



**The Nature of Evidence: How Well Do 'Facts' Travel?  
Funded by the Leverhulme Trust and the ESRC (Grant F/07004/Z)**

**1<sup>st</sup> Year Progress Report**

*Period 1<sup>st</sup> September 2004 - 31<sup>st</sup> August, 2005*

The project proposal was designed to focus attention on the historical and social science investigation of 'facts' by formulating a question about the transfer of facts between and within disciplinary fields. The research design - as set out in the original proposal and followed in practice - involves a number of individual researchers working on case studies and at the same time working as a team in sharing development of the thematic aspects of the project question. In effect, that question forms an umbrella over a number of different fields and topics but, by working together during this project, the team members share in the development of ideas and concepts that address the research question at a more generic level. This report lays out the development during the first year of a number of case topics that have got underway, and reports on our first brainstorming workshop aimed at the generic level research.

**Research Personnel**

The research team funded by the project this year has consisted of the following (with grant-funded Fellow indicated by \*, the rest being faculty members):

Dr Jon Adams\*

Dr Julien Demade\*

Professor Stephan Epstein

Dr Peter Howlett

Professor Mary S. Morgan

Dr Max-Stephan Schulze

Dr Simona Valeriani\*

Dr Patrick Wallis

The project has hosted three further young researchers working in association with the project this year:

Dr David Haycock (funded by a Wellcome Trust grant in the history of medicine)

Dr Bernhard Kleeberg (visiting from Max-Planck Institute for the History of Science in Berlin)

Ms Erika Mattila (visiting from Helsinki University)

In addition, two starting PhD students became associated with the project during the final few months of this report year: Aashish Velkar and Albane Forestier. We will report more on this development in next year's report.

**Research Clusters**

For reporting purposes, the research work can be divided effectively into clusters though it is also apparent from these descriptions that there are many intersections of interest between them. They cover, in broad terms, the agendas we laid out in our proposal:

The first cluster of case work is that on the transfer of technical knowledge. Simona Valeriani (one of the post-doc fellows) has developed a research study entitled "Travelling knowledge: Building techniques in Europe between the 16<sup>th</sup> and 18<sup>th</sup> centuries". This is concerned with the spatial transfer of practical building techniques, and concerns their import and their local alteration in relation to architectural theories, the availability of building materials, and of local knowledge. This study involves practical work (investigating roof spaces to track their history), archive work on texts and published handbooks, and a study of travelling craftsmen and architects, with sites in Italy, Germany and the UK. Patrick Wallis is interested in the problem of how technical knowledge is transferred between generations of craftsmen - particularly via the apprenticeship system. Both these two research cases relate closely to a broader investigation already well underway by Stephan Epstein on technical knowledge in Europe (Project Working Paper 1: *Transferring Technical Knowledge and Innovating in Europe, c.1200-c.1800*). His detailed historical work focusses on the travelling of facts about materials and manufacturing techniques in a period when such knowledge transfers involved heuristics and rules of thumb rather than the kind of well-codified or even scientific knowledge of later eras and when institutions for knowledge production and transfer were rather different than those of today.

A second cluster of work revolves around questions of evidence and expertise in the establishment and communication of medical facts in various ways. Patrick Wallis is researching early modern medical science to investigate the role of authority, experts and 'quacks' in various different communities. (This work has been reported at the Science Museums of London - with press coverage - and of Oxford.) And, following his previous work on the reporting of epidemic diseases, he has now investigated the successive historical and literary re-interpretations of plague facts (Project Working Paper 2 *A Dreadful Heritage: Interpreting Epidemic Disease at Eyam, 1666-2000*). David Haycock (funded by the Wellcome Trust but working in association with this project) has been investigating the notion of medical facts in early medical science. One of our associated scholars, Erika Mattila, has been researching the ways in which a multidisciplinary research group of statisticians, medics and computer experts finds ways to integrate facts and ideas about disease transmission (Working Paper 5: *Interdisciplinarity "In The Making": Modelling Infectious Diseases*).

A third cluster of work revolves around the establishment of biological and economic facts and various ways in which they travel. Mary Morgan has been working on the intersection of agricultural and economic facts in the work of Ricardo in early political economy and has used the project to bring this work into fruition (Working Paper 3: *Experimental Farming and Ricardo's Political Arithmetic of Distribution*). Peter Howlett has mapped out a case project on the 'green revolution' in India and particularly on the travelling - both 'well' and 'badly' - of factual information about high yielding varieties of wheat and rice between academic and public spheres of policy makers and farmers, a complex case in which facts travelled in many ways and directions. Bernhard Kleeberg (a visiting fellow) has been working on the "standard of living", a project which crosses the biology-economics borderland, and on which we expect to report more next year.

