

SHAPERS OF THE WEST MIDLANDS ENLIGHTENMENT

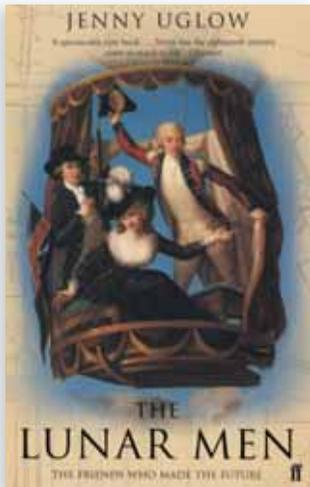
Philip Carter

What can biography tell us about the West Midlands Enlightenment? The stories of its principal figures, including Boulton, Watt and Wedgwood, are regularly told. Those of the people with whom they worked and socialised, their associates and collaborators, are less familiar, but offer a fascinating insight into the values and aspirations of the age.



'Am I Not a Man and a Brother?'.
Anti-slavery medallion by Josiah Wedgwood.

Image courtesy of The Wedgwood Museum



Courtesy Faber and Faber

The Lunar Men by Jenny Uglow.

The Birmingham historian, William Hutton (1723-1815), when recalling his first impressions of the city as a young man in the 1740s, commented: 'I was surprised at the place, but more by the people. They were a species I had never seen; they possessed a vivacity I had never beheld: I had been among dreamers, but now I saw men awake.'

The West Midlands: Heartland of an English Enlightenment

The *Oxford Dictionary of National Biography* includes the life stories not only of the 'giants' of late eighteenth-century science and manufacturing, the manufacturer Matthew Boulton (1728-1809) (see article by Rita McLean), the Scottish engineer James Watt (1736-1819), master potter Josiah Wedgwood (1730-1795) and Erasmus Darwin (1731-1802) (see article by Alison Wallis), but of a further two hundred contemporary West Midlanders, who pursued similar goals. These people define the region as the heartland of an English Enlightenment characterised by energy and the practical application of knowledge.

What was The Enlightenment?

In their different ways Boulton, Watt, Wedgwood and Darwin, as well as lesser-known figures like Maria Jacson (1755-1829), Katherine Plymley (1758-1829), John Barber (1734-1793) and Richard Lovett (1692-1780), who shared a passion for gathering, testing, using and communicating knowledge were exemplars of the 'Enlightenment' - the eighteenth-century intellectual and cultural movement by which 'early modern' belief systems were challenged by a 'modern' commitment to reason and progress.

To have described them in this way would have seemed odd to earlier generations. It was, until recently, common to doubt the existence of an English let alone a West Midlands Enlightenment, but the articles in this magazine suggest otherwise.

'Now I Saw Men Awake'

The Birmingham historian, William Hutton (1723-1815), when recalling his first impressions of the city as a young man in the 1740s, commented: 'I was surprised at the place, but more by the people. They were a species I had never seen; they possessed a vivacity I had never beheld: I had been among dreamers, but now I saw men awake.'

Few were more awake, and ready to apply enlightened opportunities, than members of the Lunar Society. As befits the West Midlands Enlightenment, the society's origins from the 1760s were primarily pragmatic: a small circle of natural philosophers, physicians and manufacturers exchanging knowledge and ideas in the pursuit of social and personal progress.

Over the next four decades the society's members, who never numbered more than fourteen, were responsible for pioneering work in

chemistry, physics, engineering and medicine; for the application of these advances in manufacturing and commerce; and for publicising new standards of social and political behaviour, notably in their opposition to the slave trade. The society's dynamism makes it an excellent case study of the aims and outcomes of the West Midlands Enlightenment.

The range of people of the West Midlands Enlightenment extends beyond the hierarchies of formal scientific enquiry, embodied by Darwin or the chemist and dissenter Joseph Priestley, to include influential amateurs and popular educators such as Richard Lovett or Katherine Plymley. Within the *Oxford DNB*, we can identify biographies of over 125 men and women remembered for their contributions to medicine, science and technology who were one-time residents of Derbyshire, Herefordshire, Shropshire, Staffordshire, Warwickshire or Worcestershire between the 1760s and 1820s. A search for those engaged in engineering and manufacturing locates a further 100 individuals active in these counties, while searches by town reveal ten Derby physicians and natural philosophers or thirty engineers and manufacturers in late eighteenth-century Birmingham.

The Importance of Networks

By comparing these life stories it is possible to identify some of the themes that characterised the West Midlands Enlightenment, as shaped by its participants 'on the ground'. From the biographies of one-time Birmingham residents, for example, we can discern the city's evident attraction to would-be scientific and manufacturing innovators.

Most celebrated of these arrivals was James Watt who moved from Glasgow to Birmingham and a business partnership with Matthew Boulton, in 1774. But there were others. They include the physician, William Small, who had previously studied at Aberdeen and lectured in Williamsburg, Virginia. He came to Birmingham in 1766 following a meeting with Boulton arranged by their mutual friend, Benjamin Franklin, himself an influential figure of the Enlightenment. In turn it was Small's Scottish connections that led to Boulton's introduction to Watt several years later.



