

The Eighteenth-Century Birmingham Brass Trade: Origins, Growth, and Politics.

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Abstract

Birmingham was known as the 'city of a thousand trades' because of its diverse industrial base, but one of these trades, brass manufacturing, has barely been explored by historians. This thesis examines the origins of the industry, explores its expansion throughout the eighteenth century, outlines the development of a national political presence through a network of brass founders, and places the trade within an international context. Using personal correspondence, Parliamentary records, trade cards, travel diaries and printed primary sources, this research provides the fullest picture of the development of the Birmingham brass industry to date. It reveals that the success of the industry was dependent on increasingly sophisticated organisational methods and political strategies, developed by a group of local industrialists. The collective political activities of Birmingham brass manufacturers enabled local businessmen to assert their interests over and against copper and brass businesses elsewhere in Britain, as well as continental Europe. This was achieved by using manipulative propaganda, lobbying politicians, and the dismantling of opponents' arguments. By 1801 the brass founders of Birmingham had established their trade as a significant local industry. Crucially, they had also successfully asserted Birmingham's economic interests on the national stage.

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Abbreviations

ABG: *Aris's Birmingham Gazette*

BPU: *Birmingham Political Union*

KKCA: *Kresen Kernow, Cornwall's Archives*

LG: *London Gazette*

ODNB: *Oxford Dictionary of National Biography*

PCOPEC: *The 1799 Privy Council Order Prohibiting the Exportation of Copper*

RCCT: *Report from the Committee Appointed to Enquire into the State of the Copper Mines and Copper Trade of the Kingdom*

SBSC: *Swinney's Birmingham and Staffordshire Chronicle*

Introduction

This thesis explores the Birmingham brass industry between 1740 and 1801. Whilst historians have acknowledged the extent and size of the brass industry in Birmingham during the eighteenth century, historical accounts of its origins, organisation, expansion, and significance have been limited.¹ This thesis is the first time that much of the scattered primary material has been collated and analysed. By bringing together a range of disparate sources, this study identifies the shape and nature of the origins and development of the Birmingham brass industry. More particularly, this thesis shows how, alongside innovations in organisation, processes and technologies, Birmingham industrialists actively developed political strategies throughout the late-eighteenth century. Brass founders in Birmingham formed a political lobbying group, through which they devised and campaigned for the protectionist policies necessary to safeguard their industry during a period marked by revolutions, foreign industrial competition, and wars. By revealing these developments, this thesis demonstrates the emerging and interconnected political, social, and economic dimensions of the Birmingham brass trade.

This research provides a case-study of the political activities of local brass founders. It explores the aims of the group, as well as the leadership, structure, membership, methods, and influential connections of brass founders, locally, nationally, and internationally. By the

¹ W. Aitken, "Brass and Brass Manufacturers," in *The Resources, Products and Industrial History of Birmingham and the Midland Hardware District*, ed. S. Timmins (London: Robert Hardwicke Publishing, 1866); M. Berg, *The Age of Manufactures 1700-1820: Industry, Innovation and Work in Britain* (Abingdon: Routledge, 1994); H. Hamilton, *The English Brass and Copper Industries to 1800* (Abingdon: Routledge, 1967); P. Jones, *Industrial Enlightenment: Science, Technology and Culture in Birmingham and the West Midlands, 1760-1820* (Manchester: Manchester University Press, 2008); M. Rowlands, *Masters and Men in the West Midland Metalware Trades Before the Industrial Revolution* (Manchester: Manchester University Press, 1975).

mid-eighteenth century brass and copper exports were lucrative markets throughout Europe, Asia, North America, and West Africa.² The industrialists of Birmingham fought to gain wealth, stability, autonomy, and influence within the British brass trade and by 1801 the brass founders were regularly engaging with some members of the political elite of Britain (Chapters Four and Five). The strategies utilised by brass founders to achieve their aims changed significantly between 1740 and 1801. These strategic shifts are outlined in this research. By examining these different phases, the thesis sheds light on the political and industrial cultures of an important British trade during the second half of the eighteenth century. Each chapter focuses on key moments, individuals, time periods, or conflicts which shaped and changed the development of the Birmingham brass industry. In sum, the thesis stresses that political engagement was a vital part of the industrial and economic changes within the trade.

William Court described the pre-industrialised region known as Birmingham and District as ‘a smallish area of some 200 square miles made up of parts of south Staffordshire, north Warwickshire, and east Worcestershire.’³ Throughout the eighteenth century the area underwent dramatic changes, including rapid population growth, industrialisation, and urbanisation.⁴ The drastic transformation of Birmingham and District during this period has led to a diverse and growing level of historical analysis, exploring how and why social, economic, and industrial change took place. This chapter begins by exploring the existing secondary historical literature on Birmingham and its metal trades, highlighting the neglect of the town’s important brass industry as a subject of study despite this diverse material. This

² W. Aitken, “Brass and Brass Manufacturers,” 229.

³ W. Court, *The Rise of the Midlands Industries, 1600-1838* (Oxford: Oxford University Press, 1938), 2.

