

Patrick K. O'Brien
London School of Economics
Email: p.o'brien@lse.ac.uk

*The Precocious Mechanization of a Global Industry: English Cotton Textile Production
from John Kay (1733) to Richard Roberts (1822)*

My concluding presentation, which substitutes for the paper offered by Jack Goldstone, is not original research but could be appropriate for the Padova conference. Global economic history cannot avoid narratives and models that attempt to explain two large facts:

- (a) that cotton textiles operated as a global industry for several centuries before the First Industrial Revolution;
- (b) that the English industry mechanised the several processes involved in the preparation, spinning, weaving and finishing of cotton fibres and cotton cloth several decades before rival industries on the mainland, and nearly a century before competitors from Asia.

I do realise that a properly specialised exercise in economic history (with aspirations to become global) would require chapters on why long-established concentrations of cotton textile production in the form of proto and domestic industries in various regions of the world economy, with potential for mechanisation, did not invent, develop and diffuse water and steam powered machinery or new chemical techniques for bleaching, dyeing and printing cotton cloth before the industry located in the North of England. Alas I have notes but nothing ready on file to offer a synthesis for a global history of cotton textiles.

Instead I propose to take you through the headings for a conversation which I have structured simply to remind you of rather familiar theories, and contextualised histories that are included in narratives designed to explain the precocious mechanisation of the English industry over a period running from the Restoration (1660s) to the demise of handloom weaving (1840s).

I will, however, make the case that narratives of this kind that now dominate histories of the Kingdom's cotton textile industry offer elaborations upon a range of 'necessary conditions' for the dramatic rise to prominence on a global scale; and that the restoration of a traditional genre of historical writing and research (namely biographies of macro inventors) is required

if “necessary” and “sufficient” conditions are to form the basis for a study that will allow historians to locate and reconfigure the ‘English case’ as a conjuncture in global economic history.

The headings for my talk at Padova are set below:

1. Cotton Textiles and Reconfigurations of the British Industrial Revolution
2. The Familiar Macro Theories of Technical Change
3. Political and Geographical Contexts for the Mechanization of Production
4. Macro Inventors and Macro Inventions
5. Biographical Narratives and Macro Inventors
6. Discovery and Agency and Necessary and Sufficient Conditions

1. Cotton Textiles and Reconfigurations of the British Industrial Revolution

2. The Familiar Macro Theories of Technical Change

2.1 Demand for technological progress

2.2 Labour saving machinery

2.3 The challenge and response model

3. Political and Geographical Contexts for the Mechanization of Production

- 3.1 Scale, scope and skill in the manufacture of textiles
- 3.2 Parliament, India and the West Indies
- 3.3 England, Ireland and Scotland

4. Macro Inventors and Macro Inventions

- 4.1 The definition of macro invention
- 4.2 Validation and significance

5. Biographical Narratives and Macro Inventors

5.1 Biography, psychology and theories of the individual

5.2 Family, social and cultural contexts

5.3 Contextualised biographies for six macro inventors

5.3.1 Social origins

5.3.2 Upbringing

5.3.3 Education

5.3.4 The conception and construction of working models

5.3.5 Networks or proto-research and development

i. for ideas

ii. for relevant skills

iii. for finance

5.3.6 Motivations

6. Discovery and Agency and Necessary and Sufficient Conditions

Questions are the cementories and patheons for inventors full of dispensable men?

If not, how can we explain the emergence of this remarkable group of men