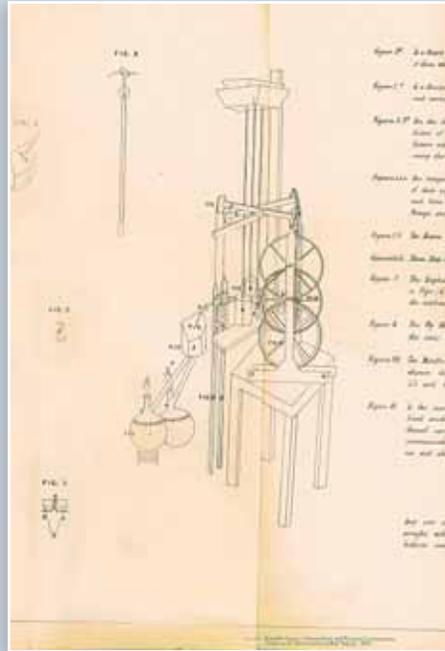
Richard Lovett, British physicist.
Engraving by R. Hancock.

Richard Lovett

In about 1750 Worcester's Richard Lovett obtained his first 'friction machine', and began a life-long study of the characteristics and possibilities of electricity. Though he was employed as a cathedral lay clerk, Lovett's scientific research focused on the medical effects of what he called 'electrical fluid'. This, he claimed, could cure ailments such as colds and sore throats. Some rubbished his contentions as showmanship. But Lovett, like his more celebrated counterparts Darwin and Benjamin Franklin, was simply edging towards a better understanding of a 'new' phenomenon, electricity, for which adequate descriptive concepts and vocabulary were lacking. Lovett's greater achievement was as a promoter of scientific research. His 1766 *Philosophical essays ... into the properties ... of the electrical fluid* brought the work of Benjamin Franklin to a new audience, while the *Electrical Philosopher* (1774) took the form of an accessible dialogue to better convey this novel subject to local readers.

Katherine Plymley

The Shropshire naturalist Katherine Plymley was born into a learned and well-connected family who counted the Wedgwoods and Darwins as friends. Her legacy is a written archive (in the Shropshire Archives in Shrewsbury) of 210 notebooks in which she traced her and her sister Ann's self-education and their work as governesses. In Katherine's words, the sisters dedicated themselves 'to endeavour to increase our own knowledge' so that 'we may be more capable of informing' others.

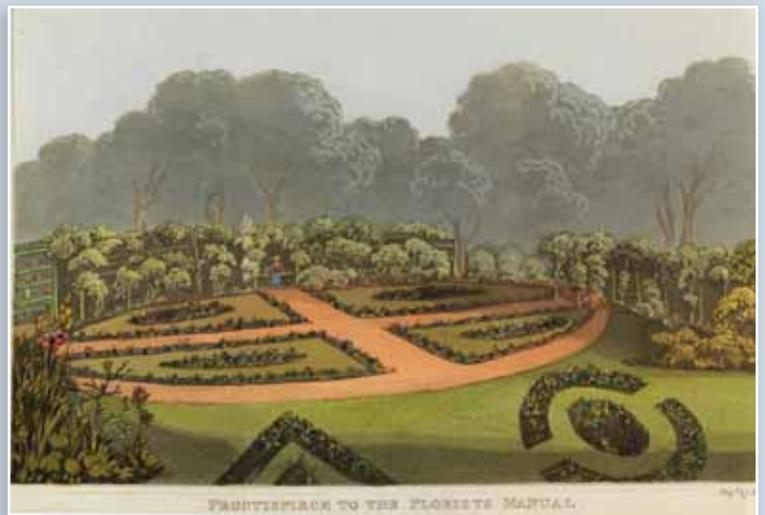


A section of John Barber's 1791 gas turbine patent.

in benefiting mankind'. He was also something of a visionary, for his experiments on the combustion of coal gas and motion paved the way for the development, nearly 150 years later, of the modern jet engine.

John Barber

In the same decade as Lovett's *Electrical Philosopher*, the Derbyshire coalmaster John Barber was engaged, like James Watt, with improving the output of the Newcomen steam engine. Barber was a model of that eighteenth-century archetype, the applied scientist, who through wide-ranging interests and inventions sought to improve early industrial processes. In 1793 Barber's obituary recalled 'a man of universal knowledge ... a sound philosopher, an eminent mineralogist, and a good mechanic who expended an ample fortune



Frontispiece of Maria Jacson's *Florist's Manual*.

Maria Jacson

Maria Jacson was born in Cheshire and later resident at Somersal Herbert, Derbyshire. Like the Plymley sisters, she had links to the circle of Erasmus Darwin, who praised her skill as a botanist and botanical artist. In her forties Jacson's fortunes changed and she was required to write for a living. In a series of books she combined research on plant propagation, Linnaean classification and the techniques of dissection, with practical guides to cultivation and garden design. Her principal readers were women and children, typically excluded from eighteenth-century scientific writing, and her aim was to engage: 'to induce even a few of my sister Florists to exercise their intellect, or relieve their ennui' through 'the study of vegetable existence'.