⁴ Court, *The Rise of the Midlands Industries*, 2.

section is followed by an exploration of the international trading context, as well as the evolving historical literature and analysis of international trade, which is crucial in understanding the changes that occurred in the brass trade of Birmingham. Following this section, the political history of late-eighteenth century Birmingham is outlined, and it is argued that there are a number of important factors that have been omitted in histories of the town – most importantly the politics of the brass industry. Following the literature review of these three core areas, the introduction focuses upon the methodology utilised in this thesis. Birmingham brass has no centralised archives, it was a notoriously secretive industry, and the sources are disparate and scattered, which creates methodological difficulties and limitations for a researcher. The introduction finishes with an overview of the structure of the thesis. The research is placed within current historiographical debates, and challenges aspects of existing analyses. It builds upon the secondary literature of eighteenth-century Birmingham metal industries, the town's international trading context, and political lobbying, to produce fresh perspectives and insights on an important industry.⁵

The History of Birmingham Metal Trades

Whilst the history of Birmingham continues to evolve, one theme remains constant within the historical literature of the town: metalworking has always been vital to Birmingham's economic growth. William Hutton, in his eighteenth-century history, was clear that he believed skill with metal lay at the heart of Birmingham's manufacturing success:

⁵ Berg, *The Age of Manufactures*; I. Cawood and L. Peters, eds., *Print, Politics and the Provincial Press in Modern Britain* (Oxford: Peter Land Publishing, 2019); J. Norris, "Samuel Garbett and The Early Development of Industrial Lobbying in Great Britain," *The Economic History Review*: 10: 3 (April 1958), 450.

Birmingham begun (sic) with the productions of the anvil, and probably will end with them. The sons of the hammer were once her chief inhabitants; but that great croud (sic) of artists is now lost in a greater: Genius seems to increase with multitude.⁶

Hutton's sentiment was echoed in the nineteenth century by liberal statesman Richard Cobden who concluded that 'our [Birmingham's] strength, wealth and commerce grew out of the skilled labour of the men working in metals. They are at the foundation of our manufacturing greatness.'⁷ Historians have continued to reinforce the idea that metalwork has been a vital element in Birmingham's history. Maxine Berg concluded that the metal industries of Birmingham were intrinsically linked to the evolution of the town, more particularly that the production of specialist metal products for international markets meant that the town's infrastructure and transportation networks were expanded and improved to cater for markets outside of the borders of Birmingham and District.⁸ This thesis provides case-study evidence to support and extend Berg's claim, highlighting the importance of the brass industry in the transformation of Birmingham. It draws attention to how its expansion, as a result of international demand for copper-alloy products, physically transformed the landscape and infrastructure of the town in terms of the number of large brass houses and the expansion of road and canal networks.

⁶ W. Hutton, *An History of Birmingham* (Birmingham: Pearson and Rollason Publishing, 1783), 79.

⁷ As cited in E. Wrigley, *Continuity, Chance and Change: The Character of the Industrial Revolution in England* (Cambridge: Cambridge University Press, 1988), 57.

⁸ M. Berg, *Markets and Manufacture in Early Industrial Europe*, (Abingdon: Routledge, 1991), 182.

In the 1990s, Berg argued that many of the details and complexities of specific metal products and industries in Britain were still not entirely understood and stressed the need for further research into individual industries.⁹ Since then a far greater understanding of the various different metal trades has emerged through a variety of studies. Robert Allen has provided macro level models that highlight how several industries, including metal trades, responded to the pressures of the international economy.¹⁰ Chris Evans and Göran Rydén have discussed the varied social organisation found within the production of iron in Europe.¹¹ Other industrial centres in Britain have detailed accounts to explain the origins, rise, and popularity of important metal and industrial trades, as well as the cultures surrounding them.¹² For instance, Geoffrey Tweedale has a thorough analysis of the development of the Sheffield steel industry.¹³ Tweedale splits his history of Sheffield steel into distinct phases; he outlines the establishment of competitive superiority within the market beginning in the 1740s, followed by a description of how competition was dealt with through the diversification of family firms, finishing in the 1920s and 1930s when the competitive edge was lost.¹⁴ In 2009 this work was followed up with a revised intercontinental approach where he explored links to America.¹⁵ There is however, no equivalent study of the Birmingham brass trade. Whilst, as is explored below, the Birmingham metal industries have received much attention, the brass industry has

⁹ Berg, *The Age of Manufactures*, 232.

¹⁰ R. Allen, *The British Industrial Revolution in Global Perspective* (Cambridge: Cambridge University Press, 2009).

¹¹ C. Evans and G. Rydén, eds., *The Industrial Revolution in Iron: The Impact of British Coal Technology in Nineteenth-Century Europe* (Aldershot: Ashgate Publishing, 2005).

¹² S. Beckert, *Empire of Cotton: A Global History* (New York: Vintage Books Publishing, 2015), 340-379; W. Crump, *The Leeds Woollen Industry 1780-1820* (Leeds: Thoresby Society, 1931); M. Keighley, *Wool City: A History of the Bradford Textile Industry* (Bradford: Whitaker and Company, 2007); P. Satia, *Empire of Guns: The Violent Making of the Industrial Revolution* (London: Duckworth Overlook, 2018); G. Tweedale, *Steel City: Entrepreneurship, Strategy and Technology in Sheffield 1743-1993* (Wotton Under Edge: Clarendon Press, 1995).

