

MATTHEW BOULTON AND FRANCIS EGINTON'S MECHANICAL
PAINTINGS: PRODUCTION AND CONSUMPTION 1777 TO 1781

by

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ABSTRACT

The mechanical paintings of Matthew Boulton and Francis Eginton have been the subject of few scholarly publications since their invention in the 1770s. Such interest as there has been has focussed on the unknown process, and the lack of scientific material analysis has resulted in several confusing theories of production. This thesis's use of the Archives of Soho, containing Boulton's business papers, has cast light on the production and consumption of mechanical paintings, while collaboration with the British Museum, and their new scientific evidence, have both supported and challenged the archival evidence. This thesis seeks to prove various propositions about authenticity, the role of class and taste in the selection of artists and subjects for mechanical painting reproduction, and the role played by the reproductive process's ingenuity in marketing the finished product.

Mechanical paintings were symptomatic of wider eighteenth-century concerns – imitation leading to invention, the transfusion of existing technologies, and the role of cultural goods in marking distinction and social class. This thesis's study of these discourses has shed a light on the development of mechanical paintings, but equally, Boulton and Eginton's reproduction of oil pictures has provided new insights into the role of ingenuity and taste-formation in eighteenth-century Britain.

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LIST OF ABBREVIATIONS

B & F	Boulton and Fothergill
BA&H	Birmingham Archives and Heritage, Central Library, Birmingham
BM	British Museum, London
BMAG	Birmingham Museums and Art Gallery
MB	Matthew Boulton
MPWB	Matthew Piers Watt Boulton, Matthew Boulton's grandson
RA	Royal Academy of Arts

INTRODUCTION

Mechanical paintings were the first sustained attempt to reproduce the look and feel of oil paintings, and, although comments on their quality varied, at best they were said to be indistinguishable from oil paintings.¹ Since the process of their production has remained a secret there are many confusing theories, including one that it was a form of early photography.² The process was invented and applied commercially by Matthew Boulton (1728-1809), the Birmingham industrialist and entrepreneur, and his multi-talented employee, Francis Eginton (1737-1805). Eginton was the chief designer and modeller for metalware, and had been in partnership with Boulton and Fothergill from at least 1776 to 1778, managing the ‘Silver, Plated and Ormolu Goods’ department which included japanned ware and mechanical paintings.³ In 1778 Eginton formed another partnership with Boulton and Fothergill for the production of mechanical paintings and japanned ware alone, which was terminated in 1780.⁴ Although the manufacture was unprofitable and short-lived, mechanical paintings have fascinated scholars interested in print-making or Boulton’s activities, not least because the process has yet to be precisely understood. The exhibition *Matthew Boulton: Selling what all the World desires*, 2009, described mechanical paintings as ‘one of the most intriguing’ products of the Soho Manufactory.⁵ Discovery of the manufacturing method has been complicated by the existence of a later process, polygraphic art, from about 1784, which Joseph Booth claimed to have invented.⁶ The

¹ Antony Griffiths noted a 1630s precursor to mechanical paintings of a Dutch landscape being transferred from copper plate to canvas in Appendix A below. William T Whitley, *Artists and their Friends 1700-1799*, Vols I and II, London and Boston, 1928, 28. A correspondent of the Art Union writing in 1840 said that Eginton’s reproductions of pictures were so good that he could not distinguish them from the originals, 28

² Charlotte Crawley, ‘Thomas Phillips’, *Grove Art Online*, Oxford University Press, www.groveart.com, accessed 11 October 2009. Francis Eginton was an ‘early pioneer in reproduction by a photographic method’.

³ Kenneth Quickenden, ‘Boulton and Fothergill’s silversmiths’, *The Silver Society Journal*, 7, 1995, 343.

⁴ *Ibid.*, 352. Eginton’s partnership was with Boulton and Fothergill, although in practice Fothergill played a minor role to Boulton in mechanical paintings.

⁵ Shena Mason (ed.), *Matthew Boulton: Selling what all the world desires*, exhibition catalogue, Birmingham Museum and Art Gallery, 30 May to 27 September, New Haven and London, 2009, 220. Boulton’s Soho Manufactory was near Birmingham.

⁶ Joseph Booth, *A Catalogue of Pictures, Copied for Sale by a Chymical and Mechanical Process, The Invention of Mr Joseph Booth; Exhibited with the Originals from which they have been taken, by the Polygraphic Society, At their Rooms in the Strand, opposite Beaufort Buildings, Being their Fifth Exhibition: Opened in November, 1790*, London, 3. Booth claimed that ‘the Secret or Art of copying Pictures in Oil Colours, by Means of a Chymical and Mechanical Process, so as to produce the exact

mechanical paintings and polygraphic copies have the finish of oil paintings and Ralph Edwards quoted the art historian and first director of the Courtauld Institute, W G Constable, as observing that such reproductions ‘added a new terror to life’ in distinguishing the copies from the originals.⁷ Yet, Boulton was marketing the ingenuity and novelty of the process to his eighteenth-century clientele; there was no intention to pass off the copies as original oil paintings. This thesis aims to uncover how improved understanding of the process and of the eighteenth-century appeal of mechanical paintings can benefit wider comprehension of artistic processes, taste and consumption of the period.

The discussion of mechanical paintings starts with the confusion of mechanical painting with early photography which arose from the ‘Sun Pictures’, a set of prints together with two silvered plates, which had been discovered at Soho in 1862 and acquired by the Museum of Patents at South Kensington (later transferred to the Science Museum). The Photographic Society, at its Ordinary General Meeting in London, 2 June 1863, discussed the paper prints and plates and thought they might prove that photography was invented many years earlier at Soho, Birmingham in the 1770s, before Joseph Niepce (1826), Louis Daguerre (1839) and William Fox Talbot (1840).⁸ M P W Boulton did much to dispel the myth of early photography in his ‘Remarks’ of 1865, but even he was puzzled by all the different speculations as to what the paper prints were and how they were produced.⁹ It was George Wallis who, in 1866, made plausible explanations for the name ‘Sun Pictures’ and pronounced the paper prints to be early experiments in making transfers for mechanical paintings.¹⁰ Wallis argued convincingly that the impressions on paper were made from aquatint plates and were produced as a mechanical means of transferring the image or ‘dead-colour’ to canvas, after which the dead-colour would be finished in oils. However, Wallis had never seen a finished mechanical painting and doubted that any such

Drawing, Colouring, and other Merits of the Original, was, after many years Labour and Expence, discovered by Mr Joseph Booth, Portrait Painter’.

⁷ Ralph Edwards, ‘Polygraphic Reproductions’, *The Burlington Magazine*, vol 113, No. 816, March 1971, 158

⁸ *The Photographic Journal*, No. 134, 15 June 1863, 291. *The Photographic Journal*, No. 139, 16 November 1863, 386

⁹ Matthew Piers Watt Boulton, *Remarks concerning certain pictures supposed to be Photographs of early date*, London, 1865

¹⁰ George Wallis, ‘The Ghost of an Art Process practised at Soho near Birmingham about 1777-1780 erroneously supposed to have been photography’, *The Art Journal*, 1 August 1866, 252

paintings had survived as he thought the durability of the oil painting over the layer of ‘dead colour’ containing gum and honey was in doubt.¹¹ Thus Wallis only speculated on the first half of the mechanical painting process, that of making a transfer print from an aquatint plate.

William Costen Aitken, in his monograph on Francis Eginton published in 1871, identified the first examples of finished mechanical paintings when he examined three copies of Philippe Jacques de Loutherbourg’s *Summer* (two copies) and *Winter* (one copy) in 1870.¹² Joshua Williams then donated three similar copies to the Birmingham Museums and Art Gallery (BMAG) in 1885.¹³ This led me to infer that the BMAG copies are the same pictures that Aitken examined. A correction at the end of the monograph stated that ‘the print of *Summer* in the possession of the Misses Eginton [grand-daughters of Francis] differs very materially from the two copies of *Summer* examined by the writer’ which removed what would have been a convincing link to Eginton.¹⁴ Aitken thought the process consisted of impressions from copper plates, printed in colour from more than one plate, and touched up here and there with oil colour, by hand.¹⁵ He quoted from MPW Boulton’s ‘Remarks’ but Aitken’s interpretation of the process will be challenged in chapter one of this thesis which argues in favour of a single plate process and total coverage of the canvas in oil paint.

William Whitley’s detailed account of ‘Artists and their Friends in England 1700-1799’, published in 1928, refers to Joseph Booth and the formation of the Polygraphic Society which exhibited reproductions of oil paintings from 1784.¹⁶ Although Whitley’s main focus was on Booth, who was encouraged by Sir Joshua Reynolds and Benjamin West, he also mentioned ‘Francis Eginton of Birmingham’ in saying that nothing appeared to be known of either process. In a similar vein, H G Clarke, updating an address he made to the London Master Printers’ Alliance in 1926 that reviewed early colour printing processes, also mentioned Joseph Booth and the

¹¹ George Wallis, ‘The Ghost of an Art Process practised at Soho near Birmingham about 1777-1780 erroneously supposed to have been photography’, *The Art Journal*, 1 September 1866, 271

¹² William Costen Aitken, *Francis Eginton: A Monograph*, Birmingham, 1871, 6-8

¹³ Tessa Sidey, personal communication regarding Accession Book 1885, BMAG, 3 July 2009

¹⁴ Aitken, *Francis Eginton*, 15

¹⁵ Aitken, *Francis Eginton*, 8

¹⁶ William T Whitley, *Artists and their friends in England 1700-1799*, vol II, London and Boston, 1928, 25-29

Polygraphic Society. Clarke credited the invention to Booth who wrote between 1784 and 1788 claiming ‘the experience of twelve years’ of improving the polygraphic process, thus predating Eginton to whom Clarke assigned the role of production.¹⁷ Booth’s earlier invention, called Pollaplasiasmos, was not, he claimed, the product of the engraver’s or printer’s art, thus distinguishing his invention from Eginton’s. However, the later ‘Polygraphic Art’ is described as a ‘Chymical and Mechanical Process’.¹⁸ Clarke asserted that there was evidence (not referenced and not substantiated elsewhere) that Boulton was one of the principal members of the Polygraphic Society. Clarke speculated on a different and overly complicated process where a painting, made with chemically prepared paints, was used to transfer the design to copper plates, ‘as many possibly as three transfers could be made - which would give three key plates’.¹⁹ Thus it was the design onto the copper plates that was reproduced by the chemical process. The plates were then etched by means of an aquatint process and printed onto paper using stump brushes ‘in all their constituent colours’.²⁰ The effect of an oil painting on canvas was secured by the means of varnish and impressing the paper with the grain of canvas. Why three plates were required when the printing process using stump brushes suggested the printing of several colours from a single plate (rather than the method preferred by the French which used multiple, aligned plates, one for each colour) was not stated.²¹

An article in *The Sphere*, in 1934, showed that the reproduction process continued to haunt the experts, as Professor A P Laurie, prompted by a recent court case, declared that copies in colour of oil pictures, supposedly invented by Francis Eginton, were produced by a silk screen process.²² The mention of a court case raised questions of authenticity and copyright for my study which are discussed in chapter two. However, Laurie also conflated mechanical paintings and polygraphic copies by claiming, like

¹⁷ H G, Clarke, ‘Early Colour: Picture Printing Process to the time of Baxter’, *Printing Review*, vol III, 1933-34, 132, 133.

¹⁸ Clarke, ‘Early Colour’, 132

¹⁹ Clarke, ‘Early Colour’, 133

²⁰ Using a single plate and applying the colours simultaneously with a printer’s dolly, stump or *à la poupée*, the process is also known as *la manière anglaise* indicating the reputation and expertise of the English practitioners.

²¹ Susan Lambert, *The Image Multiplied: Five centuries of printed reproductions of paintings and drawings*, London, 1987, 88

²² A P Laurie, ‘An Astonishing Revelation in the Art World: How Oil Paintings can be Copied in Oil Paint by a Silk Screen Process used in the Eighteenth Century and Still Employed To-day’, *The Sphere*, 10 March 1934, 354

Clarke, that the reproductions were sold by the Polygraphic Society but made at Soho, Boulton's manufactory in Birmingham.

The main research on mechanical paintings published after Wallis' work was by Eric Robinson and Keith R Thompson in 1970, who drew extensively on Boulton's personal papers deposited in the Assay Office Library in Birmingham and now held at Birmingham Archives and Heritage (BA&H).²³ Robinson and Thompson extended Wallis' theories about the process, using the archival evidence to suggest how the paper transfer was applied to canvas. They tried to locate some finished mechanical paintings, including the BMAG examples, another copy of de Louthembourg's *Summer* at the National Portrait Gallery, and some Kauffman style paintings in Culzean Castle, Scotland, and they described others no longer in existence. They were also interested in why there was a market for the mechanical paintings but they do not develop the argument as I have in chapter three, particularly in the role of ingenuity in marketing luxury goods, and the effect of the lack of a London showroom.

More recently Susan Lambert's standard work on printed reproductions made a brief mention of Boulton and Eginton's mechanical paintings and footnoted a forthcoming article by Antony Griffiths (Keeper of Prints and Drawings at the British Museum) clarifying the process.²⁴ Antony Griffiths had given a paper to the Symposium on *The Image Multiplied*, on 16 February 1988, but he did not want to publish without further research.²⁵ My subsequent meeting with Antony Griffiths, and successful collaboration with the British Museum (BM) carrying out scientific tests, is detailed in this Introduction's discussion of methodology, below. Thus, the understanding of the mechanical painting process had reached an impasse, there were conflicting theories and a lack of scientific evidence. Robinson and Thompson were the only authors to examine the images' marketing and consumption and there was no exploration of eighteenth-century attitudes to reproduction and taste regarding mechanical paintings.

²³ Eric Robinson and Keith R Thompson, 'Matthew Boulton's Mechanical Paintings', *The Burlington Magazine*, vol 112, No 809, August 1970, 497

²⁴ Susan Lambert, *The Image Multiplied: Five centuries of printed reproductions of paintings and drawings*, London, 1987, 98, 212

²⁵ Antony Griffiths, *The Mechanical Paintings of Boulton and Eginton*, unpublished paper, The Image Multiplied Symposium, 16 February 1988, British Museum, London

Apart from the directly relevant writings, secondary source material has been used in this thesis to locate the mechanical painting enterprise within the context of the eighteenth-century Industrial Enlightenment and artistic processes. Professor Peter Jones argued for the recognition of an ‘Industrial Enlightenment’ which provided the link between natural philosophy (science) and technical application in his book published in 2008.²⁶ This discourse reunited natural philosophy with the arts (a modern binary opposition) and positioned the Industrial Enlightenment as a bridge between natural philosophy and the knowledge economy of the Enlightenment.²⁷ The industrial tourism and fascination with natural philosophy and technical innovation linked directly to Boulton’s Soho manufactory and to mechanical paintings as one of the many new processes which excited its visitors.²⁸ Maxine Berg’s article ‘From Imitation to Invention: Creating Commodities in Eighteenth Century Britain’ examined the adaptation and transference of existing technologies and products in her economic analysis of luxury goods which was relevant to the use of diverse processes from different trades and industries that were harnessed to produce mechanical paintings.²⁹ Berg’s arguments, proposing a link between imitation and invention, are examined in chapter one in relation to the mechanical painting process. Eric Robinson’s economic analysis of Boulton’s marketing techniques in his article ‘Eighteenth-Century Commerce and Fashion’ will be compared and contrasted in chapter three with Neil McKendrick’s findings on Josiah Wedgwood, Boulton’s friend and sometime business rival, in his book *The Birth of a Consumer Society*, to show how mechanical paintings were promoted in the growing market for luxury goods in eighteenth-century commerce and fashion.³⁰

Theories about the effects of reproduction and the use of art as a marker of distinction have proved relevant to this thesis’s study of the artistic process of mechanical painting. Walter Benjamin’s seminal essay ‘The work of art in an age of mechanical

²⁶ Peter M Jones, *Industrial Enlightenment*, Manchester, 2008, 10

²⁷ Jones, *Industrial Enlightenment*, 2

²⁸ Marc de Bombelles, ed. Jacques Gury, *Journal de voyage en Grande Bretagne et en Irlande 1784*, Oxford, 1989, 99-100, see chapter 3.

²⁹ Maxine Berg, ‘From Imitation to Invention: Creating commodities in Eighteenth Century Britain’, *The Economic History Review*, New Series, Vol 55, No. 1, February 2002, 1

³⁰ Eric Robinson, ‘Eighteenth-Century Commerce and Fashion: Matthew Boulton’s Marketing Techniques’, *The Economic History Review*, New Series, Vol 16, No. 1 (1963) 39-60. Neil McKendrick, John Brewer and John Harold Plumb, ‘Josiah Wedgwood and the Commercialisation of the Potteries’, *The Birth of a Consumer Society*, London, 1983, 100-145

reproduction' provided a theoretical approach which could be applied transhistorically and used to question the effect of reproduction on the original work and the value placed on it by the artist, reproducer and consumer in the late eighteenth century.³¹ Pierre Bourdieu's *Distinction: A Social Critique of the Judgement of Taste*, a sociological analysis of taste as cultural, social and economic capital, helped me formulate the argument that Boulton, his taste-makers and the consumers of his luxury goods used imitation and ingenuity to both align with and distinguish themselves from the inherited wealth of the gentry and nobility, discussed in chapters two and three.³²

This thesis's research problems and approaches, leading out of current scholarship and the gaps in it, fall into two broad areas. One problem is to try to establish the actual process of mechanical painting from the confusing historiography and to determine how the process developed from existing technologies (as in Berg's theories about imitation and adaptation). The second is to expand knowledge of how the mechanical paintings were marketed, to determine the extent to which they were seen as markers of taste and how they might have conveyed social distinction, in a Bourdieuan sense, in the context of eighteenth-century Enlightenment society's love of ingenuity. Therefore, it seemed an appropriate course to take a social art historical approach as is indicated by the thesis title, 'Boulton and Eginton's Mechanical Paintings: Production and Consumption 1777-1781'. However, a third area of research is included to inform the later arguments on marketing and consumption. This is an entirely new addition to the historiography in which I analyse the choice of artist and subject matter against contemporary artistic practises and views about reproduction using Benjamin's stimulating theories about democratisation and the 'aura' of the original and to look at the role of fashion and taste.

In terms of the scope of the thesis, it seemed necessary to exclude Joseph Booth's later polygraphic process in order to focus the analysis on Boulton and Eginton's mechanical painting enterprise. However, this was not entirely successful in view of

³¹ Walter Benjamin, 'The Work of Art in the Age of Mechanical Production' (1936), eds Francis Francina and Charles Harrison, *Modern Art and Modernism: A Critical Anthology*, London, 1982, 217-220

³² Pierre Bourdieu, *Distinction: A Social Critique of the Judgement of Taste*, trans. Richard Nice, New York and London, 2007

the emerging scientific evidence discussed in chapter one. A concentrated search for more examples of mechanical paintings was also excluded from the scope of this study due to lack of resources, although Shugborough Hall, Stafford and Newby Hall, Ripon, North Yorkshire were visited for their connections to Boulton.³³

Addressing the aforementioned research problems within the scope of this thesis required different methodologies to be used to fill in the gaps in the historiography. The main methodologies employed were archival research and scientific analysis, augmented by synthesis of existing scholarly approaches and their applications to the study of mechanical paintings. The extensive collection of Boulton and Watt's incoming and outgoing business and domestic correspondence provided a rich source of archival material. The letters and documents previously stored in the Assay Office Library, Birmingham have now been added to, reorganised and housed in Birmingham Archives and Heritage, and entitled the Archives of Soho, after Boulton's manufactory of the same name. With over 40,000 items, some on microfilm, the majority on paper, indexed but with few transcriptions, it was clear that these primary sources were a rich deposit in which to uncover new material. The archival evidence was used to inform my study of both the production and consumption of mechanical paintings. For analysis of the choice of artists and subjects used in mechanical paintings, the methodology included visual analysis of the pictures themselves to determine their role in marking social distinction.

