

Ironmaking in Jamaica – towards a critique of Dr Jenny Bulstrode’s paper ‘Black metallurgists and the making of the industrial revolution’ with regard to the technology.

In a paper published in the journal ‘History and Technology’¹ Dr Jenny Bulstrode refutes the established view that it was Henry Cort (c1741 – 1800) who found a means of producing malleable iron from cast or pig iron by the use of raw coal and of rolling it into wrought iron. Bulstrode’s alternative to Cort proposes that these processes were ‘stolen’ from ‘Black metallurgists’ working in an ironmaking plant at Morant Bay in Jamaica and imported into Britain where they were patented by Cort.²

In the early eighteenth century the use of coke instead of charcoal as a fuel was successfully applied in blast furnaces to make pig or cast iron. This stimulated a similar search which could be applied to the secondary process whereby the brittle nature of cast iron could be made malleable. Progress was empirical but haphazard, making it difficult to unravel progress today. For instance there were a number of locations involved, working under a variety of ironmasters, who themselves were often dependant on the techniques of individual forgemen.³ Another shortcoming arose from Cort’s early death in 1800 which left a number of issues unresolved. The vacuum left by this led to his patents being challenged.

The questions raised by such issues were an invitation for critical analysis of Cort’s claim to having found a means of using raw coal to make malleable iron. Whilst not specifically questioning the issues raised, Jenny Bulstrode presents her case in favour of the ‘Black metallurgists’ partly based on their imported African skills.

Whilst to some extent Bulstrode’s arguments have substance they are in general challenged here in favour of malleable iron having evolved through the search to find an alternative to charcoal: As the eighteenth century progressed this need became more pressing as land enclosure inspired an agrarian revolution to feed the swelling industrial towns.

¹ Jenny Bulstrode (2023) Black metallurgists and the making of the industrial revolution, History and Technology, 39:1, 1-41, DOI: 10.1080/07341512.2023.2220991

² Manufacture of Iron , A.D. 1784. No. 1420 . Preparing , Welding , and Working Iron , A.D. 1783. No. 1351 .

³ Richard Hayman, The Shropshire wrought-iron industry c1600-1900: a study of technological change. University of Birmingham. Ph.D.(2004) see Chapter 4 pp. 86 - 116

It is not surprising that the finding of a solution should chime with the outbreak of the French Wars with the result that British patriotic fervour came to regard Cort as an industrial hero by freeing up land for agriculture at a time of blockade rather than being devoted to coppicing to supply charcoal. Although such hero worship of Cort was retrospective his stature was, by the mid-nineteenth century, seen as a contributing factor to British industrial success and celebrated by the Great Exhibition of 1851.

To a large extent this had grown as a result of the 'railway mania' which by the 1840s was in full swing as the wrought-iron rail spread British influence both at home and abroad. It is therefore not surprising that Samuel Smiles placed Cort in his pantheon of British industrial heroes.⁴

To him [Cort] we mainly owe the abundance of wrought-iron for machinery, for steam-engines, and for railways, at one-third the price we were previously accustomed to pay to the foreigner. We have by his invention, not only ceased to be dependent upon other nations for our supply of iron for tools, implements, and arms, but we have become the greatest exporters of iron, producing more than all other European countries combined.

Following Henry Bessemer's success in developing an inexpensive process for the mass-production of malleable iron in 1856 there was an ebb in the demand for wrought iron produced by the Cort process. In spite of this *The Times Newspaper* of July 1856 named Henry Cort as the 'Father of the British Iron Trade' in its aim to maintain Cort's prominence in accord with Disraeli's view of Britain being the 'Workshop of the World' and a matter of British hegemony.

In today's political climate such British hubris has led to demands for redress: it is thus that Cort has become an ideal target to be unseated from Smiles's pantheon in favour of the Black metallurgists. One therefore suspects that the motive for this is one of re-attribution of intellectual property. In this one must question where there is innovation or where there is use.⁵ Put alternatively should one accept Cort's patents

⁴ Samuel Smiles, *Industrial Biography: Ironworkers and Toolmakers*, 1863 (Chapter VI Henry Cort)

⁵ Bulstrode 2024. David Edgerton, *The Shock of the Old: Technology and Global History Since 1900*. (London, 2006).

as one of intention or one of achievement. This of course opens the possibility of a retrospective registration of patents based on a purloined Jamaican process – the point made by Jenny Bulstrode. If so then Bulstrode has a justification for her paper that places Black metallurgists as being the innovator of a process that was practised.

The questions that Bulstrode raises have resulted in much debate resulting in over 38000 on-line requests to view her paper. Such interest requires objective non-partisan examination of the period technology removed from bias to arrive at a scholarly consensus – this is the purpose of research now in preparation .

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