¹³ Tweedale, *Steel City*.

¹⁴ Tweedale, *Steel City*.

¹⁵ G. Tweedale, *Sheffield Steel and America: A Century of Commercial and Technological Interdependence 1830-1930* (Cambridge: Cambridge University Press, 2009).

not been studied in detail for reasons hypothesised in the methodology. As a result of methodological difficulties, the analysis of brass in Birmingham has often been a brief and descriptive side note within wider histories of Birmingham manufacturing, which highlight the importance of brass, but neglect explaining its origins and development.¹⁶ By using a similar approach to Tweedale, this thesis outlines the main phases of the history of the Birmingham brass industry, whilst placing them within an international perspective. It outlines how and why the brass industry expanded in the way that it did.

There had been studies of specific Birmingham metal trades and industries before Berg's intervention in 1994, for example, Nicholas Goodison's exploration of Matthew Boulton's ormolu reveals the methods by which Boulton's luxury ornaments were designed, made, and marketed between 1762 and 1782.¹⁷ However, since Berg outlined some of the gaps in the historical literature of Birmingham, an understanding of Birmingham and District's metal industries has been augmented, expanded, and updated in various studies. Shena Mason traced the origins and development of using precious metals in jewellery-making in Birmingham's Jewellery Quarter.¹⁸ Peter Jones explored Joel Mokyr's *Industrial Enlightenment* concept through a case study of Birmingham and the West Midlands, using the scientific, technological, and cultural dimensions of various industries to explore the transfer of 'useful knowledge.' Jones' study featured a variety of metal trades as examples, including steel and iron.¹⁹ More recently Priya Satia has reframed the Industrial Revolution

¹⁶ Jones, *Industrial Enlightenment*, 129-139.

¹⁷ N. Goodison, *Ormolu: The Work of Matthew Boulton* (New York: Prager Publishers, 1974).

¹⁸ S. Mason, *Jewellery Making in Birmingham: 1750-1995* (Felpham: Phillimore, 1998).

¹⁹ Jones, *Industrial Enlightenment*; J. Mokyr, *The Gifts of Athena: Historical Origins of the Knowledge Economy* (New Jersey: Princeton University Press, 2002), 28-77; J. Mokyr, *The Enlightened Economy: An Economic History of Britain 1700-1850* (London: Yale University Press, 2012).

using the expansion of the British Empire, as well as the emergence of industrial capitalism, as crucial to the development of the gun trade; many of the metal gun components she discusses were created or assembled in Birmingham.²⁰ In the years since Satia's book, doctoral research has also revealed the importance of the enamel industry and the cut nail iron trade, as well as luxury trinkets and toys to Birmingham.²¹ This thesis builds upon these analyses of the metal trades of Birmingham and District and, by focusing on the brass industry, helps in understanding what shaped their history.

The history of metalworking in Birmingham and District has inevitably focused primarily on the achievements of two individuals: Matthew Boulton and James Watt. The focus has been particularly strong in the last twelve years because of the bicentennial anniversaries of the deaths of the two men (respectively in 2009 and 2019), which were commemorated in books and conferences.²² In 2011 the pair also appeared on the Bank of England's new fifty pound note.²³ The two influential industrialists are often used to represent metallurgical entrepreneurs within the region, possibly because of their astute self-promotion and marketing of their inventions, along with the survival of the Boulton and Watt archives.²⁴ In

²⁰ Satia, *Empire of Guns*.

²¹ J. Grayson, "South Staffordshire Enamels: The Lost Craftsmanship of Eighteenth-Century Copper Substrate" (Birmingham City University PhD thesis, 2018); F. Sjögren, "Entrepreneurship and Technological Change: the Birmingham and District Cut-Nail Trade, c. 1811-1913" (University of Birmingham PhD thesis, 2019). At the time of writing J. Dixon at the University of Birmingham is conducting doctoral research into toys which were made in eighteenth-century Birmingham.

²² 'Where Genius and the Arts Preside' *Matthew Boulton and the Soho Manufactory Conference, 1809-2009*, 5 - 6 July 2009, Birmingham; S. Mason, ed, *Matthew Boulton, Selling What the World Desires* (Birmingham: Birmingham City Council, 2009); K. Croft, M. Dick, eds, *The Power to Change the World, James Watt (1736-1819) – A Life in 50 Objects* (Birmingham: West Midlands History Limited, 2019); *Rethinking James Watt (1739-1819): Innovation, Culture and Legacy Conference, University of Birmingham*, 30 August – 1 September 2019, Birmingham; M. Dick, C. Archer-Parre, eds., *James Watt (1736-1819): Culture, Innovation and Enlightenment* (Liverpool: Liverpool University Press, 2020).

²³ <https://www.bankofengland.co.uk/banknotes/50-pound-note>.