The aforementioned BM/BMAG collaboration arose from a meeting with Antony Griffiths, Keeper of Prints and Drawings, David Saunders, Keeper of Conservation and Scientific Research at the BM, Val Loggie, a collaborative PhD student researching the works on paper of Matthew Boulton and the Soho Manufactory, and myself. The BM has two pictures thought to be mechanical paintings, again copies of de Louthembourg's *Summer* and *Winter*. It also owns a set of eight aquatint prints, signed by Francis Eginton c1775, with a manuscript dedication to Miss EV Fothergill (whom Val Loggie identified as the daughter of Boulton's partner John Fothergill),

³³ Thomas Anson of Shugborough (1695-1773), MP for Lichfield, friend of Matthew Boulton, Josiah Wedgwood, James Brindley and the architect James Stuart; and his great-nephew Thomas Anson (1767-1818) who employed the architect Samuel Wyatt from 1794 [visited 28 October 2008]. William Weddell (1736-1792) transformed Newby Hall with the help of architects including Robert Adam; there are two roundels in the Red Passage after Angelica Kauffman which may be mechanical paintings, and some door furniture from Soho Manufactory [visited 19 September 2009].

entitled ‘Specimens of a new method of engraving in imitation of washed drawings invented at Soho Manufactory near Birmingham’. Antony Griffiths provided the unpublished text of his paper at *The Image Multiplied Symposium*, 1988, and explained that the lack of technical analysis and further investigation of the archive had prevented him from publishing. David Saunders agreed to perform and analyse scientific tests on pictures thought to be mechanical paintings at the BM and BMAG; in the event works from the National Portrait Gallery, Science Museum and Brodsworth Hall, South Yorkshire were also sampled.³⁴ I shared my archival research with the BM and facilitated the cooperation with BMAG. In addition I organised a workshop of specialists on paintings, prints, scientific analysis, conservation, the Archives of Soho, Matthew Boulton and eighteenth-century discourses, funded by the Paul Mellon Centre for Studies in British Art and the University of Birmingham Roberts Training Fund, to discuss the outcome of the archival and scientific research on the production of mechanical paintings. A report from this workshop is given in Appendix A.³⁵

Consideration of this thesis’s research problems, approaches, and methodologies combined to suggest three chapters: the first on product and process, the second on reproduction and taste, and the last on marketing and consumption. The first chapter will uncover the genesis of mechanical paintings beginning with early aquatints and exploring the imitation of luxury goods and the availability of existing and emerging technologies which could be adapted in the innovation of new products and processes. The nature of the archival material - practical business letters between artists and managers, managers and Boulton – appears to underline the veracity of the correspondence. These letters, unlike correspondence between public figures, were not meant for a wider audience and, allowing for a little exaggeration, they are reliable records which provide glimpses of the process. The scientific evidence is based on infrared reflectograms, overlaid images, paint cross-sections and other tests on the ‘Sun Pictures’ and various copies of de Louthembourg’s *Summer* and *Winter*. The chapter explains these findings in relation to the archival evidence and tries to tease out the issues created by Booth’s similar but slightly later polygraphic process.

³⁴ Thanks to Caroline Carr-Whitworth and Crosby Stevens at English Heritage, Brodsworth Hall, South Yorkshire.

³⁵ Mechanical Painting Workshop, BMAG, 27 April 2009

Chapter two asks why *Summer* and *Winter* were so popular as reproductions, and what connoisseurs and artists felt about the value of copies. I offer discussion of the artists and subjects mentioned in Boulton's catalogue and correspondence, and use four examples to examine issues of reproduction and taste. Angelica Kauffman was Boulton's favourite choice for mechanical paintings and one of her English history paintings, *Trenmor and Inibaca*, and a lighter subject, *Nymphs Waking Cupid*, are examined for their manifestation of societal concerns. Benjamin West's modern history painting, *Death of General Wolfe*, and de Louthembourg's large genre painting of *Winter* are also scrutinised. The active participation of all three artists in Boulton's endeavour is evidenced in relation to correspondence in the Soho Archives. It is argued that the choice of subject matter for the mechanical paintings was dependent on the perceived taste that the purchaser wished to display in the public and private spaces of his/her home.

The final chapter considers the creation of a market for mechanical paintings. Matthew Boulton had been selling buttons, buckles and 'toys' since he took over as partner and manager of his father's business in 1749.³⁶ From the outset he had aimed at a wider market than just Birmingham, wishing to sell direct rather than use middlemen to retail the products for him.³⁷ It will be argued that mechanical paintings were part of the luxury goods that Boulton and Fothergill (B&F) marketed to the upper classes and *nouveau-riche*, rather than being aimed at the more populous middle classes.³⁸ Boulton's marketing strategies will be compared and contrasted with Josiah Wedgwood's methods, and by contemporary accounts held in the Archives of Soho.³⁹ His use of taste-setters, such as the society hostess Mrs Montagu, and fashionable architects, will also be explored. The role of ingenuity in differentiating the mechanical paintings from hand-finished copies will be put forward as an

³⁶ H W Dickinson, *Matthew Boulton*, Cambridge, 1937, 24-25, 29. Sketchley's Birmingham Directory, 1767, 56, cited in Dickinson.

³⁷ Robinson, 'Eighteenth-century commerce and fashion', 40

³⁸ Thompson, Delia (ed.), *The Concise Oxford English Dictionary of Current English*, Oxford, 1995. The term *nouveau-riche* was used by Robert Burns in 1796 and combined the idea of newly acquired wealth with one who displayed it in an ostentatious or vulgar fashion.

³⁹ Neil McKendrick, 'Josiah Wedgwood and the Commercialisation of the Potteries', 100-145, and Robinson, 'Eighteenth-Century Commerce and Fashion' 39-60

interesting consequence of the Industrial Enlightenment. Finally, reasons for the demise of mechanical painting production at Soho will be examined.

The subject of Boulton and Eginton's mechanical painting enterprise presented a rich field of enquiry as the process has not hitherto been fully explained, while the Archives of Soho provide a plentiful supply of primary source material, some of which has not been recognised or cited before and some of which I have interpreted in original ways in the light of my other findings. The scientific tests made by the BM are the first on the 'Sun Pictures'; and on the de Louthembourg *Summer* and *Winter* reproductions, and they cast new light on the processes used which both support and challenge parts of the archival evidence.⁴⁰ Furthermore, by arguing that the attraction of ingenuity, both of process and subject matter, played a significant role in marketing and consumption, I cast light on the developing consumer markets for luxury goods. The results will emphasise the wider relevance of mechanical paintings to eighteenth-century discourses on the liberal and mechanical arts.⁴¹

⁴⁰ David Saunders and Antony Griffiths, Two 'mechanical' oil paintings after de Louthembourg: history and technique, paper presented at conference Studying Old Master Paintings: Technology and Practice, National Gallery, London, 16-18 September 2009, forthcoming publication.

⁴¹ In addition, the Matthew Boulton's bicentenary celebrations in 2009 provided a unique opportunity for the presentation and publication of much scholarship and new research about Boulton and his methods in the context of late eighteenth-century and early nineteenth-century society, which allowed me to contribute to this unusual gap in the knowledge of his enterprises.

CHAPTER 1

PRODUCT AND PROCESS: ARCHIVAL AND SCIENTIFIC EVIDENCE AND THE TRANSFUSION OF TECHNOLOGIES

In around 1776 Matthew Boulton and Francis Eginton invented a new process, mechanical painting, which could reproduce an existing high value product, the oil painting. The process enabled the multiplication of painted pictures at a fraction of the price of the original. Matthew Boulton described his commercial aims in a letter to Sir Watkin Williams Wynn (1749-89), a collector and patron of the arts, when stating that ‘I am engaged in painting as a manufacture and that by some peculiar contrivances, I am enabled to make better copies of good originals than can be done otherwise, without much greater expense [...] by multiplying these copies when once obtained’.⁴² This chapter will explore how Boulton identified a gap in the market for copies of oil paintings and how Eginton developed the process from the latest technologies of aquatint printing and design transfer onto enamel, japanned or ceramic bodies. No patent was applied for and no formal record of the process remains, but various theories about how the mechanical paintings were made have been put forward over the years, all awaiting confirmation from further examples of mechanical paintings or scientific evidence drawn from analysis of the few existing identified copies. As noted in the introduction, such was the mystique of the process and the reputation attached to Boulton’s name that, controversially, some pictures on paper and two silvered plates, known as the ‘Sun Pictures’, shown to the Photographic Society of London by Mr F P Smith, Curator of the Museum of Patents at South Kensington, were at one time believed to be early photographs.⁴³ It will be argued that these works on paper may have been experimental transfer prints used in the manufacture of mechanical paintings. The rich vein of documentary evidence in the Archives of Soho and the scientific analysis carried out by the BM will be used to determine the full production process.

Maxine Berg, in her essay ‘From imitation to invention: creating commodities in eighteenth-century Britain’, proposed a link between imitation (the copying of

⁴² Dickinson, *Matthew Boulton*, 104. Boulton to Sir Watkin Williams Wynn, 12 June 1779, asking for the loan of pictures.

⁴³ *Photographic Journal*, June 15 1863, 302

unobtainable or highly expensive goods) and invention (the creation of a new method of doing something) arguing that the key driver for product development in the eighteenth century was imitation. For example, English japanning ware was an imitation of the lacquered goods of the Far East and the search for japanning processes and varnishes was attested to by the registering of 20 patents between 1757 and 1825.⁴⁴ Imitation of the finds of Pompeii and Herculaneum was a key driver for Boulton and Wedgwood. Collectors and antiquarians, such as Wynn, appeared more than happy to open up their collections to manufacturers of Boulton's status and Sir William Hamilton promised him his drawings of Etruscan vases.⁴⁵ In mechanical paintings Boulton was trying to imitate oil paintings, as he thought he had discovered a gap in the market for making good but inexpensive copies. He happily admitted to adapting Greek classical motifs to his metalware goods in writing to Mrs Montagu to say, 'Ye present age distinguishes itself by adopting the most Elegant ornaments of the most refined grecian artists, [and] I am satisfied in conforming thereto, and humbly copying their style, and making new combinations of old ornaments without presuming to invent new ones'.⁴⁶

How far mechanical painting was machine-based and how much it relied on hand-finishing is one of the issues that will be examined in this chapter. It seemed possible that the term 'mechanical painting' hinted at more of a mechanised process than it delivered, and certainly the term 'mechanical' is problematic. In Ephraim Chambers' *Cyclopaedia* of 1728 'mechanical' is defined as 'practised by means of some machine or instrument' which fits in with Boulton's 'peculiar contrivances' (above) and the use of a 'roling press' in the mechanical painting process which will be discussed later in the chapter. However, Chambers also referred to the eighteenth-century distinction between the liberal and mechanical arts, which included painting among the liberal arts, characterized as 'noble, and ingenuous; [...] worthy of being cultivated without any regard to lucre' compared with the mechanical arts, which are 'those wherein the hand, and body, are more concern'd than the mind; and which are chiefly cultivated

⁴⁴ Berg, 'From Imitation to Invention', 19

⁴⁵ Eric Robinson, 'Matthew Boulton, Patron of the Arts', *Annals of Science*, vol 9, 1953, 369

⁴⁶ Robinson, 'Matthew Boulton, Patron of the Arts', 368, letter from Matthew Boulton to Mrs Montagu, 16 January 1772

for the sake of profit'.⁴⁷ Here the liberal and mechanical arts are not only contrasted between mental and manual, but also in relation to earnings, the liberal arts being seen as above profit. The term 'mechanical painting', which was used at least as early as May 1778, in a letter from John Hodges to Boulton, may refer to the fact that it was a reproductive process of the hand rather than of products of the mind (imagination, composition), but also to the process's status as a means of manufacturing for profit which Boulton may not have thought incompatible with the liberal arts.⁴⁸ The lack of many extant examples of mechanical paintings may either point to the small number and poor survival of pictures produced or it may attest to the difficulty (and reluctance) in discriminating between mechanical paintings and original oil paintings by well-known artists. Either way, this intriguing process demanded further exploration.

It is interesting to speculate how the idea of mechanically copying oil paintings arose. The practice of artists making several copies of their own paintings at this time was quite acceptable as will be examined in chapter two. Prints were already an established method of reproducing paintings in a graphic way but, until mezzotint and later aquatint, they could not suggest the smooth tonal gradations of watercolour or oil paint, far less the effects of glossy colour and raised texture. In the late-eighteenth century colour prints were usually printed in a single tint of red or brown or hand painted. Printing in more than one colour could be achieved in one of two ways. The French favoured using separate plates for each colour and lining them up with a register mark on the plate, while English printers were famous for their skill in using a single plate and inking discrete areas with different colours *à la poupée*.⁴⁹ Jacob Christoph Le Blon (1667-1741) was the first to try to reproduce pictures and drawings in full colour by overlaying the three primary colours using three mezzotint plates.⁵⁰ He lived in London from 1718 to 1734 and was granted a privilege [patent] in 1719 by George I to reproduce pictures in colour, but the venture failed and Le Blon moved on to Paris. William Aitken, who produced a monograph on Francis Eginton in 1871,

⁴⁷ Charles Harrison, Paul Wood and Jason Geiger, *Art in Theory 1684-1815*, Oxford, 2000, 342-343. Ephraim Chambers, 'Cyclopaedia' (1728) on the Arts - Liberal and Mechanical.

⁴⁸ BA&H, MS 3782/12/63/5 John Hodges to Matthew Boulton, 10 May 1778. 'I think he [Lord Beauchamp] would be pleased to see some of the large Mechanical Paintings and not unlikely to order some'.

⁴⁹ Lambert, *The Image Multiplied*, 88

⁵⁰ Lambert, *The Image Multiplied*, 87

stated that Boulton ‘had seen examples of Le Blon’s application of Jean Baptiste Le Prince’s invention of engraving by the aquatint process’.⁵¹ This must be wrong as Le Blon died in 1741, and worked in mezzotint, whereas Le Prince’s invention was not presented to the French Académie until 1769.⁵² However, Aitken also suggested that Boulton may have seen an exhibition of coloured mezzotints by Robert Laurie (1755-1836) on one of his trips to London. Laurie was rewarded for inventing a new method of printing mezzotints in colour with a premium by the Society for the Encouragement of the Arts, Manufactures & Commerce (now the RSA) in 1777.⁵³ The coloured mezzotints may have given Boulton an idea which he discussed with his multi-talented designer Francis Eginton, or it may have been a proposition that Eginton put to Boulton. There is a suggestion in the memoirs of James Watt that Eginton was the prime mover as Watt said that Boulton ‘supported Mr Francis Eginton [sic] in the manufacture of what are now called polygraphick pictures, which some time afterwards he resigned entirely to Mr Eginton’.⁵⁴ However, Peter Perez Burdett (1734/5-1793) may also have suggested the idea of printing in imitation of painting as he tried to find a market for his own aquatints, two of which were shown at the Society of Arts Exhibition in 1772. Burdett’s ideas were shared with Boulton and his circle of friends, including Benjamin Franklin who wrote to Burdett on 21 Aug 1773 that ‘I should be glad to be inform’d where I can see some example of the new Art you mention of printing in Imitation of Paintings. It must be a most valuable Discovery: but more likely to meet with adequate Encouragement on this Side the water than on ours [America]’.⁵⁵ Burdett fled the country in 1774 to escape his debtors, but his new process of aquatint was obviously known to Boulton’s circle through Joseph Priestley⁵⁶. Francis Eginton and his brother John also knew Burdett, as

⁵¹ Aitken, *Francis Eginton*, 8. Jean Baptiste Le Prince (1734-1781)

⁵² Antony Griffiths, ‘Notes on Early Aquatint in England and France’, *Print Quarterly*, IV, 1987, 3, 260-261

⁵³ The Society for the Encouragement of Arts, Manufactures and Commerce or Society of Arts for short (RSA after 1847) gave out premiums (prizes) for productions, inventions or improvements, particularly if they were freely available and not protected by patent, <http://www.thersa.org/> Accessed 22 February 2009

⁵⁴ Dickinson, *Matthew Boulton*, 205. The use of the term ‘polygraphick’ is confusing but the scientific analysis below proves that Joseph Booth’s polygraphic copy was a different process to mechanical painting.

⁵⁵ Richard T Godfrey, *Printmaking in Britain*, Oxford, 1978, 59

⁵⁶ Jenny Uglow, *The Lunar Men: Five Friends whose Curiosity changed the World*, New York, 2002. Joseph Priestley is listed amongst the ‘principal Lunar Men’ after the ‘Contents’ page.

he asked to be remembered to them in a letter to Boulton on 15 September 1777 from Rastadt.⁵⁷

Certainly, mechanical painting was seen as a new invention. The Reverend Stebbing Shaw, talking about ‘the ingenious Mr Francis Eginton’ in 1801, wrote that at ‘about this time the ingenious art of copying pictures in oil colours, by a mechanical process, was invented at Soho, and under the patronage of the above proprietor [Boulton], was brought to such a degree of perfection as to be taken for originals by the most experienced connoisseurs’.⁵⁸ Shaw was attesting to the high quality of the copies and flattering the judgement of the people who bought them. As Eginton was still alive at this date, it may be assumed that he had some input into this description which was published in *The History and Antiquities of Staffordshire* and was accompanied an engraving of his house and workshop for his later enterprise of painted glass.

However, Lord Harcourt provided a more impartial testimony to the inventive nature of the mechanical paintings in his letter to Boulton on 25 November [year not given] when stating that ‘having carried one of his new invented pictures to the Duke who had never seen or heard of this curious and valuable invention before, his RH was so pleased with it that he desired Lord Harcourt to enquire of Mr Boulton whether he could reduce Portraits of a larger size to the size of the *Penelope* done by Angelica [Kauffman] as his RH in that case would wish to have some portraits copied in that manner’.⁵⁹ Unfortunately, it has yet to be discovered how Boulton replied to Lord Harcourt and only three or four portraits feature in documented examples of mechanical paintings.⁶⁰

The earliest known examples of Eginton’s attempts to develop a mechanical painting process are the ‘Sun Pictures’, so-called because they were discovered in the Soho Library in 1862 and Price, an employee of Matthew Piers Watt Boulton, Matthew

⁵⁷ BA&H, MS 3782/12/24/122, PP Burdett to Boulton, 15 Sep 1777. ‘I beg to be kindly remembered to Mr Eggerton and his brother & if any services one in my little power which can be exerted to your or their advantage in this part of the world you have only to command.’

⁵⁸ The Reverend Stebbing Shaw, *The History and Antiquities of Staffordshire, Volume II*, London, 1801, 118

⁵⁹ BA&H, MS 3782/13/53/146, Lord Harcourt to MB, 25 November (no year). Lord Harcourt is most likely George Simon, 2nd Earl Harcourt (1736-1809) as his father died in 1777. The Duke, described as HRH could be Duke of Gloucester (1743-1805) or Duke of Cumberland (1745-1790).

⁶⁰ The King of Prussia by Moses Haughton, the Empress of Russia, James Watt Esq. and possibly Garrick though this may have been in the character of Richard III by Reynolds.

Boulton's grandson, who passed them on to FP Smith at the Patents Office, maintained that they were said to be made by the action of the sun. The 'Sun Pictures' were not finished mechanical paintings but instead comprised two silvered plates, two stipple engravings, four aquatints (Figures 1a and 3a) and one mezzotint on paper by Eginton. As noted in the Introduction, FP Smith thought the gelatinous surface and the association with the action of the sun indicated that they might be early photographs, and he assembled many documents with the help of Price to lay before the Photographic Society. Many members, including the president, were inclined to believe that the silvered plates were similar to daguerreotypes and the paper prints produced by the 'agency of light' similar to the collodion process.⁶¹ However, the claims were disputed by MPW Boulton, in his *Remarks Concerning Certain Pictures Supposed to be Photographs of Early Date* published in 1865.⁶² There, he included many items of the Soho correspondence and observed that the paper prints showed evidence of having been printed from a plate under pressure and that the coloured sections showed signs of having been applied mechanically, and he also attributed them to Francis Eginton.⁶³ The prints were identified as aquatints by Vincent Brooks, who had made the lithographs in *Remarks*.⁶⁴ MPW Boulton acknowledged that a camera obscura was used at Soho for copying outlines by drawing but he doubted if it played much part in the production of mechanical paintings and stated that 'certainly it cannot have constituted what was peculiar in that process'.⁶⁵ Therefore, he concluded that 'the evidence seems much adverse to the supposition that the so-called mechanical paintings were photographs'.⁶⁶ He went on to re-date the photographic plates as being more recent photographs, made about 1840, by either Miss Wilkinson (MPW Boulton's aunt) or Mr Alston (who lived at Winson Green, the subject of one of the silvered plates mistakenly thought to be Soho House).⁶⁷

The mystery of the 'Sun Pictures' was finally laid to rest the following year when George Wallis, of the South Kensington Museum, suggested a viable alternative explanation which was that the paper prints were an intermediate stage in the process

⁶¹ *Photographic Journal*, 15 June 1863, 292

⁶² MPW Boulton, *Remarks*

⁶³ MPW Boulton, *Remarks*, 9, 16

⁶⁴ MPW Boulton, *Remarks*, 25

⁶⁵ MPW Boulton, *Remarks*, 26

⁶⁶ MPW Boulton, *Remarks*, 10

⁶⁷ MPW Boulton, *Remarks*, 15

of mechanical painting.⁶⁸ Wallis had been approached by FP Smith in 1862-3 when he gave his opinion that the pictures on paper were very unlikely to be early calotypes but that such a claim was not absolutely impossible.⁶⁹ However, as Wallis later had time to re-examine the paper pictures he reported that they were definitely aquatints (apart from the *Stratonice* which was a mezzotint) and he thought that the layer of albumen was under the colouring matter to prevent the colour from sinking into the paper, rather than part of a photographic process.⁷⁰ Interestingly, Antony Griffiths suggested, in his unpublished paper on mechanical paintings, that there was no reason why mechanical paintings could not be produced from mezzotints although it was a more time-consuming and expensive technique.⁷¹ The ‘Sun pictures’ are now in poor condition, having suffered damage from flooding, showing the impressions to be soluble in water.⁷² David Saunders has since confirmed by cross-section analysis that the medium is gum and there is no trace of albumen or any gelatinous substance.⁷³ Wallis deduced that these pictures were an early stage in the mechanical painting process, but as he had never seen a finished mechanical painting he could not take it further than this. He surmised that this first stage used a copper plate and aquatint etching to print an image on a sheet of treated paper which would then be used as a transfer to be applied to the canvas.