A fourth cluster concerns issues about 'measurements': quantitative facts, sometimes thought to be the most reliable kinds of facts. In a discipline like economic history they are very difficult to establish, and once established, tend to have a very long life - and so travel 'well' in this sense. Julien Demade (another of our post-doc fellows) has been researching on "The International Price History Committee", an international project of the 1920s and 1930s undertaken by historians and economists to measure prices throughout history, and he is particularly interested in their different notions about what constituted a price fact. In on-going work, Peter Howlett and Max-Stephan Schulze have been concerned with the establishment of economic historical facts for the British and Central European economies, and in joint work to disentangle facts about the convergence of economies' performance. The establishment of reliable measurements - measurements which can also travel well - is a broader interest of Mary Morgan who has been investigating the principles of successful measurement in economics and the particular case of measuring the velocity of money.

A fifth cluster of work concerns facts travelling across what seem to be very broad spaces using a strongly humanities perspective on the question of travelling facts and a larger social canvas for investigation. Jon Adams (another of our post-doc fellows) is using his background in literature to research on "The popularisation of science facts" and is developing case work on the transfer of facts about the mind into the popular domain. Bernhard Kleeberg has been researching the relationship between evolutionary ideas and the changes in interpretation of biblical facts in late 19<sup>th</sup> century Germany (*Working Paper 4: Moral Facts and Scientific Fiction: 19th Century Theological Reactions to Darwinism in Germany*). Paul Johnson has investigated the broad constitution of facts about the market in the context of 19<sup>th</sup> century Britain (*Working Paper 6: Market Disciplines in Victorian Britain*).

### **Research Group Activities**

The project team this year held regular group research meetings and a brainstorming workshop on May 19-21st, 2005, in which the main project team members discussed their individual research case work. Our main aim though was to gain the help of a group of visitors on two questions: on the various ways that we might interpret the notion of "travelling"; and how to make use of the term "well" in our project title. We held two very effective brainstorming sessions on these problems during the workshop which will feed into our work in the coming year. The workshop schedule and the list of participants are included in with the materials with this report and are available on our website:

<http://www.lse.ac.uk/collections/economicHistory/Research/facts/May2005Brainstorming.htm>

We are actively formulating informal links with other research groups. One set of links has been established with those working on the parallel "Nature of Evidence" project at UCL under the direction of Professor Phil Dawid. Another set of links - which lead to our hosting of Dr Kleeberg for 6 months during this year - are with the research group under the direction of Professor Lorraine Daston at the Max Planck

Institute for History of Science in Berlin. We expect further co-operation during the coming year.

A subset of the project team (Morgan, Epstein and Valeriani) joined a small group of scholars from management and science studies (Sidney Winter, Charles Baden-Fuller, Harry Collins, Marie-Laure Djelic, Paul Nightingale, Vincent Mangematin) at the Cass Business School, City University, London for a joint workshop meeting on "knowledge replication" in June 2005 that proved an extremely useful interchange of ideas about the transfer of knowledge via 'replication' or via 'principles'.

### **Project Working Papers (Edited by Jon Adams)**

1: *Transferring Technical Knowledge and Innovating in Europe, c.1200-c.1800* by Stephan R. Epstein

2: *A Dreadful Heritage: Interpreting Epidemic Disease at Eyam, 1666-2000* by Patrick Wallis

3: *Experimental Farming and Ricardo's Political Arithmetic of Distribution* by Mary S. Morgan

4: *Moral Facts and Scientific Fiction: 19th Century Theological Reactions to Darwinism in Germany* by Bernhard Kleeberg

5: *Interdisciplinarity "In The Making": Modelling Infectious Diseases* by Erika Mattila

6: *Market Disciplines in Victorian Britain* by Paul Johnson

These working papers are included with this report and are available for downloading by following the links from the project website:

<http://www.lse.ac.uk/collections/economicHistory/Research/facts/Default.htm>

**Research activities associated with the project by individual project members: Seminars, Conferences** (including project workshop); and **Publications** (including project working papers and those in process)

### **1) Research activities by Faculty Members:**

#### **S.R. Epstein:**

##### **Seminars/conferences:**

"Transferring technical knowledge and innovating in Europe, c.1200-c.1800".