²⁴ K. Quickenden, S. Baggott, M. Dick, eds., *Matthew Boulton: Enterprising Industrialist of the Enlightenment* (Abingdon; Ashgate Publishing, 2013), 1-18; Berg, *Luxury and Pleasure*, 172-176.

contrast, this thesis identifies lesser known innovators and businessmen who made contributions to industrial developments in Birmingham and District. Industrialists such as George Simcox, Thomas Hadley, William Collins, and John Westwood were important in the expansion of the brass industry and its politics but have received little academic investigation or analysis - with only passing mentions in a number of articles.²⁵ This research explores the communication between well-known industrialists such as Boulton and Watt, and their lesser-known local business associates. These men made important technological and social contributions that raised the profile of the town. The co-operation and interaction between the networks of brass founders in Birmingham, who co-ordinated their efforts to safeguard their industry, created a powerful group with national and international connections; brass founders used their political and industrial partnerships throughout Europe and North America to solidify their national and international influence.

Despite a growing understanding of metal-based trades brass, one of Birmingham's most important industries in the eighteenth century, has not been explored in any depth. This research rectifies this neglect by exploring the technological developments such as copper-bolt and sheathing technology, the international dimensions of the brass trade, and the development of a political consciousness by the men who ran the industry.

²⁵ R. Hawkins, "Minor Products of British Nineteenth Century Diesinking," *British Numismatic Journal*: 30: 1 (1960), 174-87; J. Harris, "Copper and Shipping in the Eighteenth Century," *The Economic History Review*: 19: 3 (1966), 550-568; B Smith, "*The Galton of Birmingham: Quaker Gun Merchants and Bankers, 1702-1831*," *Business History*: 9: 2 (1967), 132-150.

International Trading Context

In 1989 Eric Hopkins explored the economic, industrial and social history of Birmingham, yet isolated the town from the wider international experience by focusing on the slow process of inventiveness and flexibility of the region's workforce.²⁶ He explored the division of labour in workshops, and concluded that the economic expansion and social growth of the town was typical of British industrial centres during the eighteenth century.²⁷ Although his work is called *The First Manufacturing Town in the World*, his analysis focused on the national economy, with little examination of how Birmingham was influenced by international developments and events.²⁸ Although undeniably important, this account overlooked many metal products which were increasingly tailored to its merchants' national and international connections; brass founders, for example, tailored their products for international buyers.²⁹ Given the limitations of sources for the trade in brass, it is difficult to determine precisely how important these markets were compared to domestic ones, and to establish which international markets were strongest, but the North American and European trades were especially important for Birmingham brass founders.

Since Hopkins' work, historians have highlighted the importance of studying British manufacturing and trading within its international context, emphasising the need to widen the geographic scope of historical economic studies, including regional research. This thesis

²⁶ E. Hopkins, *Birmingham – The First Manufacturing Town in the World*, (Birmingham: Weidenfeld and Nicolson Publishing, 1989).

²⁷ Hopkins, *The First Manufacturing Town in the World*.

²⁸ Hopkins, *The First Manufacturing Town in the World*.

²⁹ M. Berg, "Commerce and Creativity in Eighteenth Century Birmingham," in *Markets and Manufacture in Early Industrial Europe*, ed. M. Berg (Abingdon: Routledge, 1991) 173; Hopkins, *The First Manufacturing Town in the World*, 184.

is influenced by recent historical scholarship, such as the work of Berg and Satia, which seeks to apply international dimensions to the history of trade and urban growth.³⁰ Pamela Crossley, Guillemette Crouzet, Guido Van Meersbergen, and Kate Smith have highlighted international histories and trading networks.³¹ Berg has shown that Chinese porcelain shaped the Staffordshire pottery industries and influenced Matthew Boulton's industrial practices, whilst Giorgio Riello has outlined how the cotton trade shaped Manchester and Lancashire.³² Building on earlier research, Satia has demonstrated the importance of the West African trade for gun-making in Birmingham.³³ Jones stresses that European dimensions reveal how the Birmingham economy functioned. The fifth chapter of his *Industrial Enlightenment* explores how the politics of the French Revolution and Napoleonic Wars influenced the philosopher-industrialists of the West Midlands.³⁴ Jones' European political context, Berg's Asian connections, and Satia's West African trade links, provide a broader perspective for the industrial history of Birmingham and District. This thesis builds upon their research by exploring the Birmingham brass industry, to explore the interconnectedness of politics, industry, and trade throughout the Atlantic World.³⁵ Placing Birmingham's brass trade within the context of international markets reveals new insights, and sheds light on how the impact

³⁰ M. Berg, 'Skill, Craft and Histories of Industrialization in Europe and Asia,' *Transactions of the Royal Historical Society*: 24 (2015), 127-148: 1: 2, 269-288; Satia, *Empire of Guns*.

³¹ P. Crossley, *What is Global History* (Cambridge: Polity Press, 2008); G. Crouzet and G. Van Meersbergen, "What is Global History Now?" last modified 8 November 2017, https://warwick.ac.uk/fac/arts/history/ghcc/blog/jeremy_adelman_what/; K. Smith, "Amidst Things: New Histories of Commodities, Capital, and Consumption," *The Historical Journal*: 61: 3 (September 2018), 841-861.

