and interests of the public. These barriers must be overcome in order to enable the highest quality biosocial research in the future.

With support from the Biotechnology and Biological Sciences Research Council and the Genomics Forum we hosted a major international scientific symposium on Social Science and Epigenetics: Opportunities and Challenges in 2012. The event aimed to bring together social, biological and medical scientists to take forward thinking and to explore the opportunities for promoting co-operation and collaboration between scientists and social scientists in the field of epigenetics.

We will strive to build capacity to exploit our biosocial data resources

We will encourage social scientists to gain the necessary skills to make full use of new and existing data resources and to acquire the requisite knowledge to effectively collaborate with bioscientists to create and exploit biosocial research opportunities.

The National Centre for Research Methods (NCRM) provides a strategic focal point for the identification, development and delivery of an integrated national research, training and capacity building programme. NCRM have held events to support new skills for biosocial research, such as 'new approaches to biosocial research: using genes in social and epidemiological studies'.

We will help ensure a new cohort of social scientists have the skills to engage in the biosocial research agenda

We will continue to explore opportunities for training and capacity building that will allow the very best scientists to be educated and supported to the highest standards for interdisciplinary research, including biosocial.

Our Future Research Leaders scheme aims to support outstanding early career researchers to carry out excellent research and to develop all aspects of their research and knowledge exchange skills. We encourage interdisciplinary research and have had co-funding agreements in place with the Medical Research Council for awards in biosocial research.

Through our Doctoral Training Centres we help fund the next generation of social scientists and it is important that each new cohort of students has the skills required to engage in interdisciplinary research.

The Doctoral Training Centre framework facilitates greater interdisciplinarity through more flexible approaches to the design of training allowing for more innovative training provision, particularly focussed on ESRC's strategic challenges.