

## Strategies for Interdisciplinary Integration: Training the Next Generation of Researchers

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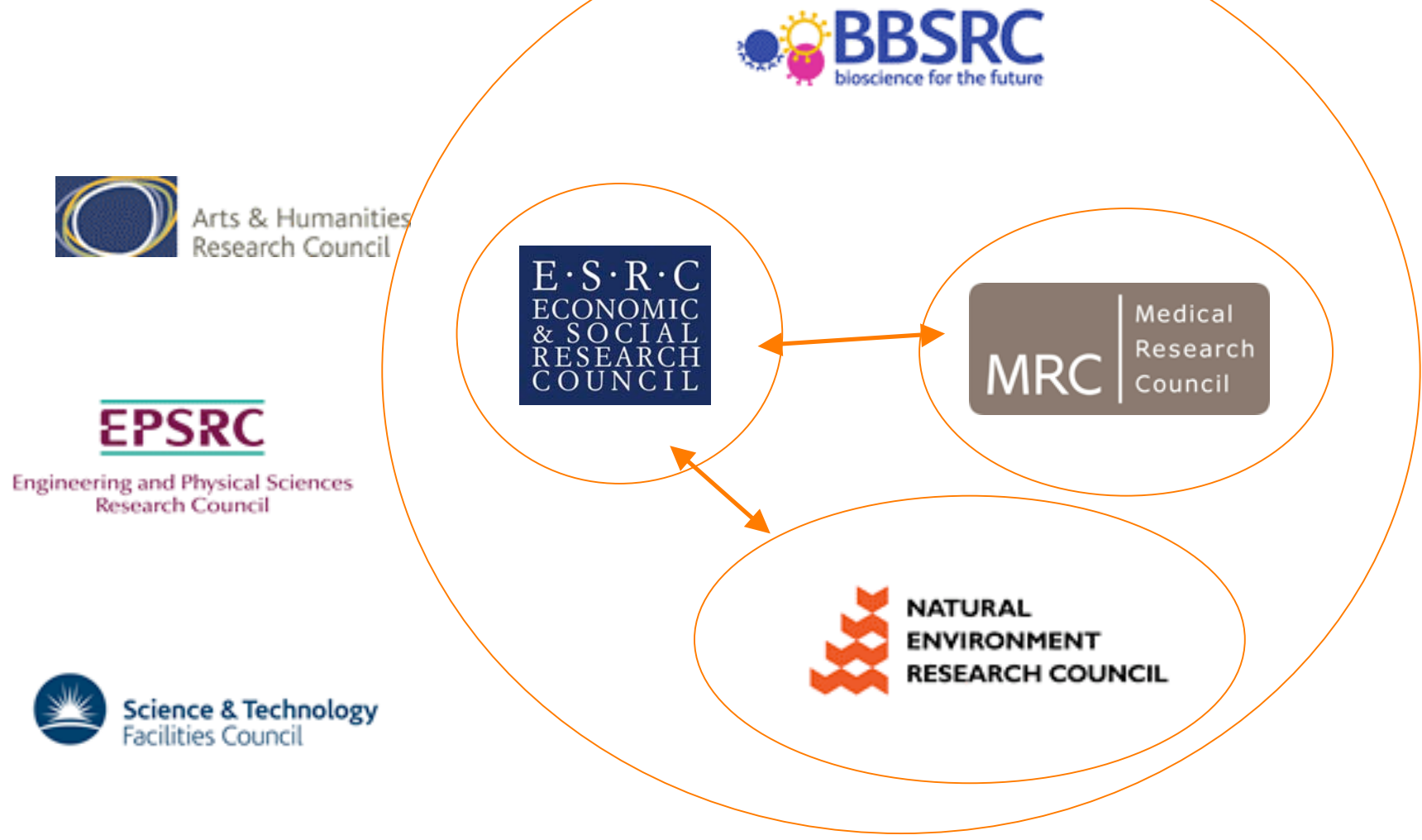
# Innogen

- ESRC Centre for Social and Economic Research on Innovation in Genomics (ca. £7M, 2002-2012)
- Part of the ESRC Genomics Network studying the evolution of genomics and life sciences and their far-reaching social and economic implications
- Researchers (Edinburgh and Open University)
  - social scientists, economists, lawyers
- Stakeholders and research partners (nationally and internationally)
  - scientists, industry and private interest groups, policy makers and regulators, and citizens and public interest groups

# Technology Development Group

- Consultancy established in US, now Scotland
- Focus on strategic change in higher education/research, e.g. interdisciplinarity, knowledge exchange
- Facilitation of innovative initiatives, strategic visioning, evaluation of impacts for government /academic/other clients internationally
- Visiting Fellow at Innogen

