

What is e-Social Science?

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Structure of this talk

- What is e-Science
- What is the Grid
- What can e-Social Science do for survey research?
- Specialist files and resources
- e-Social Science Projects

What is e-Science

- Originally experiments to connect together a few powerful computers
- The ability to connect high powered computers to undertake enormous calculations often on huge datasets
- “The Grid” = the co-ordination of geographically dispersed computing and data resources

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What is e-Science

- “What is exciting about the Grid is the combination of extensive connectivity, massive computer power and vast quantities of digitised data – all three of which are still rapidly expanding – making possible new applications that are orders of magnitude more potent than even a few years ago”
- “The term 'e-research' is sometimes used instead of 'e-science', with the advantage that gives more emphasis to the end result of better, richer, faster or new research results, rather than the technologies used to get them” (<http://www.ncess.ac.uk/>)

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The Grid

- Grid computing (or the use of a computational grid) is the application of several computers to a single problem at the same time
 - usually to a scientific or technical problem that requires a great number of computer processing cycles or access to large amounts of data
- According to John Patrick, IBM's vice president for Internet strategies, "the next big thing will be grid computing"

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E-Social Science in the UK

- 'e-Science' nowadays used as a broader term involving use of technologies associated with the Grid and with other collaborations between computing and software resources
- NCeSS: UK programme of projects looking at e-Science applications in social science projects (e.g. distributed computing; access and analysis of complex data; secure access to sensitive data)

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Less obviously some other activities where e-science could potentially help the research process