³² M. Berg, "Britain, Industry and Perceptions of China: Matthew Boulton, 'Useful Knowledge' and the Macartney Embassy to China, 1792-1794," *Journal of Global History*: 1: 2, 269-288; G. Riello, *Cotton: The Fabric that Made the Modern World* (Cambridge, Cambridge University Press, 2013).

³³ B. Smith, 'The Galtons of Birmingham: Quaker Gun Merchants and Bankers, 1702-1831,' *Business History*, 9:2 (July 1967); W. Richards, 'The Birmingham Gun Manufactory of Farmer and Galton and the Slave Trade in the Eighteenth Century,' (University of Birmingham, M.A Thesis 1972); W. Richards, 'The Import of Firearms into West Africa in the Eighteenth Century,' *The Journal of West African History*, 21: 1 (1980), 43-59; Satia, *Empire of Guns*.

³⁴ Jones, *Industrial Enlightenment*, 201-228.

³⁵ Jones, *Industrial Enlightenment*, 2.

of British wars and foreign policy shaped the development of the industry. Industrialisation was intrinsically linked to international trade and much of the lobbying undertaken by manufacturers of the town aimed to ensure that international connections remained strong (Chapters Two and Three).

According to Antony Hopkins, the increasingly connected Atlantic World of the late-eighteenth century was 'marked by two main political and economic developments: the reconfiguration of the state systems, and the growth of finance, services, and pre-industrial manufacturing.'³⁶ Christopher Bayly revealed that as early modern globalisation evolved, through the emergence of the modern international order, capitalist groups became more powerful and responded to each other and events throughout the Atlantic World.³⁷ The changing power balance within political systems, and between different states, created an environment in which British manufacturers could thrive. Sven Beckert has outlined the importance of global trading systems to the rise and fall of Manchester cotton, describing it as 'Cotton Imperialism.'³⁸ Beckert argues that protectionist policies safeguarded the development of the cotton industry in Manchester. In response to such work, this thesis outlines the rise of an important British industry and the protectionist policies introduced to safeguard it. Protectionist policies were not simply a nineteenth-century phenomenon, but crucial to the eighteenth century as well. The industrialists who acted to influence such policies became increasingly importance in this period.³⁹

³⁶ A. Hopkins, "Introduction: Globalisation – An Agenda for Historians," in *Globalisation in World History*, ed. A. Hopkins (London: Pimlico Publishing, 2003), 6.

³⁷ C. Bayly, *The Birth of the Modern World: Global Connections and Comparisons 1780-1914* (New Jersey; Wiley Publishing, 2004), 15.

³⁸ Beckert, *Empire of Cotton*, 340-379.

³⁹ E. Wood, *The Origins of Capitalism: A Longer View* (London: Verso Publishing, 2002), 44-46.

Historians have explored the commercial organisation and links formed by individuals and businesses within the international marketplace, and increasingly have focused on the relationship of those businesses and groups to rapidly-changing political systems. Vivien Dietz has highlighted the complicated and changing dynamic between manufacturing groups and the British state, and proposed the need for more case studies to understand the relationship.⁴⁰ Robert Allen, Martin Daunton and Christopher Storrs have drawn attention to state-sponsored industries in the eighteenth century, often but not exclusively linked to the military needs of Britain.⁴¹ Huw Bowen has examined the changing structure and commercial organisation of the East India Company and its relationship with the British state during the economic and social changes experienced by British society in the second half of the eighteenth century, underlining the importance of such relationships to the Company's development.⁴² Chris Evans and Göran Rydén have explored the Baltic Iron trade throughout the 1700s, comparing British and Swedish state systems and the organisation of the differing markets. They extend traditional histories of trade, manufacture, and inventiveness by demonstrating a transnational interconnectedness. In contrast to the trend of simply emphasizing cultural factors, their work outlines factors such as the impact of geography, local resources, government policy, war, institutional differences, fear, and contingency – and how those factors impacted certain industries.⁴³ This thesis identifies the relevance of many

⁴⁰ V. Dietz, "Before the Age of Capital: Manufacturing interests and the British State, 1780-1800," (Princeton University PhD Thesis, 1991).

⁴¹ M. Daunton, *State and Market in Victorian Britain: War, Welfare and Capitalism* (Woodbridge: The Boydell Press, 2008); R. Allen, *The British Industrial Revolution in Global Perspective* (Cambridge: Cambridge University Press, 2009), 2.; C. Storrs, "Introduction: The Fiscal Military State in the Long Eighteenth Century," in *The Fiscal-military State in Eighteenth-century Europe*, ed., C. Storrs (Abingdon: Routledge, 2009), 1-23.

⁴² H. Bowen, *The Business of Empire: The East India Trade Company and Imperial Britain 1756-1833* (Cambridge: Cambridge University Press, 2005); C. Evans and G. Rydén, eds., *Baltic Iron in the Atlantic World in the Eighteenth Century* (Leiden, Brill, 2007).