Printing directly onto the uneven surface of a canvas would disrupt the ground as the intaglio process requires intense pressure. So, an intermediate transfer onto paper would have been required. Moreover, the two stage process has the happy outcome of reversing the offset image and so producing a copy in the same orientation as the original. Wallis referred to an article by Llewellyn Jewitt about the invention of transfer printing onto ceramic bodies by John Sadler (c1720-1789) in Liverpool in 1752.⁷⁴ There Jewitt described how the impression from a copper plate ‘is first taken upon paper, and thence communicated to the ware after it was glazed’ and then fired again.⁷⁵ Sadler was in partnership with Guy Green and they decided against taking out

⁶⁸ Wallis, *Art Journal*, 1 August 1866, 252

⁶⁹ Wallis, *Art Journal*, 1 August 1866, 251

⁷⁰ Wallis, *Art Journal*, 1 August 1866, 253

⁷¹ Griffiths, *The Mechanical Paintings of Boulton and Eginton*, 8

⁷² Wallis, *Art Journal*, 1 August 1866, 253, 255

⁷³ David Saunders, private communication, 28 August 2009

⁷⁴ Llewellyn Jewitt, ‘Liverpool Pottery: A notice of the various “Delft ware” works, and of the invention of printing on china and earthenware in Liverpool’, *Art Journal*, August 1865, 242

⁷⁵ Jewitt, *Art Journal*, August 1865, 242

a patent, but they gave a demonstration of printing 1,200 earthenware tiles with different patterns and colours between 9.00 am and 3.00 pm on 27 July 1756, which was equivalent to the output of more than 100 men using traditional methods. This achievement was witnessed and attested to on 2 August 1756 by William Statham, a Master Extraordinary in Chancery.⁷⁶ How might this secret invention in Liverpool have found its way into Soho? Josiah Wedgwood did business with Sadler and sent his Queensware there to be transfer printed from 1760 to 1794; and he did not carry out printing in his Etruria premises until about 1784 when Sadler retired and many of his hands came down to Staffordshire.⁷⁷ The carriage and return of pottery from Burslem to Liverpool, before canals were in place, was an expensive process, vulnerable to breakages, so Wedgwood would have done his own printing if he had known how to do so. Jewitt also mentioned Peter Perez Burdett (1734/5-1793) as a possible link to Wedgwood and the Midlands.⁷⁸ Burdett was negotiating with Wedgwood and Bentley between 1771 and 1773 about the use of aquatint for ceramic transfer printing but Wedgwood ended the relationship without taking the proposition further.⁷⁹

Bernard Watney and R J Charleston offered an alternative theory that transfer printing onto enamel was already established in the Midlands in the 1750s. Watney cited the application for a patent by John Brooks of Birmingham on 10 September 1751 to transfer print enamels and china, and in so doing to reverse the print, that is to print it in its original orientation.⁸⁰ Brooks then moved south to Battersea where he petitioned

⁷⁶ Jewitt, *Art Journal*, August 1865, 242

⁷⁷ Jewitt, *Art Journal*, August 1865, 243. Invoices in the possession of Mr Mayer proved that Green was printing for Wedgwood as late as 1794, while John Pennington was mentioned in indentures dated 1784 to be taught the art of engraving in aquatint at Etruria. It may be that the plates for the transfers on the Queen's ware remained with Green in Liverpool until his retirement in 1799.

⁷⁸ Jewitt, 'Liverpool Pottery and China: A notice of Richard Chaffers and his china; the Penningtons; the Herculaneum works', *Art Journal*, September 1865, 274

⁷⁹ Martin Hopkinson, 'Printmaking and Print Collectors in the North West 1760-1800', Elizabeth E Barker and Alex Kidson (eds), *Joseph Wright of Derby in Liverpool*, New Haven and London, 2007, 88-92

⁸⁰ Bernard Watney & RJ Charleston, 'Petitions for Patents concerning Porcelain, Glass and Enamels with special reference to Birmingham, 'The Great Toyshop of Europe'', *Transactions of the English Ceramic Circle - English Ceramic Circle*, 1966, 6/2, 61. 'humble petition of John Brooks of Birmingham in the county of Warwick, engraver, Sheweth that the petitioner has by great study, application and expense found out a method of printing, impressing, and by reversing upon enamel and china from engraved etched and mezzotinto plates, and from cutting on wood and mettle, impressions of History, Portraits, Landskips, Foliages, Coats of Arms, Cyphers, Letters, Decorations and other Devices. That the said art and method is entirely new and of his own invention and for as much as it will be for the service of the public...', Public Record Office, SP 44/260

for two subsequent patents in a similar vein in 1754 and 1755 but none was successful. Watney declined to speculate on their failure but it may have been Brooks' unwillingness to specify the process until after the Letters Patent had been obtained, as he wrote in the petition 'he cannot at present discover [reveal] with safety the nature of the said invention'.⁸¹ Enamelling was one of the Birmingham trades which Lady Shelburne recorded on her visit to Birmingham in May 1766 when 'Mr [John] Taylor, the principal manufacturer there, dined with us, and we went afterwards to Mr Boldens [Boulton] who trades very much in the same way'.⁸² She recorded a demonstration of transfer printing onto enamel at the manufactory of John Taylor.⁸³ Boulton was unlikely to have got the process for free from John Taylor, since, as the acerbic James Watt wrote to Boulton in 1775, 'John Taylor died the other day worth £200,000 without ever doing a generous action'.⁸⁴ Thus, Sadler and Brooks provide two examples for the invention of transfer printing onto a hard moulded surface to give Eginton the inspiration for transfer printing onto canvas, but he may already have been using transfers in his japanning department. Yvonne Jones, speaking at a conference in 2009, said that even though transfers were not widely used on japanned ware until the nineteenth century, Stephen Bedford took out a patent for transfer printing in 1759, and some transfers were finished by being painted over.⁸⁵

Maxine Berg has argued that this diffusion of ideas (the spread or transfer of new technology to broader usage and other contexts) is typical of commercial inventiveness in the eighteenth century.⁸⁶ The two-stage printing suggested ways in which a design could be transferred to a canvas but the other key process was the invention of aquatint etching which produced a lighter tonal effect than mezzotint, more suitable to providing a tonal underdrawing or 'dead colour' on the support.

⁸¹ Watney and Charleston, 'Petitions for Patents', 62

⁸² Watney and Charleston, 'Petitions for Patents', 79

⁸³ Watney and Charleston, 'Petitions for Patents', 80. 'the method of doing it is this: a stamping instrument managed only by one woman first impressed the picture on paper, which paper is then laid upon a piece of white enamel and rubbed hard with a knife, or instrument like it, till it is marked upon the box. Then there is spread over it with a brush some metallic colour reduced to a fine powder which adheres to the moist part and, by putting it afterwards in an oven for a few minutes, the whole is completed by fixing the colour.'

⁸⁴ Watney & Charleston, 'Petitions for Patents', 65

⁸⁵ Yvonne Jones, 'A New Species of Japanning lately introduced' – the early, hitherto unexplored years of the Midlands japanning industry, unpublished paper delivered at conference, Made in (Middle) England: Design, Consumption and the Arts in the Midlands, University of Birmingham, 21 March 2009. See also forthcoming book – Yvonne Jones, *Japanned Papier Mache and Tinware c1740-1940*.

⁸⁶ Berg, 'From Imitation to Invention', 4

Antony Griffiths has confirmed that Peter Perez Burdett (1734/5-1793) introduced aquatint to Britain in 1772, which was when he showed two plates at the Society of Arts Exhibition having seen some examples by Le Prince, by developing a different process to produce a similar effect.⁸⁷ Burdett was principally a map maker and a close friend of Joseph Wright of Derby.⁸⁸ He probably passed on the technique to Eginton who produced a set of aquatints dedicated to Miss E V Fothergill, described as ‘Specimens of a new method of engraving in imitation of washed drawings invented at Soho Manufactory near Birmingham’, signed by Francis Eginton, and now in the BM. Antony Griffiths has observed that they were made by the stopping-out and acid washes technique of Burdett rather than the lift-ground of Le Prince.⁸⁹

In letters from John Hodges reporting to Boulton, and in correspondence between Hodges, Eginton and the artist Joseph Barney, there are useful comments about the mechanical painting process. It has been argued this process began with the etching of a copper plate.⁹⁰ Hodges said as much in a letter to Clarke and Green, 16 July 1781, when noting that ‘our mechanical method of doing them is such that we cannot make ‘em of different sizes without being at a similar expense as the engraving of a plate’.⁹¹ Although his use of ‘similar expense’ hints at a different process, the term ‘impression’ is used many times in the correspondence and confirms the use of a printed plate.⁹² Keir, too, called the mechanical paintings ‘painted impressions’ in his memoir of 1809.⁹³ At this stage the size of the original could be reduced or enlarged according to existing methods of squaring-up or using a camera obscura or camera lucida. Reproduction of the same size as the original could also make use of methods such as tracing through glass or pouncing (pricking and dusting through the holes) as in japan ware.⁹⁴ For the larger paintings more than one plate was used as can be seen

⁸⁷ Griffiths, ‘Notes on Early Aquatint’, 263. Burdett’s method was ‘quite unlike the French, and makes it possible that Burdett had independently deduced the process from seeing some of their plates’.

⁸⁸ Godfrey, *Printmaking in Britain*, 59

⁸⁹ Antony Griffiths, *The Mechanical Paintings of Boulton and Eginton*, unpublished paper, *The Image Multiplied Symposium*, 16 February 1988, British Museum, London

⁹⁰ Robinson and Thompson, ‘Matthew Boulton’s Mechanical Paintings’, 501

⁹¹ MPW Boulton, *Remarks*, p8

⁹² MPW Boulton, *Remarks*, 6-7, If it is convenient to Soho, Madoks will be hear this afternoon to take off a few impressions for me, and as I wish to go to London as early in the spring as possible with some of the best pictures I can get, should be glad to know if I could have the plates of Stratonice & Rynaldo’, FE to JH, 29 January 1782.

⁹³ Dickinson, *Matthew Boulton*, 107. Dickinson dated the memoir to 1819 which is an error, it is 1809.

⁹⁴ C J Woodward, *Papier Mâché: An extinct Industrial Art*, unpublished catalogues of Royal Birmingham Society of Artists, Birmingham RBSA archives, Autumn 1926, 7. ‘A pounce was a piece

in one of the ‘Sun Pictures’, the *Physician [Erasistratus] Discovering Antiochus’ Love for His Mother in Law Stratonice*, after Benjamin West, which has two sheets collaged together.⁹⁵ The etching of the copper plates was expensive so Boulton would have been reluctant to offer alternative sizes unless he felt the market could support the additional expense.⁹⁶ After the etching came the printing of the copper plate onto paper, which would have involved special inks. The print on the paper was then transferred onto canvas forming a tonal impression which could then be hand-painted in oils like a ‘painting-by-numbers’ kit. In order for this to be economic, it was carried out by ‘the boys’ and hand-finished by semi-professional artists.⁹⁷ This process is illustrated in Figure 2. Research in the Archives of Soho has supported and supplemented this description of the process with some new and surprising evidence which will be discussed below.

The materials and machines used in the mechanical painting process included a rolling press, copper plates and canvas. The rolling press was required to print the paper transfers and was an expensive item of equipment. After the partnership between Boulton and Eginton was concluded at the end of 1780, Eginton was asked to either purchase the equipment from Boulton or to return it, with it being added that ‘respecting the Roling [sic] Press, if you do not think well of taking it at 8 Guineas which is less than half its cost, please to redeliver it. We do not wish to encume [sic] you with any thing that may not be agreeable, but desire to have our affairs now finally settled’.⁹⁸ Although this letter was penned by John Hodges, it uses an authoritative tone and the plural ‘we’ which suggested it was dictated by Boulton unlike the more discursive and tentative letters composed by Hodges himself. The copper plates were supplied by Wittow & Large, copper plate makers of Shoe Lane, London, through Boulton’s London agents Bayley and Dyott.⁹⁹ Plates of this high

of paper on which an outline of the pattern was drawn and this outline was pricked with holes. The pounce was then laid on the article and fine whitening dusted over the paper, which when removed left the outline of the pattern in dots of whitening.’

⁹⁵ MPW Boulton, *Remarks*, 6-7. Eginton to Hodges, 29 January 1782, ‘there are two plates of the former [Stratonice], and three of the latter [Rynaldo], one of the three is a small one’

⁹⁶ David Alexander, ‘Kauffman and the Print Market in Eighteenth-century England’, Wendy Wassing Roworth (ed.), *Angelica Kauffman, A Continental Artist in Georgian England*, London, 1992, 175

⁹⁷ BA&H, MS 3782/12/65/43 James Keir to MB, 2 Dec 1779

⁹⁸ BA&H, MS 3782/1/30/2 (13) Hodges to Eginton, 10 Jan 1781

⁹⁹ BA&H, MS 3782/1/11 B&F Letter Book, 1777-1782, to Mess’rs Bayley & Dyott, 14 June 1777, 27-28, 33. ‘We beg you will procure us the following plates of Wittow & Larg [sic] – Copper plate

quality were not used exclusively for aquatint plates for mechanical paintings as Boulton needed such plates for illustrations of goods in catalogues as well.

Francis Eginton probably etched the aquatint plates for the mechanical paintings as his early attempts in 1775 of eight aquatint prints dedicated to Miss EV Fothergill (British Museum) showed, but his brother John (d.1796) had also met Burdett and was working as an engraver and chaser at Soho.¹⁰⁰ Canvas was the preferred support for the finished mechanical paintings and was used for them in great quantity. In another attempt to conclude the partnership with Boulton, Eginton had to reach some agreement about the materials left on his premises. On March 8 1782, he wrote to John Hodges, saying that ‘I have no objection to keeping all the 24 yards of canvas, having orders for pictures that will nearly work it all up’.¹⁰¹ However, it appears that canvas was not the only support, as a letter sent by Joseph Barney (1753-1829) to Hodges on May 4 1782 regarding the work he was sending by the bearer was listed on receipt, probably by Hodges, identifying a painting of *Cupids Blindfolded* as being on wood and one of *Hebe* as being on copper. Barney stated

I have sent two pictures by the Bearer viz *Time and Cupid* and *Cupid bound to a tree*, I have likewise sent everything I had in possession belonging to Soho, which you will find agree with your account, if you have any other commands please to send them by the bearer [...]

The two pictures are identified in a list made on receipt at Soho found inside the folded letter, it noted

Received
A finish'd *Time & Cupid*
And *Nymphs & Cupid bound*
A painting of *Cupids blind folded* on Wood (Samuel)
A print of Lord North
Ditto of *Time & Cupid*

Makers, Shoe Lane, London, 3 Copper plates for Engraving 14 by 10 ½ Inches. As we are in immediate want of the above we shall be much obliged.’

‘We shall be glad if you’ll enquire of Wittow & Large the price of Brass plates that are prepared for paintings planished and Stoned level, about the size from 15 to 20 inches’

¹⁰⁰ BA&H, MS 3782/12/24/122, PP Burdett to Boulton, 15 Sep 1777.

¹⁰¹ Dickinson, *Matthew Boulton*, 105

A painting of *Hebe* on Copper dead colour.¹⁰²

The painting on wood may be an original for copying, but the *Hebe* on copper is described as ‘dead-colour’ - a technical term for under-painting (discussed below) which was part of the mechanical painting process.

The reference to copper as a support is rare in the Boulton correspondence, and the possibility of extant mechanical paintings on copper has not been raised by any previous authors. However, a bicentenary exhibition of Angelica Kauffman’s work in 2007 in Bregenz, Austria, included four copies on copper of the same small oval picture *Penelope Weeping over the Bow of Ulysses*. One of the copies was in particularly poor condition but there is a possibility that it could have been a mechanical painting.¹⁰³ Angelica Kauffman was Boulton’s most copied artist in mechanical paintings, as discussed in chapter two. This new evidence must lead to speculation that some mechanical paintings on metal must have been produced. Moreover, a letter from Boulton & Fothergill to Bayley & Dyott, asking if they will enquire of Wittow and Large the price of ‘Brass plates that are prepared for paintings’, suggests the use of other metals as a support.¹⁰⁴ Although the technique of painting on copper is similar to painting on canvas (the copper being given a little tooth to hold the paint and being non-absorbent making the paint slightly more saturated in appearance), the transfer of the impression onto copper, rather than canvas, might have required a different application of inks and binder. The copies on copper were more expensive to buy than the copies on canvas, being ‘the price of copper a piece more’, so must have been more expensive to produce.¹⁰⁵ A *Penelopy* on glass is also mentioned and Eginton was known to have made a reputable career out of painting on glass after he left Soho, which might have also involved a transfer process.¹⁰⁶ Further work is needed on the use of copper and glass as supports as this thesis will now focus on canvas.

¹⁰² BA&H, MS 3782/1/32/16, Joseph Barney to John Hodges, 4 May 1782

¹⁰³ Barbara Fogarty, Angelica Kauffman’s *Penelope Weeping over the Bow of Ulysses*, unpublished dissertation for BA in History of Art, University of Birmingham, March 2008.

¹⁰⁴ BA&H, MS 3782/1/11, B&F Letter Book, 1777-1782, to Mess’rs Bayley & Dyott, 14 June 1777, 27-28, 33. ‘We shall be glad if you’ll enquire of Wittow & Large the price of Brass plates that are prepared for paintings plished and Stoned level, about the size from 15 to 20 inches.’

¹⁰⁵ MPW Boulton, *Remarks*, 4. B&F to Samuel More, Secretary to the Arts and Sciences, Adelphi Buildings, London, 6 June 1778, quoting for fifty copies of a picture of Lord Romney.

¹⁰⁶ MPW Boulton, *Remarks*, 6. Eginton to Hodges, March 1782.

Having made an aquatint-etched plate of the picture to be copied, the next stage of producing the mechanical paintings is applying the ‘dead coloured’ impression to the canvas. The term dead-coloured is problematic as it usually refers to underpainting but in this case I think it refers to the transferred impression on the canvas which established the composition and the areas of light and shade.¹⁰⁷ Once completed, that stage would have been followed by the first over-painting in oils carried out by employees known as ‘the boys’. These may have been apprentices training in art and design or they may have been hands employed specifically for the purpose; Boulton wrote to James Adam in 1770 that he was ‘training up more young plain Country Lads, all of which that betray any genius are taught to draw’.¹⁰⁸ James Keir (1735-1820), in the role of acting manager, wrote to Boulton at Chacewater on 2 December 1779 and stated that, ‘he [Barney] consented to work by the day to retouch the boys’ pictures, at 10/6 per day. If the painting business is to be carried on, and the boys continue to paint, certainly the value of the pictures will be enhanced more than the expence [sic] of his wages’.¹⁰⁹ The painted canvases were, thus, expertly hand-finished by named artists with a little definition or impasto to add authenticity and, therefore, value. These artists included Eginton himself, Joseph Barney, and a Mr Wilson and Mr Simmons. Mr Simmons specialised in landscapes and, according to Hodges’ letter to Boulton of 1780, ‘Mr. Simmons’ time (being three days a week) is chiefly employ’d at landscapes, being what suits his abilities best. He has done several pieces from prints, &c. that came from Mr. Eginton’s, which are judg’d likely to sell if at reasonable prices’.¹¹⁰ John Hodges, writing to Boulton in 1780, asked if Mr Wilson could be employed in finishing some mechanical paintings for speculative sale with the London agent John Stuart, ‘as there are many large pieces finish’d and many in the dead color’d state that may be finish’d by Mr. Wilson, &c., perhaps you

¹⁰⁷ Erma Hermens (ed.), *Looking Through Paintings: The Study of painting Techniques and Materials in Support of Art Historical Research*, 1998. ‘seventeenth century texts reveal that the general practice was to divide the painting process into a number of phases. In the underpainting; known as the ‘dead-colouring,’ various aspects were roughly applied. these included the composition, the main division between light and shadow and also, according to various seventeenth century texts, a first impression of the colours.’ The term was also used by Sir Joshua Reynolds, contemporaneous with Eginton.

¹⁰⁸ Dickinson, *Matthew Boulton*, 60. Letter from M Boulton to James Adam, 1 October 1770 (Letter book 1768-73).

¹⁰⁹ BA&H, MS 3782/12/65/43 Letter from James Keir (Birmingham) to Matthew Boulton (Chacewater). 2 Dec. 1779

¹¹⁰ BA&H, MS 3782/12/63/16, John Hodges to Matthew Boulton (Plangary Green), 12 Sep. 1780.

would deem it not amiss to send a few pieces for tryal'.¹¹¹ In the same letter, Hodges goes on to report that 'Mr. Barney, not being able to learn that you left any direction what he was to do in particular, purposes going on with some of the pieces for your own apartments. He has just been about one painting for Mrs. Montagu, which is now nearly ready to send off. Next he will proceed, with Mr. Wilson, in executing the small paintings order'd for Sir Sampson Gideon'.¹¹² It thus appears that the local artists were working together in a well-intentioned, but not very directed team, being subject to the vagaries of both Eginton and Hodges.

After the manufacture ceased at Soho, Eginton and Barney were both involved, at different times, in painting the whole of the canvas from the impression, i.e. without the boys. Barney also illustrated the problems and delays caused by the drying times and advised Hodges to apply white of egg (as a fixative) to the impressions before sending them on to be finished.¹¹³ Despite the involvement of professional artists, the quality of the finished paintings was often found to be unacceptable either due to problems with the impression or the poor resemblance of the reproduction to the original. Barney reported that 'the last picture of *Trenmor* which you brought is in so indifferent a State that it cannot possibly be finished without being deadcoloured again [I] am exceedingly sorry I did not examine the impression you brought before I sat down to paint at it'.¹¹⁴ Barney took such pains with a mechanical painting after an original by Benjamin West that he went down to London to check the picture, writing to Hodges 'I should take it as a favour if you will please to forward one the Picture of *Stratonice* which I am to paint for Mr Boulton as I purpose being in London in about a fortnight and taking the picture in order to finish it from the Original at Mr West's'.¹¹⁵

Evidence from the Archives of Soho appears to support the argument that the canvases were entirely painted over and that the 'mechanical' process only referred to

¹¹¹ BA&H, MS 3782/12/63/12, John Hodges to Matthew Boulton (London), 17 Apr. 1780.