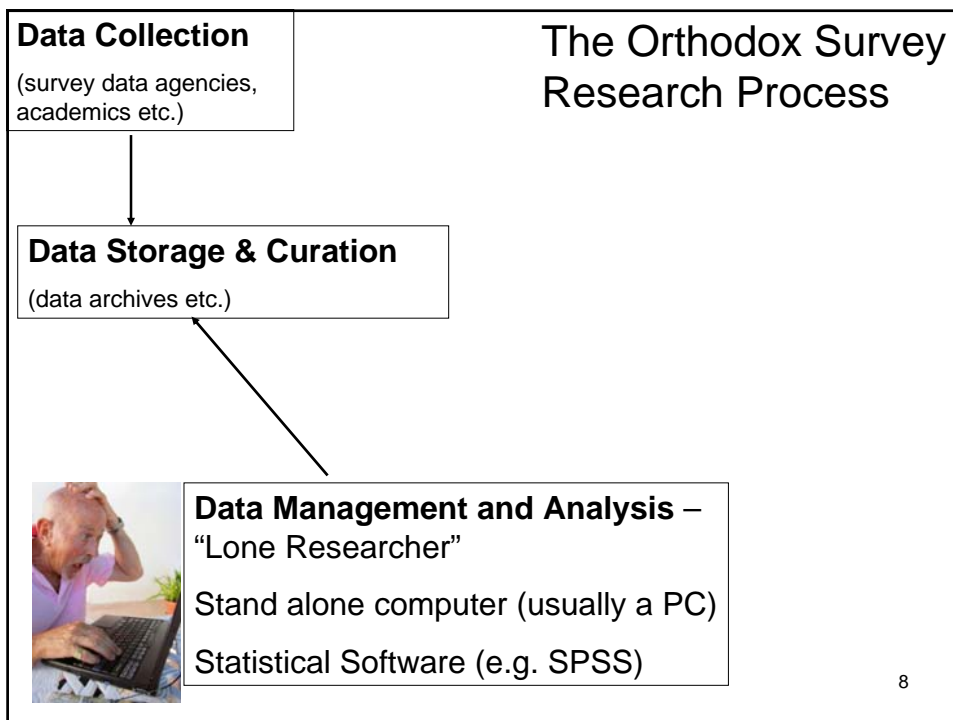
Data Preparation & Management

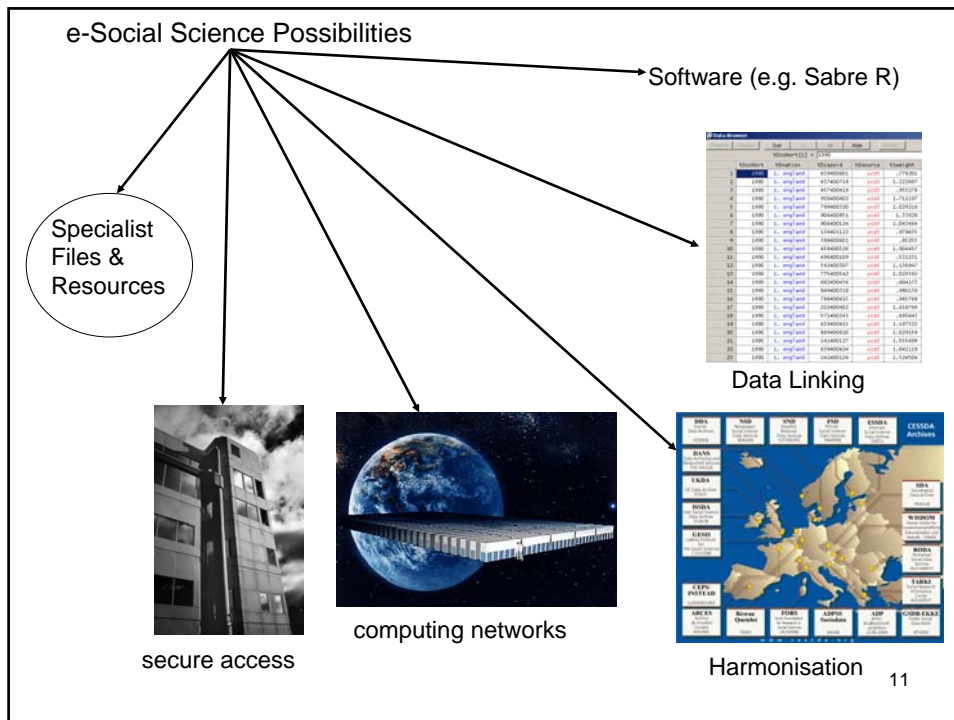
- Manipulating data

- ❖ Recoding categories / 'operationalising' variables

These are the focus of the DAMES research Node,
www.dames.org.uk

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Some Concluding Remarks

- Can e-Social Science resources can help improve survey research
 - assist with access to disparate resources
 - help with data management (especially key variables)
 - help with data standards and best practice (i.e. data discipline)
 - help with replicability (and improve incremental science)

E-Social Science

National Centre for e-Social Science,
www.ncess.ac.uk , a major UK investment in 'e-social science' technology

Examples of current e-Social Science projects...

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PolicyGrid Node

The activities of **PolicyGrid**, based at the University of Aberdeen bring together social scientists with interests in rural policy development and appraisal with computer scientists who have experience in Grid and Semantic Web technologies

The core objective being to explore how Semantic Grid tools can be created to support social scientists and policy makers

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OeSS Node

The **OeSS** node, based at the University of Oxford aims to help give the UK research community a lead in advancing understanding of the social shaping and impacts of e-infrastructures by identifying ways forward for the appropriate design of e-sciences technologies, institutions and practices

The **OeSS** research node is focused on gaining a better understanding of issues such as confidentiality, privacy data protection, intellectual property rights (IPR), accountability and trust and risk in distributed collaborations

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The Digital Records Research Node

The Digital Records research node is based at the University of Nottingham

The Digital Records or 'DReSS' Research Node is developing new tools and services that enable qualitative research to exploit heterogeneous forms of data

Digital Replay System DRS is a next generation Computer Aided Qualitative Data Analysis (CAQDAS) tool

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Obesity e-Lab

Obesity is one of the leading causes of preventable death world-wide, and a priority for many governments

It is caused when we consume more energy than what is spent in physical activity

Mostly this can be related to social factors; however studies of these factors, usually only relate to one side of the energy balance equation

In order to readdress this, there is a need for easily-shared, multi-disciplinary social research into obesity

The team is developing an eLab - a unique, secure environment for producing, sharing, communicating and finding obesity research between epidemiologists, public health researchers and social scientists

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LIFEGUIDE

Are a team of health psychologists and computer scientists developing software that will allow researchers to easily and flexibly create and modify internet-delivered interventions

LifeGuide will enable researchers to design interventions that:

- give tailored advice based on the user's answers to questions
- allow users to plan, chart and check their progress
- send follow-up messages to users in the form of personalised emails or texts
- automatically randomise users to different interventions arms

store all data on user responses and website usage for output to Excel and SPSS and much more!

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GENESIS Project

Complexity sciences project

The development of decentralised and distributed agent-based simulation, and with ideas about social and spatial emergence

Requires large-scale data bases for its execution as well as powerful techniques of visualisation for its understanding and dissemination



<http://www.ncess.ac.uk/research/>

The screenshot shows the NCESS website's 'Research & Development' page. At the top, there is a navigation bar with links for 'Home', 'About e-Social Science', 'About us', 'Research & Development', 'Tools', 'Events', 'News & Opinion', and 'Contact us'. A search bar is located in the top right corner. Below the navigation bar, there are social media sharing options for Facebook, Delicious, and RSS Feeds. The main content area features a large blue abstract image and text describing the research programme. A sidebar on the left contains a list of research areas, with 'e-Infrastructure' highlighted in pink.

Research & Development

You are here: [Home](#) » [Research & Development](#)

The NCESS research programme falls into distinct strands. These cover a range of areas across e-Social Science.

If you'd like an introduction to the work of the Nodes, two good places to start are these PowerPoint (1. [A. O'Leary](#) (alt)), and (2. [a panel](#) (alt)) which [Peter Hall](#) recently presented to outline the work we are doing.

As well as the 7 Research Nodes, we have also undertaken research from Small Grants and Pilot Demonstrator projects. Their outputs, papers, and presentations can be found in these pages, as well as further information on their activities.

Research into the e-Infrastructure project can be found in the [Services, Research](#) Section.

Research & Development

- Geographic Simulation
- Semantic Web
- Social Shaping
- Understanding New Forms of Digital Records (Digital Records)
- Video Annotation
- Quantitative Research
- Data Management
- Obesity e-Lab
- LifeGuide
- CeNeSIS
- Hub Research
- Small Grant Projects
- Pilot Demonstrator Projects
- e-Infrastructure**

How Might Dames help us with survey data analysis?

- Specialist files (e.g. occupations)
- Data matching / merging tools and services
- Workflow documentation tools (e.g. better meta data and curation)
- Data access (confidential records)
(future changes in access agreements)

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