⁴³ C. Evans and G. Rydén, *Baltic Iron in the Atlantic World in the Eighteenth Century* (Leiden: Brill Publishing, 2007).

of these factors, particularly local resources, government policy, war, and fear, to Birmingham brass (Chapters One, Four and Five) and it continues the trend of exploring different British manufacturing groups and their links to international markets, the changing organisational methods of businesses, and the relationship of capitalist groups to a mercantile state. The brass founders of Birmingham proved to be flexible in their business and political strategies throughout the second half of the eighteenth century, as they tried to cater for various international markets and attempted to manipulate the Government into supporting the brass trade by playing upon fears of international revolutions, social unrest, and industrial espionage to achieve their goals (Chapters Four and Five).

War disrupted British trade with important markets, including the American colonies, following the American War of Independence (Chapter Two). Whilst the British Empire increased (except for America), foreign policy isolated Britain from many important international industrial centres and trading partners, such as the French and the Dutch. Historians' understanding of how eighteenth-century war affected domestic affairs is changing and Stephen Conway has concluded that the domestic repercussions have not been accorded sustained and wide-ranging treatment. Conway asserts that until recently, historians have considered the conflicts of the eighteenth century as limited wars, fought for limited ends with limited means, which necessarily had a correspondingly limited impact.⁴⁴ Kathleen Wilson claims that political cultures of English towns changed during the American war, and enabled a variety of groups outside the structures of the state to claim a stake in

⁴⁴ S. Conway, *War, State and Society in Mid-Eighteenth Century Britain and Ireland* (Oxford: Oxford University Press, 2006), 2.

national affairs.⁴⁵ The research in this thesis provides evidence for the views of Conway and Wilson, when applied to the Birmingham brass industry. It argues that the American War of Independence was one of the most significant factors in the development of a political presence in the brass industry of Birmingham, instigating a coordinated movement of political pressure from the industrialists as they sought to influence new legislation (Chapter Two).

Bowen and Kirby have explored how the Government tried to cope with periods of extended war throughout the eighteenth century and how those coping mechanisms placed stress upon the population of Britain, including manufacturing communities.⁴⁶ The 'coping mechanisms' employed by the Government, such as increasingly restrictive trade policies (Chapters Two and Three), created forms of 'stress' which are evident throughout this research. These restrictions were discussed extensively by the brass founders of Birmingham in private letters and organised meetings. Their increasingly unified response throughout the second half of the eighteenth century reveals their growing political sophistication and provides a case-study of British industrial and political action. The complicated international economic mechanisms dictated much of how Birmingham brass manufacturers behaved during the late-eighteenth century. This research explores how brass founders in Birmingham responded to international demands and wars, and at times exploited the social unrest in the Atlantic world to further their business interests. The threats to the prosperity of the brass founders as a result of the Atlantic Revolutions, export restrictions by the Government, and competition from European markets, prompted the industrialists of Birmingham to develop sophisticated political and

⁴⁵ K. Wilson, *The Sense of the People: Politics, Culture, and Imperialism in England, 1715-1785* (Cambridge: Cambridge University Press, 1998), 4.

⁴⁶ H. Bowen and M. Kirby, *War and British Society, 1688-1815* (Cambridge: Cambridge University Press, 1998), 20-40.

lobbying activity to promote their interests and compete successfully with those who threatened their interests in Bristol, Wales, and Cornwall (Chapter Three).

Politics and Political Pressure

Whilst historical analysis of Birmingham's metal industries has widened and become increasingly sophisticated, and the understanding of the international context of Birmingham and District continues to develop, the work presented here explores a gap that still exists in the historical literature of the town's trades: the late-eighteenth century links between Birmingham's political history and industry. Nineteenth-century Birmingham politics has inevitably received more attention because of the emergence of Thomas Attwood and the Birmingham Political Union, but there is still a clear gap in knowledge relating to the emergence and development of industrial political lobbying in eighteenth-century Birmingham.⁴⁷ John Money has briefly explored the Warwickshire elections during the 1760s, but the relationship between industry and politics is untouched.⁴⁸ He claims that Birmingham was politically unimportant until 1838 and unable 'to advance any claim to significance in the affairs of the nation.'⁴⁹ Hopkins' work has also been criticised for including virtually nothing on eighteenth-century town politics.⁵⁰ Whilst Hopkins' history was not designed to be a political one, the omission has yet to be adequately rectified by historians. This thesis refutes the idea of Birmingham's political insignificance in the eighteenth century and provides

⁴⁷ D. Moss, *Thomas Attwood: The Biography of a Radical* (Quebec: McGill-Queen's University Press, 1990); C. Behagg, "Thomas Atwood," *Oxford Dictionary of National Biography* (2009), <http://www.oxforddnb.com/view/article/38133> (accessed 7 January 2020).

⁴⁸ J. Money, *Experience and Identity: Birmingham and the West Midlands, 1760-1800* (Manchester: Manchester University Press, 1977), 158.

⁴⁹ Money, *Experience and Identity*, 275.

⁵⁰ R. Price, "Review of Birmingham The First Manufacturing Town in the World by Eric Hopkins," *The American Historical Review*: 119: 5 (December 1990), 1536-1537.

evidence for the emergence of a group of industrialists who politicized the brass industry and had productive relationships with the political elite of Britain, influencing elements of export and import policy during a crucial time in British mercantile history. Many other aspects of the history of Birmingham and District have been addressed and updated, but the specific dimensions of late-eighteenth century industrial politics have, until this research, been largely bypassed.