Versions of this paper were presented at the Economic History Association (U.S.A.) Annual Conference, San Jose, 10-12 Sept. 2004; the 4th Global Economic History Network Conference, Leiden, 15-16 Sept. 2004; the Dept. of Economic History, LSE, Oct. 2004; the Conference on *Endogenous Institutional Change*, Stanford Institute for Economic Policy Research, March 4-5 2005; the *Project Workshop on How Well Do 'Facts' Travel?*, LSE, 19-20 May 2005; and the Workshop on *Replicating Knowledge Practices*, CASS (London), 14-15 June 2005.

"Premodern technology transfer: how was tacit knowledge stored and transferred?", at *Innovation, Professionalisierung und Technologietransfer im mittelalterlichen Handwerk*, University of Kiel, 21-23 October 2004.

“Knowledge sharing and technological transfer in premodern Europe, c.1200-c.1800”, at ESRC Research Seminar Series, Queen Mary and Westfield College: *Intellectual property rights, economic development and social welfare: What does history tell us?* , 29-30 November 2004.

“Technological clustering and technical transfer in Europe, 1200-1800”, at Historical and Cultural Geography Symposium on *Geographies of scientific practice*, Dept of Geography, Cambridge University, 14 January 2005.

“Cities and skill”, at *Gerry Martin international memorial colloquium*, Institute of Historical Research, 7-8 April 2005.

### **Publications:**

*Transferring Technical Knowledge and Innovating in Europe, c.1200-c.1800*, Working Paper No. 1, The Nature of Evidence: How Well Do "Facts" Travel?

“Craft guilds in the premodern economy: a discussion”, submitted to *Economic History Review*

### **W.P. Howlett**

#### **Seminar/conferences:**

“British exports in the 1950s: some institutional and geographic considerations”, Sixth European Historical Economics Society conference, Istanbul. September 2005.

“The Green Revolution and Travelling Facts”; *Workshop on How Well Do ‘Facts’ Travel?*, LSE, 19-20 May 2005

### **M.S. Morgan**

#### **Seminars/conferences:**

“Measuring Instruments in Economics and the Velocity of Money”, *History and Philosophy of Money*, Peter Wall Institute for Advanced Study, University of British Columbia, Canada, 12-14th November 2004 and versions given at Cachan/Amsterdam Research Day, Amsterdam, 10<sup>th</sup> December 2004 ; Department of Economic History Seminar, LSE, 27<sup>th</sup> January 2005; and as keynote speaker, *European Society for History of Economic Thought Annual Conference*, Stirling, Scotland, June 8-12th 05.

“Experimental Farming and Ricardo’s Political Arithmetic of Distribution”, *Project Workshop on How Well Do ‘Facts’ Travel?*, LSE, 19-20 May 2005

*Making Society, Knowing Society* Invited Commentator for Science Studies Workshop, University of California, San Diego, USA, June 2-4th 2005.

#### **Expert Advice:**

UN Development Programme, Expert advisors meeting to design assessment methods to measure the impact of UN National Development Reports, 15<sup>th</sup> December, 2004.

**Publications:**

“Experimental Farming and Ricardo’s Political Arithmetic of Distribution” (Project working paper no 3, submitted to *ISIS*).

**M-S Schulze****Seminar/conferences:**

“Convergence, globalisation and the dynamics of the international income distribution, 1950-1998: Did trade matter?” Versions of this paper presented at BETA Workshop in Quantitative Economic History, Strasbourg, May 2005; and The Berlin Colloquium – A Quantitative Economic History Workshop, Berlin, October 2004

“Catch-up failure : Structural change and productivity growth in the Habsburg Empire, 1870-1913” University of Münster, Economic History Seminar, June 2005; and at CERGE-EI, Charles University, Prague, April 2005.

“The Habsburg Economy at War, 1914-18” University Carlos III, Madrid, Economic History Seminar, May 2005.

**P.H. Wallis****Seminar/conferences:**

“A dreadful heritage: Interpreting Epidemic Disease at Eyam, 1666-2000,” *Project Workshop on How Well Do ‘Facts’ Travel?*, LSE, 19-20 May 2005

“Apprenticeship, training and guilds in pre-industrial Europe” Economic History Society Annual Meeting, April 2005.

“Association and Opposition in medicine in seventeenth century London”, at *Rethinking the Medical Marketplace in Early Modern England*, with Dr. M. Jenner, Wellcome Trust Centre for the History of Medicine, 21 Jan 2005.

“Guilds and Apprenticeship in Pre-industrial Europe: an Alternative View”, LSE Seminar on Modern Economic History, 2 Dec 2004.