¹¹² Ibid.

¹¹³ BA&H, MS 3782/1/32/13, Barney to Hodges, 22 September 1781. 'If these pictures are not sent away till Monday there should be some white of egg given to the *Time and Cupid* has [sic] it is scarcely dry enough to bear the Carriage.'

¹¹⁴ BA&H, MS 3782/1/32/12, Joseph Barney (W'hampton) Thursday morn to John Hodges (Soho), 20 September 1781

¹¹⁵ BA&H, MS 3782/1/32/4, Joseph Barney (W'hampton) to John Hodges (Soho), 29 June 1781

the printing of the aquatint onto the canvas to provide an underdrawing for the artists to follow. Although Aitken reported that MPW Boulton remembered his father, giving the impression that the mechanical painting process ‘copied colour mechanically, not merely chiaroscuro’, this is more applicable to the ‘Sun pictures’, some of which were printed in colour (Figures 1a and 3a), which are more likely to have been the experimental stage of transfer printing onto paper.¹¹⁶ It would not have been necessary or economically viable to print onto canvas in colour, only to be totally painted over.

The results of the BM’s technical analysis of the ‘Sun Pictures’ and of various versions of *Summer* and *Winter* thought to be mechanical paintings, carried out and interpreted by David Saunders, support some of the theories on production detailed above but offered no confirmation of a printed transfer process. These results were presented by David Saunders and Antony Griffiths in a paper at the conference on *Old Master Paintings – Technology and Practice*.¹¹⁷ Considering firstly the ‘Sun pictures’ (the experimental intermediate prints), Saunders made a comparison of the visible image and an infrared reflectogram of the coloured version of *Venus and Adonis* after Benjamin West (Figures 3a and 3b) showing that the coloured inks were visible in the infrared spectrum, although not as strongly as the black-brown inks. This suggests that if the transfer print was used in the mechanical painting process the inks would be seen in infrared reflectograms of the finished mechanical paintings.¹¹⁸ Cross-section analysis of the print revealed that Wallis’ ‘gelatinous’ layer is gum and not albumen or gelatin which so strongly suggested the photographic process to FP Smith and the members of the Photographic Society of London.¹¹⁹ The pigment is held in the gum which is soluble in water and could have been transferred by placing the paper transfer on the canvas and applying a wet cloth or heat to the back of the transfer print. The fact that the medium is soluble supports the theory that the prints were an intermediate process and not a finished product which would have been more stable.

¹¹⁶ Aitken, *Francis Eginton*, 7

¹¹⁷ Saunders, Two ‘mechanical’ oil paintings after de Louthembourg: history and technique, forthcoming publication, London, 16-18 September 2009

¹¹⁸ Infrared reflectography is a technique to look through the paint layers. The longer wavelengths of infrared light penetrate the paint layers, making the surface layers appear transparent. It is especially good at showing any underdrawing of the design in charcoal or graphite.

¹¹⁹ Fourier Transform Infrared Spectroscopy (FTIR) match to reference samples of gum.

Turning to the fully worked up reproductions of *Summer* and *Winter* from the BM and BMAG, a visual examination revealed that the paint layer was thin and blocky, with little tonal transition, and there was some impasto and visible brushstrokes. Saunders' overlay of images of a detail of the BM's and of Brodsworth's *Summer* (Figure 4) demonstrated that the dimensions of the figure groups are exactly the same, suggesting that the process defined the overall composition. The slight differences seen in the faces and clothing might be due to them having been hand finished. Infrared reflectograms of three versions of *Winter* (BM, BMAG and Brodsworth Hall) and four of *Summer* (the same locations plus the National Portrait Gallery, London) were also taken. These revealed no evidence of an underlying printed image. Saunders, however, has suggested three possibilities to account for this: that the paint layers are opaque to infrared radiation (although this would be unlikely across all the areas sampled), that the inks used in the transfer print do not absorb infrared radiation (although this was not the case in the 'Sun Pictures' where the inks were visible to the infrared camera), and the more likely explanation that there is no underlying printed area as would have been expected from the archival evidence. Cross-section analysis showed no traces of gum and no unusual pigments, with oil as the only binding medium. The versions of *Summer* and *Winter* are so similar they appear to come from the same process. Although most of them were previously identified as Boulton and Eginton's mechanical paintings, the Brodsworth *Winter* had an original label on the back which described it as a 'Polygraphic Copy'.¹²⁰ Thus, all the versions of *Summer* and *Winter* appear to be Booth's polygraphic copies which is a very significant finding in itself as the BMAG, BM and National Portrait Gallery images were all previously identified as by Eginton. Saunders suggested the possibility that the process was based on a screen or block print. The most curious findings were the unusually thick preparatory layers on the canvases. The upper-most layer contained pumice (volcanic lava) which has the characteristic of being very absorbent. Saunders argued that if the paintings were made by stencilling or block printing, it would be an

¹²⁰ The label reads 'A Polygraphic Copy Of A Landscape, representing A Winter Scene; from an original picture, by De Louthembourg; Which, with its companion, a *Summer Scene*, cost, at Mons. Des Enfans' Sale One Hundred and Fifty Pounds. *Now in the Possession of the Society.* The POLYGRAPHIC ART, of copying or multiplying Pictures in Oil Colours, by a chymical and mechanical Process, is the original Invention of Mr. Booth, and now carried on by the Polygraphic Society in London. N.B. This Picture, like all others in Oil, may hereafter want Varnish, in that Case it may be varnished in the same Manner as any other Picture in Oil.' The Noel Joseph Desenfans sale was 8 June 1786.

advantage to speed up the process of drying before another block of colour was laid. The pumice-rich layer would account for the flat, lean appearance of the oil paint as it was absorbed into the preparatory layer.

Although the scientific results appear to be describing a different technique to the archival evidence, they do not disprove that the mechanical painting process employed an impression; rather the tests suggest that examples, hitherto thought to be mechanical paintings, are more likely to be produced by Joseph Booth's polygraphic copying. The archival evidence, supporting a separate process using an aquatint plate, impression and dead-colour, is consistently referred to by several different sources.¹²¹ The chapter has shown the contemporary interest in coloured mezzotints and printing in imitation of painting which may have influenced Boulton and Eginton to develop mechanical paintings in imitation of oil paintings. As Berg has proposed, imitation led to innovation, in this case the adaptation of new technologies, like aquatint and transfer printing, in the service of mechanical painting. The British Museum's exciting results have opened up a pressing need for further research into Booth's polygraphic process and into finding authentic examples of mechanical paintings by following up existing leads and opening up new avenues of investigation through the records of the architects discussed in chapter three.¹²²

¹²¹ Patent no. 3129, AD 1809, A patent for ornamenting japanned and varnished wares, taken out in 1809 by Charles Valentine of Clerkenwell, described a process for transferring a paper impression to a hard body, using multiple plates inked with pigments held in strong burnt linseed oil to build up an impression on paper prepared with gum arabic, and then transferring the impression to a hard surface by applying copal varnish as an adhesive. The patent was initially thought to hold some clues for the resolution of the lack of finding evidence of an impression and is worthy of further research. However, it was not consistent with the BM's material findings or the archival evidence of a single plate and extensive hand-finishing.

¹²² Robinson and Thomson, 'Matthew Boulton's Mechanical Paintings', 506. suggested Moses Haughton's *The Owl* (BMAG) and some pictures at Culzean Castle. My research has suggested two roundels after Angelica Kauffman at Newby Hall, North Yorkshire.

CHAPTER 2

REPRODUCTION AND TASTE: SELECTION OF ARTISTS AND SUBJECTS

Matthew Boulton's selection of the artists and the subjects reproduced as mechanical paintings are evidence of his own personal taste and the judgements he made about the discrimination of his buyers. Walter Benjamin's essay, *The Work of Art in an Age of Mechanical Reproduction* and Pierre Bourdieu's *Distinction: A Social Judgement of Taste* are useful in providing a framework for examining the effect of reproduction on the original work and the implications for social class in the judgement of taste. Benjamin's essay on *The Work of Art* looked at the effect of reproduction on the authenticity of the original and posited the concept of the 'aura' of the work of art.¹²³ I will be arguing that the artists' involvement in sending works for mechanical painting and artistic practices of copying in the eighteenth century show that reproduction was thought to have a positive outcome for the artist. However, the presence of reproductions was seen to threaten the value of the original hence, as I argue below, it was the owners of the original that Boulton (and later Booth's Polygraphic Society) sought to reassure that, in Benjamin's terms, the 'aura' of the original would not be diminished.

Bourdieu's sociological treatise on *Distinction* argued that people situate themselves in their relative position in society by making lifestyle choices that distinguish them from other fractions, or sub-classes, of society.¹²⁴ Bourdieu's powerful arguments will be used to show how the artists and subjects selected by Boulton for reproduction demonstrate his awareness of class, his own ambivalent feelings about class, his desire to make money by shaping taste (drawing implicitly on how taste is used to mark social distinction), and the attributes he chose to utilise. In other words, I will explore the relationship between goods' production and the production of taste. Where Benjamin wrote about mechanical reproduction in relation to the work of art or object, Bourdieu focused on people and the way they are classified, and classify themselves, by the cultural choices they make. In this chapter I will be exploring the effect of reproduction and taste on the selection of artists and subjects for mechanical paintings. In particular I will be studying some works by Benjamin West, Angelica

¹²³ Benjamin, *The Work of Art in the Age of Mechanical Reproduction*, section II, 218

¹²⁴ Bourdieu, *Distinction*, 6

Kauffman and Philippe Jacques de Loutherbourg used for mechanical paintings which effectively challenged established norms of good taste.

Although Benjamin's work applied specifically to mechanical reproduction in photography and film, he referred to earlier forms of technical reproduction such as founding and stamping, woodcuts, engraving and etching, suggesting that his theories were also relevant to previous forms of reproduction. He distinguished three different functions of reproduction: copies made by pupils for training, copies by artists to diffuse their own works, and copies made by third parties for gain.¹²⁵ These practices were all prevalent during the eighteenth century; for example, the Grand Tour encouraged the proliferation of copies of Old Masters and antiquities, and multiple versions of their own work by contemporary artists. Benjamin's tripartite system, however, confuses function and person – the two functions of training and commercial gain - with the multiple roles of artists as both producer and reproducer of their own work and the works of others. Indeed, the training and gain were complementary for young artists who were learning their trade while earning a living in Europe, particularly Italy. Ann Uhry Abrams recounted that Benjamin West (1738-1820) was one of a number of young artists copying from old masters and experimenting with paintings that incorporated classical forms 'to earn and learn'.¹²⁶ Judy Egerton, writing about Joseph Wright of Derby (1734-1797), stated that Brooke Boothby bought various works from Wright including two copies after Cozens.¹²⁷ More sinisterly, George Morland (1763?-1804) was a bound apprentice for seven years from 1777 onwards, during which time his chief employment was in copying and forging, particularly seventeenth-century Dutch landscapes.¹²⁸ Angelica Kauffman (1741-1807) is a particularly good example of an artist who often made copies of her own works for new clients. Her painting of *Cornelia, the Mother of the Gracchi, Pointing to Her Children as Her Treasures* (1785, Virginia Museum of Fine Arts, Richmond) was commissioned by George Bowles and replicated for Prince

¹²⁵ Benjamin, *The Work of Art*, section I

¹²⁶ Ann Uhry Abrams, *The Valiant Hero: Benjamin West and Grand-Style History Painting*, Washington DC, 1985, 80

¹²⁷ Judy Egerton, *Wright of Derby*, London, 1990, 118

¹²⁸ Michael Rosenthal, 'George Morland', Jane Turner (ed.), *The Dictionary of Art*, 1996, 122

Poniatowski, nephew of the King of Poland, and for Queen Caroline of Naples, proving what an unexceptional practice it was.¹²⁹

Benjamin argued that reproduction interfered with the authenticity of the work of art and depreciated the quality of its 'aura' – its presence in space and time.¹³⁰

Recognising that a reproduction may affect the value of the original in some way, the producers of both mechanical paintings and polygraphic copies had to tread a fine line between emphasising the likeness and the difference of the reproduction in relation to the original. Although the Reverend Stebbing Shaw had proclaimed in 1801 that mechanical paintings were good enough 'to be taken for originals by the most experienced connoisseurs', Boulton had made a more modest claim to making 'better copies of good originals' and emphasising the mechanical means of production and the low cost.¹³¹ The catalogue of the Polygraphic Society's Fifth Exhibition in 1790 made a clever distinction between the quality of the polygraphic copies and the originals, using their visibility by stating that they 'possess the Effect of the Originals, and are scarcely distinguishable therefrom, at the Distance the Originals themselves ought to be viewed'.¹³² A photograph of Portman Place illustrating the mechanical paintings that Mrs Montagu bought, shows them to be used as ceiling panels and 'overdoors' (Figure 5), and so at a distance which would obscure any imperfections. However, the size of both the polygraphic copies and the mechanical paintings, in the range of 61 x 76 cm to 101.6 x 127 cm, and the fact that they are framed, might suggest that they could sometimes merit a closer viewing distance to appreciate them.

One way to reduce the threat to the aura was to remove the reproduction to a distant geographical location so that the owners of the original would be unlikely to encounter, or even know of, the reproduction. In the same letter to Wynn, Boulton suggested that all the reproductions would be sold abroad, 'making an extensive sale of them in foreign countries'.¹³³ The Polygraphic Society gave a different and slightly less reassuring restriction on the sales of its copies by stating that less than an average

¹²⁹ Wendy Wassyng Roworth, *Angelica Kauffman, A Continental Artist in Georgian England*, London, 1992, 91

¹³⁰ Benjamin, *The Work of Art*, section II

¹³¹ Shaw, *The History and Antiquities of Staffordshire*, 118. Dickinson, *Matthew Boulton*, 104. Letter to Sir Watkin Williams Wynn, dated 12 June 1779.

¹³² Booth, *A Catalogue of Pictures*, 4

¹³³ Dickinson, *Matthew Boulton*, 104. Letter dated 12 June 1779

of two per county should be produced.¹³⁴ While the market was there to support copying, the originality and uniqueness of a work was still important in submissions to the Royal Academy (RA) whose rules prohibited any copies from being exhibited.¹³⁵

There was clearly no intention to sell the mechanical paintings as anything but good reproductions of originals, at least not as far as the artists were involved. The appeal of the ingenuity of the ‘mechanical’ reproductive process was a significant attraction for the buyers as will be shown in chapter three. There could also be some subtle differencing of the reproduction from the original by the producer apart from the lack of a signature. As the mechanical paintings were hand-finished there would always be some differences from the original. Another way that Boulton marked the reproduction from the original was to make the copies smaller, writing to Wynn in 1779 that ‘You’ll please to observe that as the Copies I take are upon a smaller scale than the original, the Value of the original is in no danger of being diminish’d’.¹³⁶

Boulton tried to persuade Wynn that the copies would not reduce the value of the original. Rather they would make them better known ‘in the same manner as a *fine* print gives Celebrity to the picture whence it is taken’.¹³⁷ The comparison, however, was not particularly accurate as prints are graphic representations of the painting and do not attempt to reproduce the original medium, colour or texture. Yet, James Keir, who appeared to have a more prominent role in the oversight of the mechanical paintings than has previously been acknowledged, felt that the reproductions did reduce the value of the original. In his memoirs of 1809 he stated that ‘the paintings which are called mechanical [...] had not an extensive sale, proportionate to their execution. The more a work of taste is multiplied, so that many may possess it, the more its imaginary value is diminished’.¹³⁸ The Polygraphic Society catalogue,

¹³⁴ Booth, *A Catalogue of Pictures*, 5-6, ‘to obviate such objections, the Society take the Opportunity to observe, that they have resolved to limit the Number of each Subject, so, that at the utmost were they equally distributed, there would not be two of any one subject in each County’

¹³⁵ Sidney C Hutchison, *The History of the Royal Academy 1768-1986*, London, 1986, 36

¹³⁶ Robinson and Thompson, ‘Matthew Boulton’s Mechanical Paintings’, 505. M Boulton to W W Wynn 17 June 1779.

¹³⁷ Ibid.

¹³⁸ Dickinson, *Matthew Boulton*, 107.

agreeing in spirit with Boulton, emphasised the increase in value of the original rather than its celebrity:

The Society have also been indulged with the Loan of several capital original Pictures, to copy from Gentlemen's Collections; the Value of which will be naturally encreased [sic] in Proportion as the Polygraphic Copies make them more known to the World.¹³⁹

It is ironic that with the passage of time and loss of provenance, many mechanical paintings and polygraphic copies are probably now regarded as original oil paintings by their owners. Thus, it appears that the 'aura' can be acquired over time and depends upon the perceived quality and attribution of the work. Benjamin identified that a work's presence, or 'its unique existence at the place where it happens to be', is part of its aura, particularly for early religious art.¹⁴⁰ This is recognised by museums and art galleries which try to create a sympathetic environment in which to display a work. However, I consider the aura is a function of reception rather than an attribute of the object. When mechanical reproductions are displayed, often unwittingly, as originals - the viewer accords them the aura of the original.

The position of copyright in the eighteenth and nineteenth century has been explored by Ronan Deazley in his forthcoming essay on the Fine Arts Copyright Bill, 1862.¹⁴¹ There was no copyright for fine artists prior to this legislation as only engravers were protected from the copying of their engravings (Engravers Acts 1735, 1766 and 1777). In the subsequent legislation of 1862 more attention was paid to the owner of the work than the artist who produced it, due to the lobbying of the purchasers to have their property 'protected from piracy by the artists [making multiple versions]'.¹⁴² Deazley argues that the artists themselves may have felt they had no need for bespoke legal protection by relying on established custom and practice and 'the indirect protections offered by the existing engravers' legislation'.¹⁴³ Although Benjamin was not concerned with ownership, it seems, during the eighteenth century, that the owner

¹³⁹ Booth, *A Catalogue of Pictures*, 5

¹⁴⁰ Benjamin, *The Work of Art*, 3

¹⁴¹ Ronan Deazley, *Breaking the Mould? The Radical Nature of the Fine Arts Copyright Bill 1862*, forthcoming publication in R Deazley, M Kretschmer and L Bently, *Privilege and Property: Essays on the History of Copyright*, Cambridge, c.2010

¹⁴² Deazley, *Breaking the Mould?*

¹⁴³ Deazley, *Breaking the Mould?*

rather than the artist was probably more protective of the unique ‘aura’ of his property.

Pierre Bourdieu’s sociological analyses of 1960s French lifestyle choices leading to his influential work *Distinction: A Social Critique of the Judgement of Taste* can be regarded as relevant to the choice of artist and subject by Boulton for mechanical paintings. This is because Boulton wanted the reproductions to appeal to the nobility and gentry and those wishing to identify with those classes. His marketing strategy for mechanical paintings was similar to that for his expensive ormolu as will be shown in chapter three. Bourdieu’s theory allows for the identification of some of the attributes of the pictures which differentiate them from other subjects and emphasise the novelty of the process by aligning with contemporary fashionable artists and *avant garde* subjects such as modern history, literature and poetry. Bourdieu’s main thesis was that individuals implicitly or sub-consciously defined the social class and class fractions with which they wanted to be identified through their lifestyle choices, their self-presentation, the way they walked and spoke, and in their consumer choices, from food to pastimes.¹⁴⁴ Bourdieu cited Kant’s definition of taste as an acquired disposition to ‘differentiate’ and ‘appreciate’ aesthetic values.¹⁴⁵ Taste functions as a marker of class and, as it is acquired or learned, it can be the route through which the upwardly mobile chart their progress. Bourdieu described three forms of capital which influence taste: economic (based on wealth and income), cultural (based on education and experience), and social (based on class origin).¹⁴⁶ In cultural capital he made the distinction between inherited and acquired. For him inherited culture is the experience and familiarity with legitimate culture (high or canonical culture) which is sometimes seen by the recipients as being innate, while acquired culture is through education and training, for example the gentleman and tutor on the Grand Tour. These are heavily inter-dependent variables where higher income, higher levels of education and higher class go together. However, Bourdieu was interested in the different sub-divisions or fractions resulting from holding one or more of the variables constant. Thus, he

¹⁴⁴ Bourdieu, *Distinction*, 466

¹⁴⁵ Bourdieu, *Distinction*, 474

¹⁴⁶ Bourdieu, *Distinction*, 114, 262

identified differences in the lifestyle choices of people with similar income but different cultural capital such as higher education teachers and employers.¹⁴⁷

Although taste is acquired, the ability to discriminate and classify is intuitive and largely subconscious. However, the individual who classifies is also subject to classification. As Bourdieu wrote, ‘social subjects, classified by their classifications, distinguish themselves by the distinctions they make’.¹⁴⁸ How, then, did Boulton, a reproducer of art, using what appeared to be mainly his personal choices of artist and subject matter, and consciously aiming to affect taste, identify his own social pretensions and sense of place?