Another Scot drawn to Birmingham was the chemist and industrialist James Keir. Having met Darwin in his native Edinburgh, where both were students, Keir was lured to the West Midlands by the opportunity for companionship and new business ventures across the wider region. He was followed, in 1777, by the engineer William Murdoch who left his father's Ayrshire mill to join the Soho works, on the recommendation of his fellow Scot, James Boswell, where he became Boulton and Watt's principal pattern maker and an assistant engine builder.

Others travelled shorter distances. The Shropshire-born physician William Withering arrived, at Darwin's invitation, in 1775 following a decade's medical practice in Stafford. Withering's move came thirty years after that of the historian, William Hutton, who had previously worked as a Nottingham stocking-maker. Hutton's first impressions capture the optimism that must have influenced Keir, Murdoch, Withering and others. As he wrote in his *History of Birmingham* (1782): 'I had seen faces elsewhere tinctured with an idle gloom void of meaning, but here, with a pleasing alertness. Their appearance was strongly marked with the modes of civil life ... I was treated with an easy freedom by all.'

To those who came later these attractions were enhanced by the networks around the Lunar Society. But reading a wider range of West Midlands lives also highlights alternative forms of social interaction and knowledge exchange. For the Plymley sisters in Shropshire, or the Derbyshire Jacsons, for example, connections were fostered through literary and correspondence networks, in which as ever Erasmus Darwin loomed large. For others, social ties were born of proximity. In 1752 the physician John Ash moved from Coventry to Temple Row, Birmingham, where he practised medicine and became a leading advocate for a new infirmary. Though not a Lunar man, Ash developed close links with the circle following William Small's arrival in 1766 and Small's decision to share consulting rooms with Ash, with whom he also campaigned for the city hospital. In 1775, following Small's early death, Withering took up the share of Ash's Temple Row rooms, and likewise established a firm friendship with the older physician. It was a relationship that brought professional as well as personal benefits. Now best known for describing the effects of foxglove, *Digitalis purpurea*, in heart disease, Withering was first introduced to the medical potential of the plant by John Ash.

Disputes

Withering's study of digitalis also points to another aspect of the West Midlands Enlightenment. For all the talk of intellectual collaboration, and the undoubted strength of networks forged, a biographical perspective reminds us that these individuals were also ambitious, competitive and touchy. Though capable of firm friendships, Withering for one was not given to social niceties. It was this that drew him into a series of disputes with fellow-thinkers, most

notably Erasmus Darwin, on the matter of who had first introduced digitalis into medical practice.

Lichfield was the location for another contest, this time between the poet Anna Seward and the maverick Lunar man Thomas Day over his plan to cultivate his ideal wife by educating an orphan girl (see article by Kate Iles). Day is best known for this unusual episode, but his contribution to the Enlightenment was not always so unorthodox.

He co-wrote *The Dying Negro* (1773), one of the earliest tracts to condemn the injustices of African slavery, which at the time was a notably bold and progressive stance to adopt.

The Application of Knowledge

That many of Day's associates also supported abolitionism offers two final insights into the character of the West Midlands Enlightenment. First, is the interchange of enlightened principles and practices: the application of knowledge for tangible outcomes, and the use of these outcomes to promote Enlightenment ideals further. Among the latter, the most celebrated remains Wedgwood's manufacture of medallions, bearing the figure of a chained man and the legend 'Am I not a Man and a Brother?', in support of anti-slavery. But biographies in the *Oxford DNB* also highlight other instances whereby Enlightenment methods served more prosaic, but far-reaching, notions of social improvement: the 'polite' tea ware of the Derby ceramicist William Duesbury (1725–1786), for example; or James Keir's application of chemistry for the mass production of soap at his 20-acre site at Tipton, near Dudley, second only to Soho in scale.

Keir also embodies a second characteristic of those who shaped the West Midlands Enlightenment, namely, their breath-taking range of interests and activities. Prominent figures like Darwin and Priestley have long enjoyed reputations as polymaths. But as a biographical approach shows, this quest for knowledge, pursued across multiple disciplines, was the norm in almost any life we choose to explore. ●

Dr Philip Carter is Publication Editor of the *Oxford Dictionary of National Biography*.

Further Reading

Roy Porter, *Enlightenment. Britain and the Creation of the Modern World* (Penguin, 2001).

Jenny Uglow, *The Lunar Men: The Friends who made the Future* (Faber, 2002).

Oxford Dictionary of National Biography

The *Oxford Dictionary of National Biography* is a collection of essays on more than 58,500 noteworthy figures who shaped British history. It is available online at <http://www.oxforddnb.com>. If you are a public library member you can access it freely at home using your library ticket. Go to <http://www.oxforddnb.com> and follow Library Card Login.

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