“Daffy’s Elixir: proprietary medicines and problems of interpretation”, Medicinal Receipts Research Group, Institute for Historical Research, 10 Nov 2004.

“Doctoring the Plague” Centre for Metropolitan History study day on *Plague in early modern Europe*, Institute for Historical Research, 6 Oct 2004.

**Museum work:**

“Drug Trade: Therapy, pharmacy and commerce in early-modern Europe”, Museum of the History of Science, Oxford. 9 October, 2004 - 13 March, 2005. Proposed and wrote text for the exhibition. An online version is available:

<http://www.mhs.ox.ac.uk/drugtrade/index.htm> Delivered public lecture at the Museum in connection to the exhibition. ‘Quacks and Quackery’.

Public lecture and discussion on quackery designed, written and presented in association with the Science Museum, London. Held at the DANA centre on 9 March and 27 April 2005. News coverage included the *Daily Telegraph*, BBC online, *The Scotsman*, and the *Daily Mail*.

**Publications:**

'A dreadful heritage: Interpreting Epidemic Disease at Eyam, 1666-2000', *History Workshop Journal* (Project Working Paper no 2, May 2005) (Forthcoming, 2006)

Plagues, Morality and the Place of Medicine in Early Modern England, *English Historical Review* (Forthcoming, 2006)

'Disease Metaphors in New Epidemics: The UK Media Framing of The 2003 SARS Epidemic', *Social Science and Medicine*, 60/11 (2005), 2629-2639 (with B. Nerlich).

Metaphors and Biorisks The war on infectious diseases and invasive species', *Science Communication* 26/3 (2005), pp. 243-268 (with B. Nerlich & B. Larson).

**2) Research activities by funded post-docs**

**J. Adams**

**Seminars/conferences:**

"Metaphor is Not a Dirty Word" and "Two Uses for Scientific Popularisation: Reinforcing Orthodoxy, Disseminating Radical Ideas" for Project Workshop, May 2005. *Project Workshop on How Well Do 'Facts' Travel?*, LSE, 19-20 May 2005

"The Anxiety of Criticism" Knowledge and Society Seminar, Institute for Historical Research, London; Feb 2005

**Publications:**

"On the Utility of Popular Science" (submitted to *Perspectives on Science*, April 2005)

"What it Means to Have x-Number of Plots" (submitted to *Philosophy and Literature*, June 2005)

Review essay on *Heaven's Fractal Net*, by William Jackson, for *ebr.com* (Aug 2005).

**J. Demade**

**Seminars/conferences:**

"La rythmicité, structure fondamentale de l'économie médiévale", seminar on Historical Anthropology of the Medieval West, EHESS, Paris; February 2005



“L’invention d’un objet: l’histoire des prix comme histoire sérielle (France-Angleterre-Allemagne, années 1920-1930)”, *La valeur des choses*, University of Paris-1 Panthéon/Sorbonne, March 2005.

“The function of volatility on late medieval German grain markets”, Department of Economic History, May 2005

“What’s in a Price? Seriality as Facticity in the Inter-War European Research on Price History” *Project Workshop on How Well Do ‘Facts’ Travel?*, LSE, 19-20 May 2005

## **S. Valeriani**

### **Seminars/conferences:**

“Le strutture di copertura nei trattati e nei manoscritti rinascimentali”, Cuarto Congreso Nacional de Historia de la Construcción, Cadiz, Spain, January 2005

“Architecture in motion: Local and foreign knowledge between facts and words”. Project workshop, May 2005 *Project Workshop on How Well Do ‘Facts’ Travel?*, LSE, 19-20 May 2005

### **Publications:**

“Le strutture di copertura nei trattati e nei manoscritti rinascimentali” in: S. Huerta (Editor): *Actas del Cuarto Congreso Nacional de Historia de la Construcción*, Cadiz, January 2005. Instituto Juan de Herrera, Madrid 2005, vol. 2, p. 1039-1049.

“S. Cecilia in Trastevere und die Geschichte der römischen Dachwerke”, *Architectura*, 1. 2005.

*Kirchendächer in Rom. Zimmermannskunst und Kirchenbau von der Spätantike bis zur Barockzeit*, *Berliner Beiträge zur Bauforschung und Denkmalpflege III*, Imhof Verlag, Petersberg, in press.

*I Metodi dell’archeologia dell’architettura applicati allo studio delle coperture lignee di alcune basiliche a Roma*, in: *Archeologie. Scritti in onore del Prof. Tiziano Mannoni*, in press.