In the Boulton correspondence there is an awareness of social position which reveals some of the signifiers of class and status. Boulton and fellow industrialists like Wedgwood were aware of social class in relation to their markets and in the notion of taste in creating goods which would appeal to buyers with social pretensions. Boulton was proud of working for a living as his reply to the letter of Philip Thicknesse, a traveller and author who tried to insult Boulton by addressing him as Tradesman of Birmingham, demonstrates when Boulton described how ‘early in life Fortune gave me the option of assuming the character of an idle man commonly called a Gent’n, but I rather chose to be of the class w’ch Le Baron *Montesque* describes as the constant contributors to the purse of the commonwealth rather than of another class which he says are always taking out of it without contributing anything towards it’.¹⁴⁹ Boulton’s two wives brought dowries of £14,000 each which he could have retired on. He referred to Montesquieu’s *Considérations sur les causes de la grandeur des romains et de leur décadence* (1734) which identified the decadence of the ruling classes with the fall of Rome, thereby giving distinction to his knowledge and education while deriding the classes who relied on inheritance alone.¹⁵⁰ Wedgwood also expressed his awareness of the fluid boundaries of class when he said ‘I scarcely know without a good deal of recollection whether I am a Landed gentleman, an Engineer or a Potter, for indeed I am all three by turns’.¹⁵¹ In general the men in the

¹⁴⁷ Bourdieu, *Distinction*, 115

¹⁴⁸ Bourdieu, *Distinction*, 6

¹⁴⁹ Dickinson, *Matthew Boulton*, 37

¹⁵⁰ Albert Boime, *Art in an Age of Revolution 1750-1800*, Chicago, 1987, 29

¹⁵¹ Uglow, *The Lunar Men*, 112

Lunar Society, though somewhat disparate in social rank, ignored social inequalities. But, occasionally, comments by the outspoken Erasmus Darwin betrayed the ever present awareness of class, particularly as expressed through education. It is recorded, for example, that ‘Dr Darwin says *nobody* writes *Grace*, & Rt honourable, but Taylors & such like folks’.¹⁵²

Sir Sampson Gideon and Richard Barwell, who both bought mechanical paintings from Matthew Boulton, are examples of upwardly mobile individuals who used inherited and acquired cultural capital to move into the lifestyles of the nobility and gentry. Sir Sampson’s father had been a wealthy and influential financier whose ambition to found a titled family, denied fulfilment by his Jewish ancestry, was realised by his son. The father had an important collection of paintings, many from Sir Robert Walpole’s house.¹⁵³ Sir Sampson ordered some small mechanical paintings in 1780 and later had his portrait painted by Benjamin West in 1784.¹⁵⁴ Barwell was a ‘nabob’, a fabulously wealthy East India Company servant who had worked with Warren Hastings.¹⁵⁵ He retired to England and bought Stansted House in Sussex from the Earl of Halifax in 1781. He bought £85 worth of mechanical paintings in 1780, including West’s *Erasistratus* and Murillo’s *Good Shepherd* which, given the average cost of about eight guineas each for a mechanical painting, would have covered a lot of wall with cultural signifiers.¹⁵⁶

The class categories in the late-eighteenth century may not have been clearly articulated or defined but contemporary individuals were very aware of their status in relation to the variety of people they met. Servants were one indicator of social class and were also the source of information about their masters or mistresses who could not be questioned directly about their status. John Hodges wrote to Boulton that a lord had visited the manufactory at Soho but he could not ascertain his name, ‘he being

¹⁵² Uglow, *The Lunar Men*, 113

¹⁵³ *Oxford Dictionary of National Biography*, Edgar Samuel, ‘Samson Gideon (1699-1762)’ [father of Sir Sampson Gideon (1745-1821)], www.oxforddnb.com, accessed 13 December 2008.

¹⁵⁴ BA&H, MS 3782/12/63/12, John Hodges (Soho) to Matthew Boulton (London), 17 Apr. 1780

¹⁵⁵ *Oxford Dictionary of National Biography*, TH Bowyer, ‘Richard Barwell (1741-1804) www.oxforddnb.com, accessed 2 November 2008. Jennifer Kloester, *Georgette Heyer’s Regency World*, London, 2005, 14; Nabob was an eighteenth-century term for someone who had made their fortune in India or the Far East, chicken nabobs had a smaller fortune.

¹⁵⁶ BA&H, MS 3782/12/63/19, John Hodges (Soho) to Matthew Boulton (Plangary/Plengwarry Green), 31 Oct. 1780

attended with no servants'.¹⁵⁷ Hodges could also spot gentlemen and treat them accordingly, writing that 'no body of any particular note hath visited Soho, though people are coming daily [...] Mr Framlington and Mr Shaft two gentlemen from Newcastle were here and gave Orders for Goods – say plated Wares and Tray, amount about £30 – who appeared to be Gentlemen, I shew'd them particular attention'.¹⁵⁸ In this period of industrialisation, with fortunes being made without regard to class or education, the opportunity to increase one's status came with many decisions about how to differentiate oneself from the group below and be recognised and accepted in the group to which one aspired. One of the markers of distinction for Boulton and the industrial tourists who visited the Soho manufactory was the ingenuity of the mechanical painting process. This argument will be developed in chapter three.

In order to examine the question of taste in relation to mechanical paintings it will be instructive to look at some of the artists and subjects chosen by Boulton to reproduce as mechanical paintings, or, as he asked John Wyatt in 1778 to enquire from his cousin, the architect James Wyatt, about 'such subjects that will bear repetition are the most proper for our purpose'.¹⁵⁹ The identity of the artists and subjects can be found in the Boulton correspondence and in the various inventories from Soho, particularly 'a catalogue of some of the best and most favorite pieces of our mechanical Paintings' sent to Baron de Watteville de Nidan in December 1780.¹⁶⁰ As Boulton was in the throes of dissolving his partnership with Eginton by then, it may be assumed that these mechanical paintings were either in stock or easily produced from existing plates.¹⁶¹ Of the twenty-four paintings listed, fourteen were by Angelica Kauffman, three by Moses Haughton (1734-1804), two by Sir Joshua Reynolds (1723-1792), and one each by Murillo (1618-1682), van Dyck (1599-1641), Parmigianino (1504-1540), Antonio Zucchi (1726-1795) and William Hodges (1744-1797). Moses Haughton was a local artist from the Birmingham area, once employed by Henry Clay in japped

¹⁵⁷ BA&H, MS 3782/12/63/9, John Hodges, Letter to Matthew Boulton, 8 June 1778

¹⁵⁸ BA&H, MS 3782/12/63/5, John Hodges, Letter to Matthew Boulton, 9 May 1778,

¹⁵⁹ Robinson & Thompson, 'Matthew Boulton's Mechanical Paintings', 504, Boulton & Fothergill to John Wyatt, 23 Nov 1778

¹⁶⁰ Robinson & Thompson, 'Matthew Boulton's Mechanical Paintings', 507, B&F letter to Baron de Watteville de Nidan, Capitaine de Dragons, Berne, 23 December 1780

¹⁶¹ BA&H, MS 3782/1/30/16 Rich'd Clarke to Mess'rs B&F (Soho), 10 July 1781, the catalogue is very similar to the list of paintings ordered by Clarke & Green in 1781, three of which are marked in pencil by 'JPS' as in stock.

ware and engraving, and he later exhibited portraits at the Royal Academy.¹⁶² Zucchi was a long-time friend and future husband of Kauffman, engaged mainly in painting decorative panels for Robert Adam, while William Hodges was the official landscape artist on Cook's second voyage.¹⁶³ It is interesting to note that only three of the artists (Murillo, van Dyck and Parmigianino) were Old Masters. It may be that the gentlemen collectors were less likely to offer their old masters for copying or it may suggest the more contemporary taste that complemented the idea of an 'ingenious' new process. Of the subject matter, thirteen are history paintings, eight nymphs and cupids, two portraits, two still-lives and a set of four landscapes. The predominance of history paintings and lack of portraits in mechanical painting is the reverse of the market for original oils produced by living artists which heavily favoured portraits over narrative subjects.¹⁶⁴ Yet the appeal of history paintings, despite, or perhaps because of, the difficulty in reading them, is fitting for a Bourdieuan perspective because of the requirement for cultural capital in the form of knowledge of or an education in the classics.

Without attempting to take a representative sample I will be examining two large history paintings by Benjamin West and Kauffman, one of Kauffman's 'cupids' and a large genre painting by Philippe Jacques de Loutherbourg because they illustrate the appeal of novel and fashionable works by well-known artists. This is key to Bourdieu's theory of distinction as I will argue that the challenging and *avant garde* subject matter allowed the producer and consumer to both ally with, and differentiate themselves from, the taste of the nobility and gentry who had inherited their wealth. The two pictures by Kauffman are from the 1780 catalogue, *Trenmor and Inibaca* (Figure 6) and *Graces Awaking Cupid* (Figure 1); while de Loutherbourg's *Winter* (Figure 7) and West's *Death of General Wolfe* (Figure 8) are also mentioned in

¹⁶² *Birmingham Museums and Art Gallery*, 'Moses Haughton', www.bmagic.org.uk/people/Moses+Haughton, accessed 18 November, 2009

¹⁶³ Malise Forbes Adam and Mary Mauchline, 'Kauffman's Decorative Work', ed. Wendy Wassing Roworth, *Angelica Kauffman: A Continental Artist in Georgian England*, London, 1992, 114 for Antonio Zucchi. Geoff Quilley, 'William Hodges, artist of empire', eds Geoff Quilley and John Bonehill, *William Hodges 1744-1797: The Art of Exploration*, 1-2, 'Hodges is a key figure in proposing landscape painting both as the obvious means of recording the topographies of empire, and (most revolutionary) also as a suitably philosophical medium for evaluating them and commenting on their significance'.

¹⁶⁴ Marcia Pointon, 'Portrait-Painting as a business enterprise in London in the 1780s', *Art History*, vol 7, 1984, 189. An analysis of Royal Academy exhibits: annual percentage by genre showed that between 1781 and 1785 portraits ranged from 34.7% (lowest) to 49.36% (highest) compared with history painting 9.9% to 16.49%.

correspondence with Boulton. All three artists were actively involved in promoting their work through mechanical reproduction as will be shown. Kauffman was at the height of her fame in Britain, particularly through her extensive print market,¹⁶⁵ West was history painter to the king and the future president of the Royal Academy after Reynolds,¹⁶⁶ and de Louthembourg was making a name for himself as a versatile set designer for David Garrick's Drury Lane theatre.¹⁶⁷

Kauffman was certainly an early favourite with Boulton as Robinson and Thompson have maintained that she was commissioned to paint *Penelope Weeping Over the Bow of Ulysses* in 1776 and that Boulton owned many of her paintings.¹⁶⁸ Joseph Barney went to London in 1774 and used Antonio Zucchi's address in John Street, Adelphi, when he exhibited at the Society of Artists in 1777, so he was also very familiar with her work.¹⁶⁹ Kauffman's *Trenmor and Inibaca* (1773, private collection, Figure 6) is mentioned in correspondence by John Hodges, Clarke and Green, Joseph Barney and Eginton between January and November 1781. The catalogue size was 89 x 68.5 cm and the size of the original was 128 x 103.5 cm. The painting depicts Trenmor in armour, dropping his lance in astonishment at the sight of Inibaca taking off her armour and revealing a breast. The dramatic background is dominated by a dark looming tree, with glimpses of mountain and sea. The story came from James Macpherson's apocryphal *Works of Ossian*, poems purportedly composed in the third century AD about Fingal and his ancestry, and published in 1765.¹⁷⁰ The painting was exhibited at the RA in 1773 and engraved by Thomas Burke later the same year.¹⁷¹ The subject is typical of Kauffman in showing a strong proactive heroine and slighter, effeminate male; the message made palatable for male patrons by the cross-dressing

¹⁶⁵ Alexander, 'Kauffman and the Print Market', 141. There were more singly issued stipples engraved in England after the work of Angelica Kauffman than after any other painter. Between 1774 and 1781 some 75 stipple engravings were published after her paintings and drawings.

¹⁶⁶ *Oxford Dictionary of National Biography*, Dorinda Evans, 'Benjamin West', www.oxforddnb.com, accessed 13 December 2008.

¹⁶⁷ Rüdiger Joppien, *Philippe Jacques de Louthembourg, RA, 1740-1812*, exhibition catalogue, London, Kenwood, The Iveagh Bequest, London, 2 June – 13 August 1973, London 1973, p3

¹⁶⁸ Robinson & Thompson, 'Matthew Boulton's Mechanical Paintings', 504

¹⁶⁹ Olga Baird, In Matthew Boulton's orbit: Joseph Barney of Wolverhampton, unpublished conference paper delivered to Where Genius and the Arts Preside: Matthew Boulton and the Soho Manufactory, 1809-2009, 3-5 July 2009, 2

¹⁷⁰ Rafael Valls, *Angelica Kauffman in British Collections*, catalogue Rafael Valls Ltd, London, 2007, 36

¹⁷¹ Valls, *Angelica Kauffman in British Collections*, 36

and sexual allusion.¹⁷² It was also one of the first paintings of British History seen at the RA, the first being *Vortigern Enamoured with Rowena* (1770 Devon, Saltram House), also by Kauffman. Thus, it appealed on many levels, implying intellectual knowledge of history and literature, satisfying the male gaze with partially exposed breast, appealing to patriotism, romanticism and, for those with eyes to see, the dissatisfaction of some women with their position in society and their desire to play a more active role.¹⁷³ The other Kauffman history paintings in Boulton's possession likewise depicted strong female heroines and referred to knowledge of the classics or Shakespeare, then undergoing something of a revival under Garrick and through John Boydell's ambitious print project, the Shakespeare Gallery.¹⁷⁴

Kauffman's *Nymphs Waking Cupid* (Figure 1) is worthy of discussion as it represents one of the lighter subjects of nymphs and cupids which featured very strongly in the 1780 catalogue, mainly through Kauffman's works but also including van Dyck's *Time Clipping the Wings of Cupid* and Reynolds' *Hebe*. Kauffman herself called them her 'fancy figures'.¹⁷⁵ The dimensions of the mechanical paintings attest to a reasonable size picture and they often came in pairs, in round or square shapes possibly more in keeping with ladies' boudoirs and drawing-rooms.¹⁷⁶ *Graces Awaking Cupid* depicted two of the three graces attempting to waken Cupid by poking a stick in his ear. The mythological and romantic scene gives licence for semi-nudity - one of the graces is revealing a breast while the diaphanous clothing of both emphasised their thighs and the outline of a nipple, and revealed delicate sandal-strapped feet. The picture remains charming without appearing in any way salacious. Kauffman often took her inspiration from literature and these playfully flirtatious subjects probably derived from Pietro Metastasio's poem *Le grazie vindicate*

¹⁷² Kauffman did draw heavier, more muscular males when the occasion demanded, as can be seen in her religious paintings, notably *David and Nathan*, Bregenz, Vorarlberger Landesmuseum, 1797, but as a female artist she was both criticized for the lack of, and prevented from, studying life models.

¹⁷³ Laura Mulvey, 'Visual Pleasure and Narrative Cinema' in *Visual and other pleasures*, 1989, chapter 3. Griselda Pollock, 'The Gaze and the Look: Women with binoculars – A question of difference', R Kendall and G Pollock (eds), *Representations of Women and the Politics of Vision*, 1991, 106-130. These essays contain a discussion of the male gaze and the power relations between the predominantly male buyers, artists and viewers compared with the passive female role of being viewed.

¹⁷⁴ Godfrey, *Printmaking in Britain*, Oxford, 1978, 47

¹⁷⁵ Tobias G Natter (ed.), *Angelica Kauffman: A Woman of Immense Talent*, exhibition catalogue, Germany, 2007, 258. Letter from Kauffman to Daniel Daulby 1778, 'she [Kauffman] has smaller sizes for historical or fancy figures'

¹⁷⁶ Adam and Mauchline, 'Decorative Work', 122-124

(Revenge of the Graces) published in 1735.¹⁷⁷ Metastasio (1698-1782) was court poet in Vienna and his works were extremely popular. Fanny Burney, an astute commentator on class and manners, remarking on the distinction of cupid imagery as a status symbol, has written that ‘they who, in a short time, can make themselves known and admired now in London, must have their Cupids’.¹⁷⁸ William Wynne Ryland made a stipple engraving of *Nymphs waking Cupid* after Kauffman, in 1776, entitled *Dormio Innocuus* (Figure 1b). He gave Latin titles to a series of circular prints of allegorical scenes of love, flattering the intellect and redefining the appeal to an educated audience.¹⁷⁹ The variety and subtlety of Kauffman’s works allowed the purchaser to display their literary and classical knowledge while at the same time alluding to sexual politics, thereby distinguishing themselves from a narrower moral and didactic reading.

West’s *Death of General Wolfe* (1770, National Gallery of Canada, Ottawa, Figure 8) was very well known, exhibited at the RA in 1771, replicated in at least four almost identical versions by the artist for other clients including the King, made famous by public exhibitions and engraved by William Woollett in 1776 for Boydell. Everyone concerned in the production of the engraving earned a fortune. Boydell received £15,000, Woollett nearly £7,000, and West picked up the undisclosed royalties.¹⁸⁰ Reproduced as a mechanical painting by Joseph Barney in 1780, Hodges informed Boulton that it was on display at Soho Manufactory where it could be admired by the visitors, stating that ‘he [Barney] has just sent from W’Hampton for you a large painting of General Wolfe which by Mr Fothergill’s direction we have placed in the Toy Room’.¹⁸¹ Boulton had a copy but it is not known whether it was a print or mechanical painting; returning the picture in 1781 Barney wrote that ‘whatever damage *General Wolfe* has received was done before it came to me’.¹⁸²

The Death of General Wolfe depicts Major-General James Wolfe moments before his death on the battlefield, surrounded by his men. An officer in tartan is pointing to a

¹⁷⁷ Roworth, *Angelica Kauffman: A Continental Artist in Georgian England*, 44

¹⁷⁸ Adam and Mauchline, ‘Decorative Work’, 136

¹⁷⁹ Alexander, ‘Kauffman and the Print Market’, 156-7

¹⁸⁰ Boime, *Art in an Age of Revolution*, 486

¹⁸¹ BA&H, MS/3782/12/63/20, John Hodges (Soho) to Matthew Boulton (Plengwarry Green), 30 Nov. 1780. The Toy Room was one of the salerooms, used to display small metal items.

¹⁸² BA&H, MS 3782/1/32/3, Joseph Barney (W’hampton) to John Hodges (Soho), June 12 1781

figure in the mid-distance bearing the news of victory at the Battle of Quebec (1759), the turning point in the battle for colonial rivalry in North America between Britain and France. The composition is neo-classical – a flat frieze-like arrangement of figures with noble expressions, revealing their sorrow and concern by gesture and bodily deportment. An aide is staunching a wound to Wolfe’s chest but there is no great show of blood and gore. The sky reflects the storm of battle passing and the bright skies of peace and prosperity returning under the rule of George III. Wolfe’s upturned face, his twisted body and the great furred flag behind him suggest the deposition of Christ from the cross. A native American, depicted as a noble savage contemplating Wolfe’s suffering, dominates the front of the canvas like a classical nude. When West was first introduced to the statue of the Apollo Belvedere in Rome he is said to have remarked ‘how like it is to a young Mohawk warrior’.¹⁸³

Even more so than Kauffman’s *Trenmor*, West’s *Death* challenged the academic tradition of history painting as it referred to recent history and the combatants were depicted in modern rather than classical dress. Sir Joshua Reynolds had urged West to give the subject a classical treatment with heroic nudity, as history paintings were meant to convey a timeless, universal message.¹⁸⁴ However, West controversially painted the figures in their authentic uniforms against a modern battlefield.¹⁸⁵ He reversed the usual format of classical story with references to modern themes, using instead a recent event which had references to Greek history.¹⁸⁶ Epaminondas, a Greek warrior, was mortally wounded, but waited until victory was confirmed before removing the spear from his chest, which had been stemming the blood and delaying his inevitable death. The depiction of the native American with bared, muscular chest and noble bearing, was probably enough to evoke a classical image such as the Apollo Belvedere, and although George III was initially repelled by the modern dress he eventually ordered a copy.¹⁸⁷

West was not immune to distinguishing himself by dress to establish his status as a gentleman. When he had a private meeting with George III, he determined to dress

¹⁸³ Abrams, *The valiant hero: Benjamin West and grand-style history painting*, 76.

¹⁸⁴ *Oxford Dictionary of National Biography*, ‘Benjamin West’.

¹⁸⁵ Abrams, *The valiant hero: Benjamin West and grand-style history painting*, 173

¹⁸⁶ Boime, *Art in an Age of Revolution*, 130

¹⁸⁷ Abrams, *The valiant hero: Benjamin West and grand-style history painting*, 170.

appropriately, wearing a sword to denote his position in society, as he told his American pupil Charles Willson Peale that he did so ‘to belong to the higher orders of society’.¹⁸⁸ Interestingly, Boulton also dressed up in the latest fashion and wore a sword on his visit to France in 1791.¹⁸⁹ West became History Painter to the King in 1772.¹⁹⁰ Twenty years later his class aspirations were overplayed when he refused a knighthood in the expectation of a hereditary peerage.¹⁹¹

West was familiar to both Boulton’s Lunar friends and his artistic employees. Benjamin Franklin listed West as an example of one ‘of our young geniuses’.¹⁹² Eginton’s later career as a glass painter was enhanced by the loan of West’s *Conversion of St Paul* as a model for altar windows in St Paul’s, Birmingham (1789). Barney, wanting to improve the likeness of the painting of *Erasistratus of Ceos the Physician, Discovers the Love of Antiochus for Stratoniche* (unknown date, private collection), was on familiar enough terms to finish it from the original at West’s house in London.¹⁹³ West’s association with applied art and manufacture was later utilized when he was commissioned to paint a great decorative scheme devoted to art and industry at Queen’s Lodge, Windsor, to celebrate the union of the liberal and mechanical arts brought together by common participation in British industry and empire.¹⁹⁴ The central motif of *Genius Calling Forth the Fine Arts to Adorn Manufactures and Commerce and Recording the Names of Eminent Men in Those Pursuits*, exhibited at the RA in 1791, was Wedgwood’s Etruria. This was symptomatic of the changing status of the mechanical arts and their inclusion in cultural capital.

