

## Industrial Enlightenment in the West Midlands

### Industrial Enlightenment in the West Midlands: A Cultural History of Science and Technology in Birmingham and its District c. 1760-1820

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The idea that England, too, experienced an Enlightenment on a par with the cultural shifts taking place on the continent of Europe in the latter part of the eighteenth century has been slow to take root. By common consent England's vocation during this period lay elsewhere: in preparations for industrial 'take-off'. Only recently, therefore, have historians started to treat the Enlightenment and the Industrial Revolution as interlocking rather than discrete - or competing - phenomena. As a consequence research in this area has lacked depth and theoretical perspective. There exists no joined-up narrative linking the history of science and the growth of a secular-minded and information-rich consumer society in the second half of the eighteenth century. The regional texturing of this domestic English Enlightenment remains particularly poorly understood, and the same can be said of the relationship between scientific knowledge accumulation and the development and dissemination of technological 'know how'. My project is trying to re-connect that which traditional historiography has tended to compartmentalise. It brings to bear the fresh perspective of a researcher whose interests have not hitherto been framed around either the scientific and technological ramifications of the Enlightenment, or the processes of industrialization.

**The Approach** The originality of the approach that I have adopted derives in large part from the existence in Birmingham Central Library of a unique archive consisting of the papers of the Boulton & Watt steam engineering company (B & W) founded in 1774, and the personal and intellectual correspondence of its principal partners over two generations: Matthew Boulton and his son Matthew Robinson, and James Watt together with his sons James and Gregory. The papers of B & W and its successor companies are of course familiar to historians of technology, if not to historians of science; likewise the extensive personal records of Matthew Boulton. But the papers of the Watt family were acquired comparatively recently and have received little more than passing attention from investigators. Their return to Birmingham in 1994 restored the integrity of the 'archive' as it existed in 1820, that is to say at the moment of James Watt's death.

Even so, major obstacles have deterred and continue to deter researchers from taking proper stock of this archive. For a start the sheer volume of the manuscript material (approximately 250,000 letters; 1,500 engineering portfolios; hundreds of accounts and note books; diaries etc.) has acted as something of a disincentive. Researchers have found it more practicable to mine the holdings for specific purposes than to try and place the whole in a domestic context. In this way valuable studies of business organisation, of the development of the steam engine, of the production of plated and ormolu wares, and of technology transfer have been undertaken. But no one, so far, has felt it possible, or worthwhile, to try and place the archive within the cultural-historical framework of the late eighteenth and the early nineteenth centuries. Nor has it occurred to anyone to use the voluminous B & W correspondence files as a means of marking out the contours of a definable West Midlands 'community' of natural philosophers; or indeed an international 'community' of savants and technologists. This, despite the fact that Birmingham, Lichfield, Derby, Etruria, Coalbrookdale and the Black Country towns were all destined to become nodal points in a Europe-wide network of scientific sociability during the third and fourth quarters of the eighteenth century.

**The questions asked** Six research hypotheses inform the scope of my project:

- How was scientific knowledge constituted in the period c. 1760-1820?
- How did scientific knowledge dissemination take place?
- What link, if any, existed between scientific knowledge accumulation and technological activity?
- What was the relationship, if any, between Dissent (Non-Conformity) and industrial enterprise?
- How did those responsible for the generation of knowledge about the natural world respond to the opportunities and constraints of the French Revolution and Napoleon?
- How did men and women respond aesthetically to the 'machine', and to visible evidence of accelerating knowledge production?