Roger Ward has explored the partisan, and often violent, politics of Birmingham but has primarily focused on the nineteenth and twentieth centuries, although he does refer to the ‘turbulent beginnings of politics’ in the late-eighteenth century.⁵¹ He extends this time period in a chapter in Carl Chinn’s and Malcolm Dick’s first history of Birmingham since the 1970s in their edited volume, *Birmingham: Workshop of the World*. He refers to limited petitioning in 1716 and the Improvement Acts of 1769, but these are passing mentions with limited analysis.⁵² Whilst the research in this thesis is not a history of the politics of Birmingham, but an exploration of the political dimensions of a specific industry, it is proposed that the brass trade (and other trades) acted as important elements in shaping Birmingham’s industrial and political history. This thesis focuses on the political lobbying of a group of brass founders, that has been neglected by political and economic historians, to reveal important insights into the town between 1740 and 1801.

⁵¹ R. Ward, *City-State and Nation: Birmingham’s Political History, c. 1830-1940* (Chichester: Phillimore, 2005), 15.

⁵² R. Ward, “A Political Profile, 1700-1940,” in *Birmingham: The Workshop of the World*, eds. C. Chinn and M. Dick, (Liverpool: Liverpool University Press, 2016), 160-193.

Political lobbying by social and industrial groups is an important aspect of eighteenth-century history. This work builds on research by H.T. Dickinson, who has highlighted the growing influence of commercial and manufacturing groups within Britain because of their increasingly effective lobbying methods.⁵³ Patrick O'Brien, Trevor Griffiths, and Philip Hunt draw attention to Manchester and cotton, and argue that protectionist policies introduced by Parliament were instigated by industrial pressure groups which created a favourable trading environment for various industries.⁵⁴ Christopher Dudley is sceptical however, believing that the political power of industrial lobbying has been overstated.⁵⁵ He has called for more research into these groups and their relationship with MPs, in order to shed light on the nature of the political economy of Britain to understand why aspects of trade policy were reformed.⁵⁶ This thesis extends the debate by examining the extensive industrial and political lobbying of an important metal industry, which reveals the unique relationships between an industrial pressure group and the political elite of the country. There has been research into lobbying movements in eighteenth-century Birmingham, such as J.R. Norris' investigation of Samuel Garbett, but this thesis expands on his ideas significantly (Chapters Two and Three), by drawing attention to both the brass manufacturing network that supported him, and the wider international context that shaped industrial lobbying within Birmingham and District.⁵⁷

⁵³ H.T. Dickinson, *The Politics of the People in Eighteenth Century Britain* (Basingstoke: Macmillan Press Limited, 1994), 75.

⁵⁴ P. O'Brien, T. Griffiths, and P. Hunt, "Political Components of the Industrial Revolution: Parliament and the English Cotton Textile Industry, 1660-1774," *The Economic History Review*: 44: 3 (August 1991), 416.

⁵⁵ C. Dudley, "Party Politics, Political Economy, and Economic Development in Eighteenth Century Britain," *The Economic History Review*: 66: 4 (November 2013), 1084-1100.

⁵⁶ Dudley, "Party Politics, Political Economy and Economic Development," 1084-1100.

⁵⁷ J. Norris, "Samuel Garbett and The Early Development of Industrial Lobbying in Great Britain," *The Economic History Review*, (April 1958), 454.

In sum, this thesis builds on the existing historical literature by exploring the links between Birmingham's brass industries, the international trading context, and political engagement. A wide range of primary sources has been utilised to illuminate the central themes of the research. There are however methodological obstacles to overcome in order to build an accurate image of the brass trade and its expansion throughout the eighteenth century.

Methodology

This research is a study of the industrial and political developments of the brass trade. Whilst trying to summarize the historical brass productions that existed within Birmingham, W.C. Aitken concluded that they 'are so numerous and so varied that no one could be found who could undertake to describe all.'⁵⁸ More recently Eric Hopkins discussed the difficulty of attempting an overview of industrial change during this period; 'it is very easy to convey an impression of steady and sustained growth when, in fact, industrial expansion was neither uniform nor even.'⁵⁹ This thesis pinpoints the key moments in the uneven industrial expansion and accounts for the fluctuations in progress. It is organised around four sets of questions, explored in five core chapters. Firstly, how and why did brass foundry become so significant to the regional economy of Birmingham and District? (Chapter One). Secondly, how was the brass trade organised as it expanded, and by whom? (Chapter Two). Thirdly, how did Birmingham-based brass founders respond to the threats of national and international competition? (Chapter Three). Fourthly, what was the nature of the links between these brass founders and elected MPs, and how did they use these links to try and influence legislation

⁵⁸ Aitken, *"Brass and Brass Manufacturers,"* 208.