The painting *Winter* (Figure 7) by Philippe Jacques de Loutherbourg (1740-1812) also seems to be a break from tradition within Georgian painting. *A Winter Morning, with a Party Skating*, exhibited at the Royal Academy in 1776, is a large genre painting depicting the artist himself with his friends, engaged in a pastime which included people certainly from the middle classes, if not the gentry, together with the lower

¹⁸⁸ Boime, *Art in an Age of Revolution*, 125

¹⁸⁹ Dickinson, *Matthew Boulton*, 124

¹⁹⁰ Boime, *Art in an Age of Revolution*, 128

¹⁹¹ *Dictionary of National Biography*, ‘Benjamin West’

¹⁹² Boime, *Art in an Age of Revolution*, 122

¹⁹³ BA&H, MS 3782/1/32/4, Barney to Hodges, 29 June 1781

¹⁹⁴ Boime, *Art in an Age of Revolution*, 373

orders. The skaters on the frozen Serpentine lake in Hyde Park are shown as a rather comical collection of novice skaters, arms outstretched or stumbling and falling. The foreground is taken with a group of better dressed people being helped, hindered or ignored by others from the lower orders. Matthiesen Fine Art's catalogue, *French Paintings 1700-1800*, identified de Louthembourg as the seated figure facing out, being fitted with skates by a kneeling man.¹⁹⁵ His new English wife, Lucy Paget, is shown in profile with a fashionable black bonnet and white fur wrap, a female companion by her side. The other friends include the engraver, Victor Marie Picot (1744-1805) who was de Louthembourg's partner from 1776 to 1784, John Webber (1751-1793) as youngest is probably the boyish figure on the left of the group holding his hat, and Jean-Georges Noverre (1727-1810), the famous French choreographer and friend of David Garrick, whom de Louthembourg probably knew from his set design work in Garrick's Drury Lane Theatre. Picot is mentioned in de Louthembourg's letter to Boulton in August 1777 saying he had received Boulton's draught of fifteen guineas and that 'M'r Picot in my absence has delivered your Picture to Mr Matthews'.¹⁹⁶ Webber was the artist who accompanied Cook on his third and final voyage [1776-1780]. There was great interest in the illustrated findings of Cook's voyages and the mechanical paintings catalogue of 1780 included a set of four views of Otaheite (Tahiti) after William Hodges, from Cook's second voyage.¹⁹⁷

Rüdiger Joppien had suggested that De Louthembourg's *Winter* is a caricature of English social life which, as a recent visitor, he was well-placed to observe.¹⁹⁸ De Louthembourg's print of *An Exhibition*, published by Picot in 1776 is a satire on ignorant spectators viewing paintings at the Royal Academy. Thomas Rowlandson (1756-1827) was influenced by de Louthembourg and drew a *Skating Scene* after de Louthembourg's *Winter* and his *Stage Coach* owes something to *A Summer's Evening, With a View of a Highway*, exhibited at the RA in 1775 and painted as a pendant to *Winter*.¹⁹⁹ It may show the increasing confidence of the industrialists, merchants and bankers, rich enough to live like the nobility and gentry, that they could enjoy these images of the different ranks of society.

¹⁹⁵ Matthiesen Fine Art Ltd., *French Paintings 1700-1800*, exhibition catalogue, Stair Sainty Matthiesen (Gallery), London and New York, 1989, 72

¹⁹⁶ BA&H, MS 3782/1/26/19, P J Louthembourg (Shooters Hill) to B&F, 17 Aug 1777

¹⁹⁷ Robinson and Thompson, 'Matthew Boulton's Mechanical Paintings', 507

¹⁹⁸ Joppien, *Philippe Jacques de Louthembourg RA*, 'Caricature and Humour'

¹⁹⁹ Joppien, *Philippe Jacques de Louthembourg RA*, 'Caricature and Humour'

Bourdieu's theory on the relationship between goods production and the production of taste was that, in the cultural market, the matching of supply and demand was neither production imposing itself on consumption, nor a conscious serving of consumer needs. Rather it was the fairly close correspondence between the specialized fields of production, in which products are developed, and the fields of social classes, in which tastes are determined, which was the source of changing tastes.²⁰⁰ Mechanical paintings were one of an ever-changing number of products that were developed in a competitive market to fuel the demand of different class fractions to differentiate themselves by their cultural choices. As Bourdieu stated, 'the field of production enabled taste to be realized by offering it the universe of cultural goods as a system of stylistic possibilities from which it can select the system of stylistic features constituting a lifestyle'.²⁰¹ Even the lack of the long-term success of mechanical paintings is symptomatic of the dynamism of the relationship between production and taste and perhaps it was the failure of mechanical paintings to be recognised as a mark of distinction that hastened their demise. Bourdieu would have identified Boulton as one of the 'need merchants', sellers of symbolic goods and services, who sell themselves as models and guarantors of value of their products, and believe in what they sell.²⁰² Culture is produced by both producers of cultural goods and makers of taste. The next chapter will explore the role of the taste-makers in marketing and consumption.

The work of Walter Benjamin was useful in assessing the effects of reproduction on the original and on the response which differed between the artists and owners. The contemporary artists whose designs were reproduced by Boulton and Eginton all seemed to be active participants for financial gain and in making their work better known. It appeared that the owners were more protective of the 'aura' of their originals and needed to be persuaded to loan either on the basis of increasing the value or celebrity of their paintings. This argument is supported by Deazley whose research into fine arts copyright suggested that in the nineteenth century there was more lobbying by the owners to protect themselves from subsequent versions by the

²⁰⁰ Bourdieu, *Distinction*, 230

²⁰¹ Bourdieu, *Distinction*, 230

²⁰² Bourdieu, *Distinction*, 365

artists, than by the artists protecting their work from being copied. Bourdieu provided a framework by which to analyse the ways in which people distinguished themselves from the social group below and identified themselves with the group above. In producing the mechanical paintings, Boulton was attempting to reproduce expensive cultural objects at reduced cost, to make them available to those wishing to mark their distinction. However, the particular choices of artists and of subjects illustrated demonstrate that he was drawn to novel subject matter which would complement the innovative process of mechanical painting. The artists were already established and fashionable but the particular subjects were often at the experimental end of their oeuvre which attracted a particular fraction of society that contained the more socially mobile and energetic. These were the people who were the enlightened industrial tourists to Boulton's Soho manufactory discussed in chapter three.

CHAPTER 3

MARKETING AND CONSUMPTION: SOHO, LEADERS OF TASTE AND INDUSTRIAL TOURISTS

In the previous chapter consideration of the artists and subjects led to the conclusion that the avant-garde nature of some of the mechanical paintings complemented the perceived ingenuity of the process and conferred a particular social distinction, marking the purchaser as both educated and interested in innovation. This chapter will continue the discussion on taste, but in relation to the ways in which Matthew Boulton tried to create demand for mechanical paintings, what their function was, how they were marketed and what kind of people bought them. It will be argued that their function was to provide a cheaper alternative to easel paintings and to hand-painted panels in decorative schemes. Nevertheless, unlike prints, mechanical paintings were never intended to be democratising products, but were always promoted as luxury goods at a price which restricted the market to the wealthy.²⁰³ My analysis of the people who bought the pictures revealed an awareness, by Boulton, his peers and staff, of social class and its role in marketing mechanical paintings. Although they were targeted at the nobility and gentry, the mechanical paintings attracted the wealthy middle classes and trade customers.²⁰⁴ Boulton used his extensive connections with fashionable architects and prominent society-leaders, such as Elizabeth Montagu, to utilise and create a demand for mechanical paintings. He also employed his existing methods of endorsement, display, personal networks and the fascination with industrialisation to promote the sale of mechanical paintings. However, the lack of a London saleroom will be shown to have had a particular impact on the sale of the pictures which had to be viewed in order to be fully appraised by potential customers. Finally, this chapter will assess the probable reasons for the early demise of the mechanical painting enterprise, including financial losses, the variable quality of the products, and Boulton's own desire to be intimately

²⁰³ Maxine Berg and Elizabeth Eger (eds), *Luxury in the Eighteenth Century: Debates, Desires and Delectable Goods*, Basingstoke and New York, 2003, 7. The concept of luxury was a source of major debate in the eighteenth century as luxury's former associations with corruption and vice were challenged by positive aspects of reproduction, trade and the civilising influence of taste and refinement.

²⁰⁴ Kenneth Quickenden, and Arthur J. Kover, 'Did Boulton sell silver plate to the middle class?', *Journal of Macromarketing*, 27, 2007, 60. Quickenden and Kover suggested that Boulton had a fundamental need for an elitist product which mechanical paintings briefly fulfilled when silver-plate manufacture declined.

involved in the production and marketing of all his enterprises' outputs which was restricted by his time-consuming involvement in the setting up of steam engine pumps in Cornwall.

Boulton marketed his goods through his showrooms at Soho and through agents in London and abroad. His new Manufactory at Soho was a showplace in itself, attracting thousands of industrial tourists who could order or pay for goods from the 'Toy Room', a showroom for small decorative accessories such as the 'Cork Screws, Buckles, Draw and other Boxes; Snuffers, Watch Chains, Stay Hooks, Sugar Knippers' which are identified in *Sketchley's Birmingham Directory* of 1767.²⁰⁵ Peter Jones, in his book on the *Industrial Enlightenment*, recorded nearly 1,100 visitors to Soho, over half of whom came from abroad.²⁰⁶ He estimated the total number of visitors to the Manufactory to be nearly 4,500 in the forty years of Boulton's ownership.

Many of Boulton's commercial practices and problems at Soho were revealed in the correspondence between John Hodges and Matthew Boulton from 1777 to 1805. Hodges (died 1808) was apprenticed to Boulton in 1768 and eventually rose to become manager of the plated department in 1783 (Sheffield plate, silver plate and ormolu).²⁰⁷ Although he was not responsible for the production of the mechanical paintings, which was Eginton's domain, Hodges mentioned them in relation to the Toy Room and increasingly became the conduit between Boulton and Eginton in their deteriorating relationship. Boulton was often away from Soho, in London, abroad, or, increasingly from 1778 to 1786, in Cornwall, supervising the growing but difficult pumping engine business with Watt. Hodges wrote a fortnightly report to Boulton informing him of who was visiting Soho, the state of the 'Toy Room', a list of orders and cash sales, and details of problems, such as sorting out an inventory of the mechanical painting business at Eginton's house in September 1780. Hodges usually cast such reports to his own advantage by detailing his part in creating order out of

²⁰⁵ Dickinson, *Matthew Boulton*, 56. *Sketchley's Birmingham Directory*, 1767.

²⁰⁶ Jones, *Industrial Enlightenment*, 95

²⁰⁷ Dickinson, *Matthew Boulton*, 51, 63, 54. Sheffield plate – copper fused with a thin sheet of silver; silver plate – solid silver needing to be assayed; ormolu (French *or moulu*) – gold ground with mercury to form an amalgam used in gilding ornamental brass.

chaos over and above his ordinary duties.²⁰⁸ Although the reports of cash sales were very detailed, mechanical paintings were rarely identified by price. For instance a letter from Hodges to Boulton at Plengwarry Green (near Redruth in Cornwall), contains an account of sales for £1606.5s.11d between 20 August and 9 September 1780, which listed fifty-five sales including the purchaser, amount and category (B for buttons, P for Plated wares, S for Silver wares, T for Tortoise wares and C for Chapes), and although mechanical painting sales are mentioned in the detail of the letter they cannot be identified in the sales record.²⁰⁹ I have attempted to quantify the sale of mechanical paintings but this was not possible to estimate as in thirty letters from Hodges to Boulton, between 9 January 1777 and 10 September 1783, there were only three amounts of £12.6s, £10.0 and £85.6.6 specified for pictures.²¹⁰

The state of the ‘Toy Room’ was a constant source of concern to Hodges, which would have impacted on the sales of all the goods, including the mechanical paintings displayed there such as the *General Wolfe* discussed in chapter two.²¹¹ On 25 May 1778, Hodges informed Boulton that ‘Lord & Lady Villiers with some Gent’n and Ladies [...] were disappointed in seeing so little in the shew Rooms’.²¹² A week later there was still little to show and Hodges excused himself from the problem of the lack of goods displayed by appearing to put the responsibility on Boulton’s London agent, John Stuart.²¹³

In addition to the display of mechanical paintings in the ‘Toy Room’, Boulton’s home at Soho House was also used to show them off to advantage and occasionally pictures were bought off the walls. Richard Barwell, who had just returned from India in 1780, ordered more than £85 worth of paintings. Hodges reported, perhaps anxiously, that

²⁰⁸ BA&H, MS 3782/12/63/12, John Hodges (Soho) to Matthew Boulton (London c/o William Matthews), 17 April 1780.

²⁰⁹ BA&H, MS 3782/12/63/16, John Hodges (Soho) to Matthew Boulton (Plangary Green), 12 September 1780, ‘Inclosed I have the pleasure of transmitting an account of the sales since your departure, and which I purpose doing ev’ry fortnight untill your return.’ The account is produced on a very thin sheet of translucent tissue paper inked on the reverse which can be read from the front and must have been produced on Watt’s copy press.’ Chapes are the metal pieces that attach buckles to straps.

²¹⁰ BA&H, MS 3782/12/63/5, MS 3782/12/63/9, MS 3782/12/63/20

²¹¹ BA&H, MS/3782/12/63/20, John Hodges (Soho) to Matthew Boulton (Plengwarry Green), 30 Nov. 1780.

²¹² BA&H, MS 3782/12/63/7, John Hodges (Soho) to Matthew Boulton (London), 25 May 1778

²¹³ BA&H, MS 3782/12/63/8, John Hodges (Soho) to Matthew Boulton Esq at Mes’rs Matthews & Barton, Merchants, Green Lettice Lane, London, 1 June 1778.

He chose them chiefly from those at your house, and as he wanted them sooner than it was possible to get them up, (by Mrs. Boulton's permission) we purpose taking two pieces out of your room, (i.e.) the *Physician Erasistratus*, and the large *Good Shepherd*, which pieces I learn may be substituted again by Mr. Barney better than those; but I have not yet giv'n him the order, and should wish for your determination before I acquaint him of it. Should you have any objection to these pieces of yours being taken, please to inform us directly. Mr. Barwell will pay upon delivery of the pictures.²¹⁴

A month later Hodges had taken Boulton's silence for consent and 'in consequence said Gentleman's order was sent off Saturday last'.²¹⁵ Barwell bought Stansted House in West Sussex the following year and had it largely reconstructed by Joseph Bonomi and James Wyatt. Bonomi was married to Rosa Florini, a relative of the artist Angelica Kauffman who supplied so many of the designs for the mechanical paintings, and the Wyatt dynasty had numerous connections with Boulton and Eginton. James Wyatt's cousin Maria had married Francis Eginton and Boulton had brought up Wyatt's cousins Charles and John when their father went bankrupt.²¹⁶ Such were the networks and systems of patronage in the eighteenth century that it may well have been on Bonomi or Wyatt's recommendation that Barwell went to Soho for a ready supply of prestigious reproductions to furnish his new home.

As well as sales from Soho, Boulton employed agents in London to obtain orders, receive goods and collect the money. John Stuart, one of Boulton's London agents, worked for him from 1778 to 1780. Stuart appeared on the accounts of sales which Hodges sent periodically to Boulton with larger amounts of goods against his name than against the individual client orders. Kenneth Quickenden has noted that Boulton's agents Stuart and his predecessor, John Wyatt, had complained to him about the lack of a London showroom.²¹⁷ Wyatt had had to visit the gentry to gain

²¹⁴ BA&H, MS/3782/12/63/19, John Hodges (Soho) to Matthew Boulton (Plengwarry Green), 31 October 1780.

²¹⁵ BA&H, MS/3782/12/63/20, John Hodges (Soho) to Matthew Boulton (Plengwarry Green), 30 November 1780.

²¹⁶ John Martin Robinson, *The Wyatts: An architectural Dynasty*, unpaginated family tree; Robinson, *Eighteenth-century commerce and fashion*, 55; Aitken, *Francis Eginton*, 14.

²¹⁷ Kenneth Quickenden, 'Richard Chippindall and the Boultons', *The Silver Society Journal*, 22, 2007, 52

orders which took time and meant he was not treated with respect.²¹⁸ Whereas Stuart had his own modest premises to display the goods as well as store them, Hodges informed Boulton that Stuart had asked for a few of the larger mechanical paintings for ‘tryal’, ‘he having a proper room to shew them and thinks he could dispose of some’.²¹⁹ Hodges persisted in a later letter to Boulton, writing that ‘as there are many *Penelopes* and *Calypsos* finish’d, as well as *or moulu* frames, I purpose to send a pair for trial, which, if they sell and you approve of sending more, more can be immediately expedited’.²²⁰

Thus Boulton suffered from the lack of a permanent showroom in London. His fellow industrialist, Josiah Wedgwood, had a London showroom from at least 1769 when he was taking £100 a week in cash sales.²²¹ Wealthy visitors such as Princess Dashkova, a Russian noblewoman, who bought mechanical paintings at Soho, asked if Boulton had an Exhibition Room in London.²²² At one time Boulton considered having his own premises in the capital but various ventures fell through. He was offered a place in or near the Adams’ premises in Durham Yard, St James, but his ideas for the premises were obviously very different from those James Adam had in mind. He wanted a stylish showroom for his luxury goods where he could guarantee privacy and exclusivity for his noble clients, as is clear from a letter of 1 October 1770.

I think no situation superior to the neighbourhood of Durham Yard but my Ideas of a Shop or sale room are very different from yours for I wou’d rather choose a large elegant room up Stairs without any other window than a sky light; by this sort of concealment you excite curiosity, more, you preserve your improvement from Street walking pirates: the Nobility wou’d like that less publick repository [...] for at Paris all their finest shops are upstairs. If a large Room upon this plan cou’d be had with proper appendages in the neighbourhood of Durham yard, I shou’d be glad to become a Tenant of it [...] the lower parts might be apropieted [sic] to the sale of the lesser Articles of

²¹⁸ Quickenden, ‘Richard Chippindall and the Boultons’, 52

²¹⁹ BA&H, MS 3782/12/63/12, John Hodges (Soho) to Matthew Boulton (London, directed to William Matthews), 17 April 1780.

²²⁰ BA&H, MS 3782/12/63/13, John Hodges (Soho) to Matthew Boulton (London), 1 May 1780

²²¹ McKendrick, ‘Josiah Wedgwood and the Commercialisation of the Potteries’, 119

²²² BA&H, MS 3782/12/63/14, John Hodges (Soho) to Matthew Boulton (149 the Strand, near Somerset House, London), 15 May 1780.

our Manufacture and for the reception of Gent'n Serv'ts, the upper handsom room for plate d'or Moulu and such other fine toys as we make.²²³

Boulton showed his awareness of social class, as discussed in chapter two, and made a distinction between the upper and lower rooms. He was sending mechanical paintings for trial with his agent in London, but a very elite upstairs room would, he believed, have been much more effective.

Boulton nurtured demand for Soho's goods among the upper classes and was unashamedly elitist in the promotion of his luxury goods and the protection afforded to his clientele. He wrote to the Duchess of Portland in 1771, saying 'our Mr Boulton proposes making an Exhibition [at Christie's] of some quite new and very elegant things about the beginning of March, which will be continued about 2 or 3 weeks for inspection and sale to the Nobility and Gentry only, as care will be taken to expel that class who do not come to purchase but expressly to incommode those who do'.²²⁴

Those customers for mechanical paintings mentioned previously in this thesis, Richard Barwell, Sir Sampson Gideon, Mrs Montagu, Doctor Erasmus Darwin, Princess Dashkova, Lord Beauchamp and Captain David Arthur, were all drawn from the nobility and gentry, apart from Darwin and Arthur who, as their occupations suggest, were from the middle classes.²²⁵

Although Boulton may have been targeting the upper classes in the sale of mechanical paintings, the journals of outgoing letters show a broader spectrum of society were buying them, including the richer middle classes as well as trade customers. The recipients of mechanical paintings do include a surprising number of lords - Exeter, Stormont, Macclesfield and Colonel Burton, later Lord Conyngham.²²⁶ However, there are several letters to middle-class customers, including James Wickens of Lichfield and W R Powell of Cardiff, sending apologies for delays in the delivery of

²²³ Dickinson, *Matthew Boulton*, 61

²²⁴ Robinson, 'Eighteenth-century commerce and fashion', p52, footnote 5.

²²⁵ Quickenden, and Kover, 'Did Boulton sell silver plate to the middle class?', 55. Quickenden and Kover have constructed a useful hierarchy of socioeconomic classes in the late eighteenth century using rank and occupation.