# Rural Economy and Land Use Programme

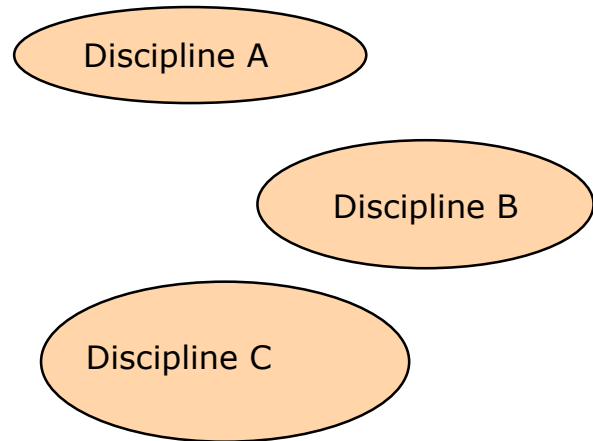


# UK research policy context

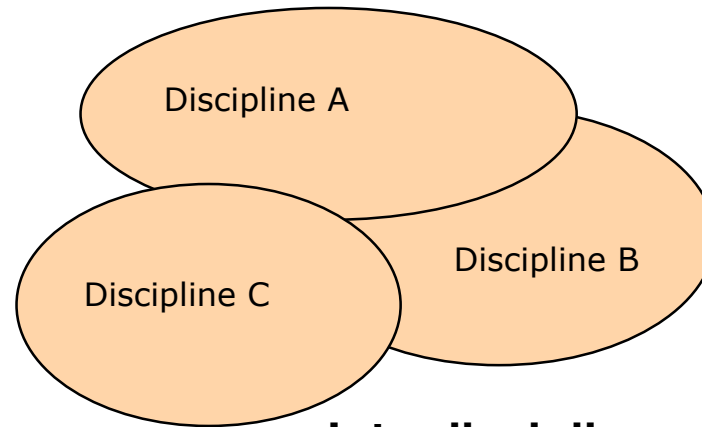
- ESRC PG training framework trends towards:
  - better opportunities for ID training programmes
  - supporting long-term ability of social science community to address increasingly complex research questions
- ESRC Strategic Plan – 15 mentions of ID in 32 pp:

*Although much effort must be made to sustain the health of individual disciplines, the social scientist's value is increasingly realised in interdisciplinary work (Foreword)*
- BUT ID still not mainstream; some pockets of good practice (e.g. RELU); retrenchment to disciplines despite rhetoric

# Still ID rather than TD?

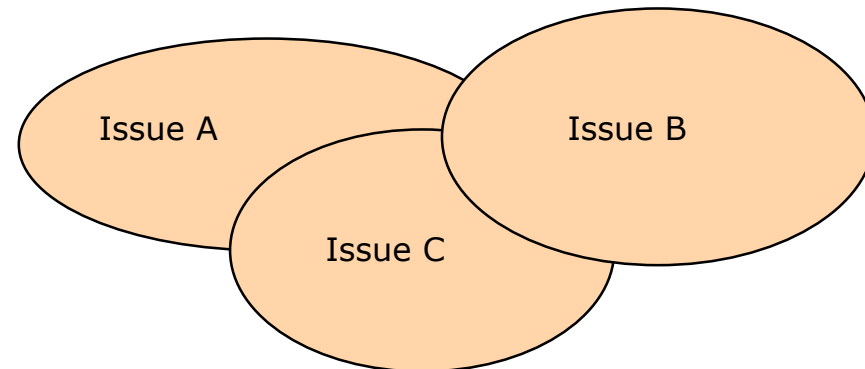


**Multidisciplinary research**



**Interdisciplinary research**

**Transdisciplinary research**



# Evidence base

- Bruce A., Lyall C., Tait J. and Williams, R. (2004) “Interdisciplinary Integration in the Fifth Framework Programme”, *Futures*, 36/4, 457-470
- Meagher L. and Lyall C. (2005), *Evaluation of the ESRC/NERC Interdisciplinary Research Studentship Scheme*
- Meagher L. and Lyall C. (2009), *Evaluation of the ESRC/MRC Interdisciplinary Research Studentship and Post-Doctoral Fellowship Scheme*

[www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Support/Evaluation/publications](http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Support/Evaluation/publications)

# Interdisciplinary Masterclasses

- Residential, workshop based
- Capacity- and community-building, advanced training not teaching
- Focus on ID between natural & social sciences
- Evidence of demand: 1st event 4X oversubscribed
- Audience: from students to research directors
- Spin off activities: from talk in a pub to training for senior researchers

# Approach

- Beyond usual training in transferable research skills
- Strategic mix of training and a designed element of sharing of research experiences which may develop into lasting peer networks
- Trainers draw on own research across a range of disciplinary and ID domains
- Complementing generic messages about ID with concrete lessons about application in range of 'real' research and policy contexts

# Outline programme

- understanding different languages, methods, cultures
- variety of motivations for, and different modes of, ID
- sharing problems/lessons about pursuit and timely completion of an ID PhD (e.g. role of supervisors)
- development of publication strategies

# Outline programme *cont.*

- career advice (challenges facing interdisciplinary junior academics, awareness of potential applications of research to policymaking etc)
- maintaining an ID approach within discipline-focused institutions and academic reward mechanisms
- common ID research management challenges

# Interdisciplinary ‘Short Guides’

1. Developing Interdisciplinary Research Proposals
2. Reviewing Interdisciplinary Research Proposals
3. Building and Managing ID Research Teams
4. Supervising Interdisciplinary PhDs
5. Troubleshooting Some Common Interdisciplinary Research Management Challenges
6. Designing ID Research for Policy and Practice
7. Developing ID Strategies for Research Groups

[www.tinyurl.com/idwiki](http://www.tinyurl.com/idwiki)

# Student feedback

- Participants greatly valued the opportunity to network and learn from other students' experiences
- Exit survey:
  - 82% had thought about interdisciplinarity in at least one new way as a result of the Masterclass
  - 77% had at least one new insight into overcoming the challenges of an interdisciplinary PhD
- Follow up survey:
  - almost a third had changed something about their research as a result of the Masterclass
  - almost a quarter had unmet interdisciplinary training needs or anticipated that they may have such needs post PhD

# What have we learned?

- These masterclasses are worth doing
- Early career (and established) researchers benefit from reflecting on ID processes
- Highly individualistic interdisciplinary researchers benefit from a sense of community

# What next?

- Challenging funding environment
- Changes to PG training (ID element in UK's Doctoral Training Centres?)
- New weight on ID given UK research assessment's focus on impact?
- Community building, f2f and virtual
- Codifying tacit, practical knowledge:
  - *Interdisciplinary Research Journeys* book
  - more Masterclasses?

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