²²⁶ BA&H, MS 3782/1/39, 459, B&F to Lord Exeter, 5 February 1778, BA&H, MS 3782/2/14, 164, B&F to Lord Stormont, 26 November 1783. BA&H, MS 3782/12/63/13, JH to MB, 1 May 1780. BA&H, MS 3782/1/11, 113, B&F to William Dunn, 5 November 1777.

paintings.²²⁷ There is also correspondence with merchants such as Webb and Riggs of Cheapside, and Clarke and Green for export sales, in which case the class of the ultimate customers is unknown.²²⁸ The exclusivity of the marketing should not be seen as being inconsistent with the purchasing of mechanical paintings by members of the middle classes who had upwardly mobile expectations as discussed in chapter 2.

In the absence of a London showroom, Boulton relied on agents and existing networks of state diplomats and ambassadors at home and abroad, and taste-setters such as leading architects and society hostesses to recommend or display his goods in their houses. His use of patrons and leaders of fashion to promote his mechanical paintings was very similar to Wedgwood who, when discussing the chances of his competition with Boulton's vases with James 'Athenian' Stuart in 1770, explained that he needed sponsors like the architects, as leaders of fashion, to influence 'a third class [...] who wo'd be over ruled by their betters in the choice of their ornaments as well as [in] other matters; who wo'd do as their architects, or whoever they depended upon in the matters of taste directed them'.²²⁹ Boulton had extensive commercial connections with the leading architects of the day, including John Adams (who had proposed sharing premises with Boulton at the Adelphi), William Chambers, architect to the King, James Stuart, Robert Mylne, James Paine, as well as family connections with the Wyatts.²³⁰ There is evidence that Stuart, Paine and Robert Adam were all associated with the use of mechanical paintings in decorative schemes at Montagu House, Wardour Castle (home of Lord Arundell) and Culzean Castle.²³¹ James Wyatt may have influenced Barwell in his purchase of mechanical paintings, as discussed above. Further research into these architects and the houses they were involved with is required to reveal the extent of the promotion of mechanical paintings.

²²⁷ BA&H, MS 3782/1/11, 80, B&F to James Wickens, 6 September 1777. BA&H, MS 3782/1/10, 861, B&F to W R Powell, 12 March 1777,

²²⁸ BA&H, MS 3782/1/11, 108, B&F to Webb and Riggs, 25 October 1777. BA&H, MS 3782/1/30/10, Richard Clarke to B&F, 18 May 1781

²²⁹ McKendrick, 'Josiah Wedgwood and the Commercialisation of the Potteries', Josiah Wedgwood to Thomas Bentley, Dec 1770, 115.

²³⁰ Robinson, 'Eighteenth-century Commerce and Fashion', 50, 57-8

²³¹ Robinson, 'Eighteenth-century Commerce and Fashion', 58, refers to letters from Boulton and Fothergill to Lord Arundell on 10 July and 13 November 1777. Robinson, 'Matthew Boulton's Mechanical Paintings', 499, fig 14, detail from Green Drawing Room, Culzean Castle, probably a mechanical painting after Kauffman.

In addition to marketing his paintings to the architects, Boulton exploited his contacts with leaders of taste like the society hostess and bluestocking Elizabeth Montagu. Mrs Montagu (1718-1800) was a wealthy widow who was a shrewd business woman and patron of the arts. She described herself, in a letter to her sister in 1767, as ‘a Critick, A Coal Owner, A Land Steward, a sociable creature’.²³² Frances Reynolds attested to Mrs Montagu’s position as a leader of taste in high society by dedicating her *Enquiry Concerning the Principle of Taste and the Origin of Our Ideas of Beauty* to her in 1785.²³³ She was introduced to Boulton by the architect James Stuart, in 1770, to buy an ormolu-mounted tea kitchen. Her friendship with Boulton was shown by her admiration for Boulton’s ‘triumph over the French in taste’, and the interest she took in his daughter’s health.²³⁴ Kenneth Quickenden’s essay, on the service of plate she purchased from Boulton in 1777, explored her social aspirations in relation to her substantial wealth and found that she was very aware of the restraint and feminine virtue that she had to exercise in her taste.²³⁵ Boulton was fortunate that her new residence, Montagu House, 22 Portman Square, also served as an unofficial show room for many of his wares. The Gallery room (Figure 5) featured mechanical paintings over the doors and in the centre of the ceiling, supplied by Barney and Eginton.²³⁶ Robert Walpole praised Mrs Montagu’s Gallery as being ‘grand not tawdry’.²³⁷ James Keir, when he was looking after Boulton’s business interests in Birmingham with a view to becoming a partner, wrote to Boulton in 1779 to inform him that, ‘Mrs. Montague says that she has received the pictures and does not doubt but they will produce other orders, &c’.²³⁸ It was a symbiotic relationship whereby Boulton used Mrs Montagu’s social cachet to promote his goods while she traded on the quality and ingenuity of his paintings and plated goods to distinguish her own position of intellectual and refined taste.

²³² Elizabeth Eger and Lucy Pelz, *Brilliant Women: 18th-Century Bluestockings*, London, 2008, 24-25

²³³ Kenneth Quickenden, ‘Elizabeth Montagu’s service of plate. Part I’, *The Silver Society Journal*, 16, 2004, 137. Frances was sister to Sir Joshua Reynolds.

²³⁴ BA&H, MS 3782/12/93/9 Elizabeth Montagu (London) to MB (London) 9 July 1780 (directed to Green Lettice Lane). Dickinson, *Matthew Boulton*, 54.

²³⁵ Quickenden, ‘Elizabeth Montagu’s service of plate. Part I’, 141

²³⁶ Robinson and Thompson, ‘Matthew Boulton’s Mechanical Paintings’, 500

²³⁷ Quickenden, ‘Elizabeth Montagu’s service of plate. Part I’, 138

²³⁸ BA&H, MS 3782/12/65/42, James Keir (Soho) to Matthew Boulton (Chacewater), 25 November 1779

Boulton was also aiming at ‘making an extensive sale of them [mechanical paintings] in foreign countries’ as he outlined to Sir Watkin Williams Wynn in 1779.²³⁹ The importance of foreign markets has been demonstrated by McKendrick in his essay on Wedgwood when he observed that the European market had a population of 200 million compared with three million Americans and a domestic market of less than eight million; he estimated that the Staffordshire potteries exported 84% of their total production.²⁴⁰ Boulton’s partner, Fothergill, had been apprenticed in Konigsburg and had expanded the business in Italy, France, Holland, Denmark, Sweden and Russia between 1764 and 1766.²⁴¹ They had outlets throughout Europe and reference is made that ‘foreign orders throng in’ for luxury goods in 1785.²⁴² Boulton, too, travelled abroad and on his trip to Holland in 1779 he took samples of the mechanical paintings, recording in his notebook that, ‘I afterward waited upon Sr Joseph & conversed some Hours & shewd him 2 of our pictures. I think I should send him one’.²⁴³ The catalogue of mechanical paintings was sent abroad, for example to Baron de Watteville de Nidan in Berne, Switzerland, but the lack of any possible physical inspection must have restricted sales. It was left to the merchants Clarke and Green to risk a large order of sixty to a hundred mechanical paintings for export in 1781.²⁴⁴ Unfortunately, by this time Soho had ceased making the mechanical paintings so they were sub-contracted out to Eginton who suffered from the increasingly demanding letters for improved quality and speed to meet the deadline of the ‘Shipp’s’.²⁴⁵

²³⁹ Dickinson, *Matthew Boulton*, 104

²⁴⁰ McKendrick, ‘Josiah Wedgwood and the Commercialisation of the Potteries’, 134, 136

²⁴¹ Robinson, ‘Eighteenth-century commerce and fashion’, 1963, 41

²⁴² BA&H, MS 3782/12/63/35, John Hodges (Soho) to Matthew Boulton (London), 6 Mar 1785.

²⁴³ Fiona Tait, ‘Coinage, Commerce and Inspired Ideas: the Notebooks of Matthew Boulton’, ed. Malcolm Dick, *Matthew Boulton: A Revolutionary Player*, Studley, Warwickshire, 2009, 81, citing BA&H MS 3782/12/108/17, 15-16

²⁴⁴ BA&H, MS 3782/1/30/10, Richard Clarke to B&F, 18 May 1781. ‘We understand it is a part of your Manufactory. Paintings on Canvas of dff’t Views in gilt Frames the Sorts we mean have been purchas’d by some of our Friends of you say about two foot by one foot. We very much wish the opportunity of seeing some of them and request you will let us hear from you on this head by return of Post and say in what time a quantity of them may be elegantly and well finished. Its more than probable we may give you an orders to make us from Sixty to one hundred of them. Prov. you will enable us to sell your works w’t some profits to ourselves you will do us the favor [sic] of writing immediately.’

²⁴⁵ BA&H, MS 3782/1/30/22 Clarke and Green to Mess’rs B & Co, 25 Aug 1781. ‘We are requesting your particular attention to the executing our order for the Paintings and beg you will by no means exceed the time you fix’d fearing it may be too late for the shipp’s [sic] we are very desirous of having the Views to the same time particularly the Vale of Tivoli. You must exert your selves to get the whole to time as they will be of no use use [sic] to us if later than the Shipp’s will take them – we shall be very glad to give you a longer time and will take the first opportunity of acquainting you with its – at present that is not in our power therefore repeat our request your keeping to the time of paying every attention to their being well executed.’

Boulton's close association with many of the leading architects led to the mechanical paintings functioning as 'overdoors' and being used in decorative ceiling panels, as well as being bought as 'easel' paintings. Samuel Wyatt suggested 'panels for doors and window shutters with very narrow Mouldings and ornaments in Or Molu would be a good subject for Soho painting'.²⁴⁶ When they were bought directly by individuals, having seen the reproductions at Soho or chosen them from a catalogue, the mechanical paintings were more likely to be framed and hung alongside original oil paintings. The 1780 catalogue listed the dimensions, price and an additional price for gilt frames.²⁴⁷ The elaborate ormolu frames, the prestigious subjects (as discussed in chapter two), and the eponymous use of the artist for the mechanical painting, such as Erasmus Darwin asking after his 'Koffmans', all suggest that the reproductions were valued as works in themselves.²⁴⁸ Many of the paintings were round, square or oval and paired with another title so that they could be hung in groups. The large history paintings, demanding some knowledge of the classics in order to be decoded by viewers, and appealing to the literary, moral and intellectual pretensions of the audience, would have been suitable for public spaces within elite homes. Angelica Kauffman's series of Cupids, Nymphs and Graces must have been popular, given the number offered as mechanical paintings, and would have been more suitable for a lady's private rooms where the teasing, romantic nature and tastefully suggestive semi-nudity may have contributed towards an atmosphere of relaxed intimacy.

The paintings were categorised as large or 'small common ones' by Stuart and this is indicated by the prices according to the catalogue of 1780, the largest (127 x 101.6 cm) sold for 12 to 15 guineas and the smallest (25.4 x 20.3 cm) cost two guineas.²⁴⁹ Boulton's pricing strategy, in general, was to sell cheaply by keeping his costs as low as possible while maintaining high quality. He achieved this through mass production, and, as he explained to the Earl of Warwick in 1770 about Soho manufactures in general, 'by the Super activity of our people and by the many mechanical

²⁴⁶ MPW Boulton, *Remarks*, 21

²⁴⁷ Robinson and Thompson, 507. Letter from Boulton & Fothergill to Baron de Watteville de Nidan, 23 December 1780, enclosing 'a catalogue of some of the best & most favorite of our mechanical Paintings'.

²⁴⁸ Robinson, 'Matthew Boulton, Patron of the Arts', 372

²⁴⁹ BA&H, MS 3782/12/63/16, John Hodges (Soho) to Matthew Boulton (Plangary Green), 12 September 1780.

contrivances, and extensive apparatus wick [sic] we are possess'd of, our men are enabled to do from twice to ten times the Work that can be done without the use of such contrivances'.²⁵⁰ This low price strategy was the opposite of Wedgwood's who deliberately overpriced his wares to differentiate himself from the many other suppliers in the Potteries. The prices of Boulton's plated articles were set at the same level as the Sheffield manufacturers and, as Hodges pointed out, 'the savings must be in the execution'.²⁵¹ One way of reducing the prices of the mechanical paintings was to reduce the cost of the frames. The gilt frames came from Jee and Eginton (Francis' brother John) and were expensive, about one-quarter the price of the paintings, so Hodges 'ventur'd to order a few black ones with gilt borders, which will come cheap and in all probability be one means of tempting their sale'.²⁵²

Underlying the promotion of mechanical paintings was the assumption that the association with manufacturing and ingenuity carried more prestige than a hand-painted copy. Boulton intended the mechanical paintings to compete with hand-painted copies but he emphasised the mechanical ingenuity of the reproduction method by alluding to 'peculiar contrivances' which made them 'better than good [copies of] originals [...] without much greater expense'.²⁵³ This allowed him to justify a higher price for mechanical paintings. Even if he sold them more cheaply than ordinary copies, the buyer felt he was getting a bargain. In fact, the mechanical part of the process reduced the time (and, therefore, cost) by almost a half, as Barney informed Hodges in September 1781 when he was asked to paint two blanks as if they were mechanical paintings of *Telemachus* and said that 'your Idea was perfectly right respecting *Telemachus* had it been mechanised, but at present [sic] the outline and dead colour take nearly half the time'.²⁵⁴ Hodges had written saying 'Mr Boulton [...] begs they may be good pieces and exactly alike, for they go as mechanical paintings'.²⁵⁵ Thus it is clear that Boulton intended to sell the hand-painted copies as mechanical paintings, probably because he had to complete an order and there was no time to prepare the canvas with the impression. However, this presented Barney with

²⁵⁰ Robinson, 'Eighteenth-Century commerce and fashion', 43

²⁵¹ BA&H, MS 3782/12/63/29, John Hodges (Soho) to Matthew Boulton (Cusgarne), 15 October 1782.

²⁵² BA&H, MS 3782/12/63/16, John Hodges (Soho) to Matthew Boulton (Plangary Green), 12 Sep. 1780.

²⁵³ Dickinson, 104. Letter from Boulton to Sir Watkins Williams Wynn, 4th baronet, 12 June 1779.

²⁵⁴ BA&H, MS 3782/1/32/10, Barney to Hodges, 6 September 1781.

²⁵⁵ *Photographic Journal*, No. 139, 16 November 1863, 395, Hodges to Barney, Soho 25 August 1781

the problem of how to make money out of the hand-painted copies when they took more time than the mechanical paintings. Barney was a talented artist who had studied under Kauffman's future husband Zucchi in 1777, exhibited at the Royal Academy from 1784, and worked as a drawing master at the Royal Military Academy from 1793 to 1820.²⁵⁶ However, between 1781 and 1782 he was grateful for the employment that Boulton offered him, although he thought his hand-painted copies were as accomplished as the original even if they were not as accurate as mechanical paintings, 'for though the one I have now done has full as much effect it is by no means equal to it [the Original of *Trenmor*] in correctness'.²⁵⁷

Thus, ingenuity was a significant marketing ploy of Boulton's as the intellectual capacity for invention was prized by Boulton's circle and visitors to Soho. Eginton's process for copying oil paintings pre-dated Erasmus Darwin's mechanical copying machine or 'bigrapher' in 1777, and may have informed James Watt's invention of a letter copying press in 1779 which used special inks and paper to take an offset copy of a hand-written letter.²⁵⁸ Benjamin Franklin, a friend of Boulton and Darwin, subscribed for three of Watt's copying presses 'as I love to encourage Ingenuity'.²⁵⁹ Princess Dashkova, who had a 'deep desire for knowledge and profound respect for modern technology and science', visited Soho in 1780 and also subscribed for the 'Copying Machine' as well as buying several small mechanical pictures.²⁶⁰ However, imitation, invention and ingenuity alone were not enough to guarantee a money-making project, as Boulton was to find out with mechanical paintings.

Production of mechanical paintings ceased at Soho in 1781, although it continued off-site for about another ten years with orders and sales passing through Soho. The reasons for the demise were variable quality, lack of overseeing by Boulton, and

²⁵⁶ Baird, In Matthew Boulton's orbit, unpublished

²⁵⁷ BA&H, MS 3782/1/32/12, Joseph Barney (W'hampton) Thursday morn to John Hodges (Soho), September 20 1781

²⁵⁸ Uglow, *The Lunar Men*, 306

²⁵⁹ Olga Baird, 'Benjamin Franklin, Catherine Dashkova and James Watt's 'Art of Copying'', *Benjamin Franklin and Russia: The Philosophical Age. Almanac 31*, St Petersburg, 2006, and www.ideashistory.org.uk, 128, 125. The Copying Machine or copy press was an invention of James Watt to copy correspondence. The original had to be written with special ink onto which thin wet tissue paper was pressed. The resulting mirror image could be seen through the tissue paper so that an exact replica of the original was made. Erasmus Darwin had earlier made himself a copying machine called a bigrapher using an articulated arm which was attached to a second writing instrument which reproduced the movement of the first.

²⁶⁰ BA&H, MS 3782/12/63/14, John Hodges (Soho) to Matthew Boulton (London), 15 May 1780.

ultimately the non-viable cost of production. The mechanical paintings never seem to have made a profit. When James Keir was managing Soho for Boulton in 1779 he was trying to reduce the losses on the mechanical painting business, as he wrote to Boulton to say ‘we are taking some other economical steps in that business by which a great deal of money may be saved. For *saving* not *gaining* is the object in that business’.²⁶¹ The sales were constantly monitored and seasonal patterns such as the ‘Oratories’ and Christmas noted.²⁶² The success of the various enterprises was reported annually and, in January 1780, John Scale, who later replaced Fothergill as Boulton’s partner in the button business, wrote to Boulton commenting that ‘I am afraid the Painting and Refining trade will turn out very indifferent’.²⁶³ Fothergill, never happy with his partner’s attitude to cash-flow problems, wrote to Boulton of the 1779 Painting and Japanning Trade annual accounts that ‘the losses we have sustain’d prior to the keeping a separate Account of this Article of our Business [mechanical paintings] must farr [sic] exceed £1000, you will now determine if it is prudent to continue so destructive a branch, without further delay’.²⁶⁴ By April 1782 the mechanical painting business had been sub-contracted to Eginton, Barney and Wilson, but there was still concern about the remaining stocks of pictures as Hodges warned Boulton that the ‘painting trade (considering what sales were made last year) I doubt not will turn out well, and it is necessary this branch should be attended to in order to get off the stock on hand’.²⁶⁵

²⁶¹ BA&H, MS 3782/12/65/43, James Keir (Birmingham) to Matthew Boulton (Chacewater), 2 December 1779

²⁶² BA&H, MS 3782/12/63/17, John Hodges (Soho) to Matthew Boulton (Plengwarry Green), 26 September 1780. ‘Not many persons of distinction have been here since my last. It was expected the oratories (which were last week) would have brought much company to Soho.’

Jones, *Industrial Enlightenment*, 65, the Oratories were probably the same as the triennial music festival founded in 1768 to raise funds for the newly built hospital mentioned in Jones.

BA&H, MS/3782/12/63/25, John Hodges (Soho) to Matthew Boulton (Cosgarne House), 27 November 1781. ‘Nothing particular has occur’d here for these few days past. I am sorry to remark that orders still continue scarce, tho’ I hear ‘tis a general complaint in Birmingham. I hope that as soon as Christmas is turned, if not before, [the] prospect will be widely alter’d.’

²⁶³ BA&H, MS 3782/12/72/27, John Scale (Soho) to Matthew Boulton (Chacewater), 15 January 1780.

²⁶⁴ BA&H, MS 3782/12/60/188, John Fothergill [Birmingham] to Matthew Boulton (Chacewater), 5 February 1780

²⁶⁵ BA&H, MS 3782/12/63/28, John Hodges (Soho) to Matthew Boulton (Soho), 6 April 1782.

‘The painting trade (considering what sales were made last year) I doubt not will turn out well, and it is necessary this branch should be attended to in order to get off the stock on hand, and further when ’tis consider’d that, by means of Mr. F—n, Mr. B—y, and Mr. W—n, any orders may be made compleat to your advantage.’

The quality of the mechanical paintings was not always up to Boulton's standards and was also an overriding concern with Clarke and Green who insisted that they be painted 'in a much more masterly manner than the pictures you sent as samples'.²⁶⁶ Even Joseph Barney's work was criticised as he acknowledged in a letter to Hodges in 1781, when writing 'sorry I have not succeeded in my endeavours to please Mr Boulton in the last picture in respect to *Patience and Perseverance*'.²⁶⁷ Marc de Bombelles, on an extensive tour of Britain in 1784, visited Soho and, in commenting on the secrecy of English manufacturers in general, made an interesting observation on mechanical paintings where he thought the mystery was due to the product not coming up to expectations:

The English manufacturing bosses are not very communicative and make, as far as they are able, a secret of everything. For example, their own compatriots don't see the work being done on pictures, which, by means of an ingenious mechanism, are printed and then retouched by good painters. This new invention was intended to obtain perfect copies of paintings by the greatest masters at a more moderate price than that of the originals, but so far, results have not lived up to the inventors' expectations. I have seen several of these pictures, and the best-executed cost far more than they are worth. It is also generally believed that the deep mystery in which the operations of this manufacture are left is caused, to a large extent, by what these entrepreneurs themselves feel, that they are not as successful as they had predicted.²⁶⁸

A final reason for the demise of the enterprise, which Boulton himself gave in letters to John Garnett and Isaac Hawkins Browne about not being able to produce any new subjects, because his time was 'almost wholly engaged in his steam engine

²⁶⁶ BA&H, MS 3782/1/30/16, Rich'd Clarke to Mess'rs B&F (Soho), 10 July 1781.

²⁶⁷ BA&H, MS 3782/1/32/2, Joseph Barney (Wolverhampton) to John Hodges (Soho), 17 May 1781

²⁶⁸ Marc de Bombelles, ed. Jacques Gury, *Journal de voyage en Grande Bretagne et en Irlande 1784*, Studies on Voltaire and the eighteenth century, vol 269, Oxford, 1989. 'les anglois Chefs de manufactures sont peu communicatifs et font tant qu'ils le peuvent des secrets de tout. par exemple leurs propres compatriots ne voyent pas travailler des tableaux qui au moyens d'une mecanique ingenieuse sont imprimés et retouchés ensuite par de bons Peintres. cette nouvelle invention avoit pour but de procurer dans une égale perfection des copies des tableaux des plus grands maitres à un prix plus modique que celui des originaux, mais ce qui s'est fait jusqu'à présent n'a pas répondu à l'attente des inventeurs. j'ai vu plusieurs de ces tableaux, et les mieux exécutés coutent beaucoup plus cher qu'ils ne valent. on croit aussi généralement que le mistere profond dans lequel on laisse les operations de cette manufacture, nait en grande partie de ce que ses entrepreneurs sentent eux memes, qu'ils n'ont pas le succès qu'ils s'etoient promis.'

business'.²⁶⁹ He liked to supervise his businesses personally or not deal with them at all, as he revealed in a candid letter to James Watt in 1769, there he explained why he did not want to be a silent partner in Watt's steam engine endeavour 'as I am determined never to embark on any trade that I have not the inspection of myself'.²⁷⁰ During the period of the mechanical painting enterprise, Boulton was often away in Cornwall, overseeing many of the forty steam pumps built between 1776 and 1780, so, he could not give the fledgling mechanical painting business the attention it required. Keir was managing in Boulton's absence, and production decisions on improving the quality by employing artists to finish the paintings and finding other ways to save money were made by him, not Boulton, but Keir could not replace Boulton's talent for marketing. Although Boulton dissolved the partnership in 1780, he did not immediately withdraw his capital from the business. As described in chapter one, he offered the 'roling press' and other equipment to Eginton at a reasonable price so that he could carry on off-site which Eginton did until at least 1791 when he sent twenty-four paintings to Soho for £13.7.6.²⁷¹

Boulton's commercial aims in his artistic ventures were encapsulated in a letter he wrote to his London jewellers, Woolley and Heming, in January 1771. There he said that he was not in competition with his fellow-countrymen but with the 'Paris artists who have hitherto rivalled us in elegance and cheapness [...] we think they are not easily rival'd unless by the plan we have form'd the Essentials of wch are cheapness good taste and good execution'.²⁷² The mechanical paintings appear to have succeeded on the level of good taste, through Boulton's use of the leaders of fashion such as the architects and Mrs Montagu, but less well on good execution and not at all on cheapness. Boulton promoted the pictures, with their expensive gilt frames, as luxury goods, and targeted the nobility and gentry with assurances of exclusivity. The copies were marketed as an alternative to hand-painted copies, but the ingenuity of the process was also a significant factor in appealing to a wider spectrum of buyers who

²⁶⁹ MPW Boulton, *Remarks*, 7-8. Letters from Hodges to John Garnett 13 March 1781 and to Isaac Hawkins Browne 4 September 1781.

²⁷⁰ Dickinson, *Matthew Boulton*, 82

²⁷¹ BA&H, MS 3782/1/30/2, Hodges to Eginton, 10 January 1781. 'Respecting the Roling [sic] Press'. *Photographic Journal*, 390. Hodges to Boulton, 22 April 1791, 'Inclosed Mr Eginton's charge for the 24 pictures sent you this afternoon in a Case mark'd in the Corner thereof 'Paintings'. The amount being £13.7s.6d'.

²⁷² Eric Robinson, 'Matthew Boulton and Josiah Wedgwood, Apostles of Fashion', *Business History*, vol 28, No. 3, 1986, 100.

wanted to mark their distinction by demonstrating an interest in inventiveness and industrialisation. However, the lack of a London showroom restricted their visibility, and the amount of hand-finishing required to maintain the quality of the mechanical paintings meant that they could not be produced cheaply. That the demand was there is evidenced by Clarke and Green's large orders, the sustained interest from patrons such as John Garnett and Sir Isaac Hawkins Brown, and by the success of Booth's later Polygraphic Society, but ultimately Boulton could not build the market, despite his various strategies. Boulton liked to be associated with artistic projects and to influence taste but, ultimately, he could not sustain the losses of producing mechanical paintings at Soho and the business was left to decline in off-site production over the next decade.

CONCLUSION

Mechanical paintings have been the subject of few scholarly publications since their invention in the 1770s. Such interest as there has been has always focussed on the unknown process, although Robinson and Thompson also considered the marketing techniques and buyers in the hope of finding some more examples.²⁷³ The lack of scientific material analysis historically resulted in several confusing and unsubstantiated theories of production. This thesis has aimed to uncover the mechanical painting process through research into the recently catalogued Archives of Soho and through collaboration with the BM and their new scientific evidence. Using relevant scholarly models, mechanical paintings have been situated in the eighteenth-century context of artistic processes, the Industrial Enlightenment, the relationship between imitation and invention, and class and cultural capital. In addition this thesis has sought to prove various propositions about authenticity, the restricted market for mechanical paintings, the role of class and taste in the selection of artists and subjects for reproduction, and the role of the ingenuity of the reproductive process in marketing.

The archival evidence for the process appeared to be at odds with the BM's scientific analysis of various reproductions of *Summer* and *Winter* after de Louthembourg. David Saunders could find no evidence of an underlying printed impression on the canvases, and the similarity of dimensions between the four versions of *Summer*, and three of *Winter*, made a compelling argument for their having been made by the same process. As one of the paintings of *Winter* had an original Booth's 'Polygraphic Copy' label on the back of the frame it was concluded that all the paintings examined were polygraphic copies rather than Boulton and Eginton's mechanical paintings. However, the archival evidence was equally clear that the mechanical process involved printed impressions. The nature of the correspondence between artist and Soho, dealing with the minutiae of fulfilling orders, was such that it was felt to be reliable. I concluded that the probable reattribution of reproductions previously thought to be mechanical paintings did not negate the archival evidence for their existence. Moreover, the scientific evidence has advanced the knowledge of Booth's polygraphic process and

²⁷³ Robinson and Thompson, 'Matthew Boulton's Mechanical Paintings', 506

provided support for the ‘Sun Pictures’ being part of the transfer process for mechanical paintings. However, there is now a pressing need to identify an authenticated example of an extant mechanical painting.

Moving on to artistic practices, Benjamin’s theories about the ‘aura’ of a work were found useful in explaining the strategies used to convince the owner of original paintings of the benefits of reproduction. Nevertheless, the notion of the ‘aura’ was challenged as an attribute of the object; it was argued that it was a function of reception by the viewer. Bourdieu’s critique of distinction helped to explain Boulton’s role as ‘Patron of the Arts’ as he sought to influence taste and be defined socially by the judgements he made. No previous analysis of the choices of artists and subjects of mechanical paintings had been undertaken. A case was made that the reproduction of history paintings and fashionable, feminine, ‘fancy pieces’ predominated over the portraits that formed the majority of oil painting commissions of the same period, and that the narrative pictures were challenging accepted traditions by their novelty. It was argued that the high proportion of history pictures reproduced by mechanical painting marked a desire to display cultural capital, while the *avant garde* subject matter and ingenuity of the process allowed the would-be gentry and nobility rising out of industry, banking and trade to distinguish themselves from those who had inherited their wealth.

Boulton used similar strategies to market the mechanical paintings that he employed for his other luxury goods of silver, ormolu and plate. However, the lack of a visual example, like the pattern books which depicted the plated ware, and the need for a London showroom, restricted the visibility of the mechanical paintings in the important London market. The attraction of the ingenious and secret mechanical process was played to advantage by Boulton. He also used the architects who were remodelling and building town houses and country seats to incorporate mechanical paintings in their decorative schemes. The patronage of the society hostess and bluestocking, Mrs Montagu, served as an example of the difference that a London showroom, intellectual enlightenment and leaders of good taste could make. However, in the end, the lack of financial return, Boulton’s inability through other commitments to take a detailed interest, and perhaps the variable quality of the

product itself, led to the cessation of manufacture of mechanical paintings at Soho in 1781, although production continued under Eginton for at least another ten years.

The mechanical paintings, in their innovation, reproduction and marketing, were symptomatic of wider eighteenth-century concerns – imitation leading to invention, the transfusion of existing technologies, the interest in the application of science to technology, the role of mass production in creating a consumer society, and the role of cultural goods in marking distinction and social class. These discourses have shed a light on the development of mechanical paintings, but equally, Boulton and Eginton's reproduction of oil pictures has provided new insights into the role of ingenuity and taste-formation in eighteenth-century Britain.

APPENDIX A: MECHANICAL PAINTING WORKSHOP

AV Room, Gas Hall, Birmingham Museums and Art Gallery (BMAG), 27 April 2009

The workshop was sponsored by the Paul Mellon Centre for Studies in British Art and the University of Birmingham, Roberts Training Activities Fund.

Workshop notes

Introduction by Antony Griffiths

The workshop opened with an introduction by Antony Griffiths. Boulton and Eginton's mechanical paintings were the first attempt to make a print look like a painting, apart from a 1630s precursor of a Dutch seascape being transferred from copper plate to canvas. He noted that the large size of some of the mechanical paintings had puzzled experts. An album in the British Museum (BM) contained a set of Francis Eginton's aquatint experiments c. 1775. In 1988, at the Symposium of 'The Image Multiplied', Antony had suggested a possible process for mechanical paintings but had not published anything as two elements were missing that he was unable to fill: the first was the technical analysis; the other was a full investigation of the archive. He concluded by saying that David Saunders was now supplying the first requirement and Barbara Fogarty was doing the same for the second, so now was the moment to give the investigation a final push towards completion and (if possible) resolution.

Technical analysis by David Saunders

David Saunders reported back on the infrared reflectograms of the three BMAG mechanical paintings taken that morning. He compared these with images taken at Brodsworth and the BM of similar de Louthembourg *Summer* and *Winter* reproductions, and with the 'Sun Pictures', *Venus and Adonis*, Eginton's aquatints on paper at the Science Museum.

The black/brown and coloured aquatints of *Venus and Adonis* had been examined. The black/brown ink showed up more strongly in the infrared than the coloured red, blue and beige inks. However, one would suppose that even if they were covered by paint they may still be visible in places. The ink was on a gelatinous layer [later tests proved the existence of gum only].

On examination of the BMAG mechanical paintings David confirmed they were finished by hand. The infrared reflectograms showed no indication of anything underneath the oil paint layer. This means that either the coloured inks do not show up as well or that there is no print underneath and no print process has been used.

The Brodsworth and BM's *Summer* and *Winter* infrared reflectograms did not reveal any features that were not present in the surface paint, although the tear and repair showed up on the Brodsworth. Any carbon would also show up strongly in infrared. Overlay of the figure groups of the family in the lower left of *Summer* showed they were exactly the same dimensions, suggesting that the process precisely defines this. The paintings were hand finished, as could be seen in the details in the faces and folds of the clothes. Similarly with the skating figures in the *Winter* paintings. However, the Brodsworth *Winter* had a Polygraph label on the back.

A Polygraphic Copy Of A Landscape, Representing A Winter Scene; from an original picture, by De Louthembourg; Which, with its companion, a *Summer Scene*, cost, at Mons. Des Enfants' Sale One Hundred and Fifty Pounds. *Now in the Possession of the Society.* The POLYGRAPHIC ART, of copying or multiplying Pictures in Oil Colours, by a chymical and mechanical Process, is the original Invention of Mr. Booth, and now carried on by the Polygraphic Society in London. N.B. This Picture, like all others in Oil, may hereafter want Varnish, in that Case it may be varnished in the same Manner as any other Picture in Oil.²⁷⁴

This had led Antony and David to query the provenance of the BM copies which were thought to be by Eginton but may be Booth polygraphic copies.

²⁷⁴ The label on the back of the Brodsworth painting was drawn to David Saunders attention by Caroline Whitworth-Carr, Brodsworth Hall.

The dimensions of the figure groups in the BMAG paintings have not been compared with the BM's yet. David and Haydn Roberts thought that it would be useful to analyse paint cross-sections of the BMAG and BM copies. This will be carried out on a future visit.

Haydn Roberts, who had cleaned and conserved the BMAG paintings, reported that there was no difference in cleaning them from traditional oil paintings although the reds and browns were sensitive to solvents.

As aquatint produces blocks of colour rather than lines it was queried whether this would be picked up. However, if it was the same as the coloured *Venus and Adonis* it would have shown up, though not as strongly as black.

Extracts from the Archives of Soho

A discussion followed based on the correspondence found in Birmingham Archives and Heritage (numbers refer to Workshop paper):

Silk screen process (26)²⁷⁵

Antony was interested in reading the full AP Laurie article in the *Sphere*, 10 March 1934, describing a silk screen process said to be invented by Francis Eginton, as Laurie was an expert on inks.

Use of albumen (24)

Alan Barnes noted that albumen may have been used to stabilise the paint when it was too wet to travel. He added that albumen was used in early photography and may have contributed towards the confusion of the 'Sun Pictures' with early photography.

Copying machines and rolling press (8)

Alan Barnes mentioned Erasmus Darwin's pantograph invention (bigrapher) which he used to make copies of his notes and letters. Watt made a sculpture machine for 3D copying. Watt's copy press of 1780 may have some relation to the mechanical painting transfer process with the rolling press mentioned in (8). Val Loggie said that

²⁷⁵ Numbers in brackets refer to the Workshop paper circulated by Barbara Fogarty prior to the meeting which contained research questions based on the archival evidence.

there was a coloured portrait of Boulton after Beechey with ‘splodgy’ colour in the Timmins collection. Peter Jones said that the visitors to Soho, like Marc de Bombelles, were very impressed by the mechanical printing process.²⁷⁶ A discussion followed about what could have impressed them if the process was basically printing and hand-finishing, or were they impressed by the final object?

Electrifying

Malcolm Dick referred to the Timmins Collection and a portrait of Wesley by Priestley, said to be made by electrical means. Alan Barnes mentioned Abraham Bennett who wrote books on electricity; Matthew Boulton had a copy at Soho. Alan spoke of other links to Erasmus Darwin and Joseph Wright of Derby – Joseph Banks and Chisholm, chief chemist for Wedgwood. This network of friends gave access to a ferment of ideas, experiments and inventions.

Size of copies

Rita McLean mentioned Boulton & Watt’s engine drawings in relation to very large copies made on substantial paper. Antony Griffiths said the largest plates he had seen were approximately 32”. Stubbs had found himself limited to 30” copper plates which is why he asked Wedgwood to make larger ceramic supports. Val said that some plates were sent to London to be printed because the Soho presses were not powerful enough. Robert Riddel wrote a letter to Boulton about Riddel’s book on mountains, asking for Boulton’s advice on large plates.

Paper

Tom Jones said that cambric paper was used for Watt’s copy press. The special paper used for the copy press was like tissue, it had to be read through the paper as the inked-side was a mirror image of the original. Connections to Baskerville and paper were referred to. Peter Jones mentioned ‘papier serpent’ (snake watermark) which was thin tissue-like paper. Neither the tissue paper nor canvas would be suitable for an intaglio print like aquatint, the pressure of the press would tear the tissue and risk disrupting the ground on the canvas.

²⁷⁶ Marc de Bombelles, ed. Jacques Gury, *Journal de voyage en Grande Bretagne et en Irlande 1784*, Studies in Voltaire and the Eighteenth Century, vol 269, Oxford, 1989

Colour printing

Antony said that while the French used multiple plates and registration marks [to line up the plates] for colour printing, the English printers always used a single plate to which they applied a limited number of colours ‘a la poupée’ (with a printer’s dolly). The English printers had a reputation for being very skilled at this.

‘The boys’ (19) and originals (16)

The dead-colour/impression was painted over by ‘the boys’ copying the colours from the ‘original’ (either literally the original or a copy of it which was used to standardise the subsequent reproductions). Val mentioned that several groups of ‘boys’ are mentioned eg the ‘mint boys’ in white suits, presumably literally boys or apprentices working at a lower rate than the men. This accounts for the quality of the painting which is formulaic, like ‘painting by numbers’; there is no blending of paint ‘wet in wet’. The specialist artists would then finish the details – trees, faces, impasto etc.

Varnishes

Alan Barnes mentioned that Matthew Turner, Liverpool merchant, produced varnishes for Boulton and Wedgwood.

Summing-up by Antony Griffiths

Basically the ‘Sun pictures’ eg *Venus and Adonis* were made from an aquatint design on a [copper] plate which was printed on to standard paper using preparation ‘x’. The aquatint produced tone not line. The background was not pigmented and the particles of ink were dispersed within the material which was water soluble. The ‘Sun Pictures’ had been water-damaged, presumably while being stored upside-down as shown by a chamfered white band at the top where the ink-bearing layer had come off. Therefore there is a translucent detachable layer with ink in it. This suggests that this layer was capable of being transfer-printed onto another support eg prepared canvas (the canvases of the de Louthembourg copies were primed with a white ground). The layer may have contained gelatine and/or albumen, both of which discolour/yellow with age. [Wallis suggested a ‘bat’ process, using an essential oil of spike or lavender, which evaporates, leaving all the other materials to be transferred.²⁷⁷] A damp cloth or

²⁷⁷ George Wallis, ‘The Ghost of an art-process’, *The Art Journal*, August 1866, 255

gentle heat on the back of the paper would allow the paper to be peeled off the canvas leaving the tonal print. The archives reveal that many of the impressions were not good enough and had to be redone (14) suggesting the transfer printing was not a uniformly reliable process.

The transfer processes used in ceramics and enamelling used tissue-like paper which was burnt off in the process, leaving the vitreous print. These transfer processes were known from the 1750s but the pigment and binder had to be modified to transfer onto canvas.²⁷⁸

Post-meeting note from Olga Baird

Regarding a letter from James Keir to Matthew Boulton, 14 Dec 1779

(MS3782/12/65/45): Keir's work on ink and paper was usually understood as an independent experiment, or related to the copying machine. If so, why did he address it to Boulton and not Watt, was he experimenting with the media for mechanical paintings? In the same letter an apparatus is mentioned. Keir is much concerned with its design and appearance and wants it to be a fine piece of furniture. In Keir's letter on 22 Jan 1780 (MS3782/12/65/50), Keir mentioned a machine to 'Egginton design', which Olga thinks is a machine for mechanical paintings. This opens up areas for further research in the archives.

²⁷⁸ John Brooks, transfer printing onto enamels and china in Birmingham 1751, as discussed by Bernard Watney, 'Petitions for Patents concerning Porcelain, Glass and Enamels with reference to Birmingham, 'The Great Toyshop of Europe', *English Ceramic Circle*, 1966, 61; John Sadler, transfer printing onto ceramic bodies in Liverpool, 1752 as discussed by Llewellyn Jewitt, 'Liverpool Pottery' *Art Journal*, August, 1865, 242

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Figure 1a
Francis Eginton after Angelica Kauffman,
Graces [Nymphs] awakening Cupid,
1778-1781, 'Sun picture', London,
Science Museum

(Courtesy Science and Society Picture Library, 10421400, 10421397)



Figure 1b
William Wynne Ryland after
Angelica Kauffman, *Dormio
Innocuus*, 1776, stipple engraving,
London, Science Museum

etched aquatint on copper plate



printed onto paper



Transferred to canvas (dead-colour)



painted over in oils by 'the boys',
retouched by professional artist

Figure 2 Mechanical Painting Process
(Courtesy Birmingham Museums & Art Gallery Picture Library, 1885 P2589)



Figure 3a
Francis Eginton after Benjamin West,
Venus and Adonis, 1778-1781, 'Sun
Picture', London, Science Museum
(Courtesy Science and Society Picture Library, 10421401)



Figure 3b
Infrared reflectogram of *Venus and
Adonis*, 2009, London, British Museum
(Courtesy Department of Conservation and Scientific
Research, The British Museum)



Overlay of both images

Figure 4

Comparison of detail from two copies of *Summer*, after PJ de Louthembourg, c1778, British Museum (upper) and Brodsworth Hall, South Yorkshire (lower) with overlay

(Courtesy Department of Conservation and Scientific Research, The British Museum)



Figure 5
The Gallery, Montagu House, Portman Square [now demolished],
photographed 1894, Country Life Picture Library
(Courtesy Country Life Picture Gallery, 672261)

Figure 6

Angelica Kauffman, *Trenmor[e] and Inibaca [Imbaca]*, 1773, private collection

This image can be seen at

<http://www.localhistory.scit.wlv.ac.uk/articles/Barney/Joseph.htm>



Figure 7

Copy after P. J. de Louthembourg, *Winter*, c1778, catalogued as a mechanical painting, Birmingham Museums and Art Gallery (Courtesy Birmingham Museums & Art Gallery Picture Library, 1885 P2591)

Figure 8

Benjamin West, *The Death of General Wolfe*,
1770, Ottawa, National Gallery of Canada

This image can be seen at

<http://www.gallery.ca/en/see/collections/artwork.php?mkey=5363>