⁵⁹ Hopkins, *Birmingham, The First Manufacturing Town in the World*, 60.

and Government policies? (Chapters Four and Five). These questions are explored through the identification of distinct phases within the evolution of the trade. The trends that emerge include the rise and development of early individual handicraft workshops in the seventeenth century, followed by the establishment of large brass houses after 1740, the development of international business connections, and the formation of a politically-conscious group of industrialists who pressured MPs into supporting the trade. By exploring these themes, this thesis shows the interconnected development of industry and politics in Birmingham.

As previously noted, there are several practical reasons to account for the lack of studies into the brass trade and its significance, despite its apparent importance; primarily that the source material is scarce, scattered, and not systematically organised. There is no single collection for the history of brass. There is also the nature of the brass industry, which was incredibly secretive. The phrase ‘the art and mystery of making and selling brass,’ appears repeatedly in extant sources on the eighteenth-century brass industry.⁶⁰ Very little written evidence survives to shed light on individual technological processes: techniques were passed down through the generations to maintain secrets (Chapters One and Two). Maintaining industrial secrets was evidently important but provides significant obstacles when trying to create a comprehensive picture of the industry. The lack of centralised archives for brass businesses, as well as the secretive nature of the industry, has inhibited understanding. This thesis sheds light on the history of the metals industry of Birmingham and District by collating and connecting the scattered and diverse range of primary sources- including parliamentary

⁶⁰ Wolfson Centre Archival Research (WCAR), MS3004/9: *Articles of the Birmingham Brass Company*.

reports, private letters between brass founders, newspaper coverage, pamphlets, and trade directories.

Due to the involvement of Matthew Boulton in the brass industry, and the extensive source material relating to his businesses, the starting point for research was the Boulton and Watt collection in the Library of Birmingham Archives.⁶¹ Personal correspondence led to links across Great Britain, including material in the National Museum of Wales in Cardiff, the Bristol Archives, and the Cornish Archives at Kresen Kernow. Alongside these collections, this thesis has also uncovered relevant material in Staffordshire, Sandwell, Dudley, Walsall, and Wolverhampton archives, such as business records, newspapers, and bankruptcy claims.⁶² Travel diaries exist in Scandinavian and Russian museums that discuss the sophisticated organisation of the Birmingham metal industries.⁶³ The Cornish and Bristol Archives contain letters from mine owners and brass traders discussing the success and dominance of Birmingham brass founders. The Greenwich Maritime Museum has purchase records of copper and brass bolts and ship sheathing.

There are limitations to some of the archives; many of the collections are family-created and therefore generated from existing records which may have been filtered by dutiful sons and daughters. The contents of many of the collections have been organised by archivists, so

⁶¹ These collections are found in the WCAR.

⁶² "Dudley Archives," [https:// www.dudley.gov.uk/resident/libraries-archives-and-local-history-service/](https://www.dudley.gov.uk/resident/libraries-archives-and-local-history-service/); "Staffordshire CC," <https://www.staffordshire.gov.uk/leisure/archives/collections/OnlineCatalogues/home.aspx>; "Walsall Archives," https://go.walsall.gov.uk/local_history_centre_online; "Wolverhampton archives," <http://www.wolverhamptonart.org.uk/about-wolverhampton-archives/>.

⁶³ S. Schröder *Day Book 1748-1751*, trans. D. Rood and P. Manning, (Pittsburgh: University of Pittsburgh, 2016); R. Angerstein, *Illustrated Travel Diary, 1753-1755 – Industry in England and Wales from a Swedish Perspective*, trans. P. Berg and T. Berg (Trowbridge: Cromwell Press, 2001); Rowlands, *Masters and Men*.

human error, personal interest, bias, and agendas must be considered. Hannah Grout discusses the flaws of archival cataloguing by stressing that ‘institutions signify what a society has deemed worthy of preserving, with an emphasis on the objects as providing substantiation of a person, place or event.’⁶⁴ It is important that cultural bias be taken into account as well; ‘inequalities which exist in human societies are reflected in the holdings of the institution that keep them.’⁶⁵ Experiences that are often underrepresented in archival holdings often relate to disability, sexual orientation, gender, religion, class and faith.⁶⁶ The ‘absences’ that arise in historical archival practice, as described by Joan Schwartz and Terry Cook, often present male-centric records that are representational of historical institutional bias.⁶⁷ The material analysed in this research undeniably falls into the category of male-centric history and the focus of this history remains on the white, usually educated, men of the brass trade. This may be due to historical archival bias, or simply representative of the nature of the industry, but there are almost certainly gaps in knowledge and experience within the brass industry of Birmingham, especially regarding the experience of the workers inside brass houses. Boulton complained that many of his contemporary brass founders and workers were illiterate, and whilst this may not have been universally true for all workers, the paper trail is incomplete and inevitably focused on the experience of the educated and privileged industrialists.⁶⁸ Harry Smith has explored the difficulties of categorising different social classes and groups within Birmingham between 1780 and 1832; there was no single economic or social class that brass founders came from, but generally this thesis focuses on

⁶⁴ H. Grout, “Archiving Critically: Exploring the Communication of Cultural Biases,” *UAL Creative Teaching and Learning Journal*: 4: 1 (2019), 71.

⁶⁵ Grout, “Archiving Critically,” 72.

⁶⁶ Grout, “Archiving Critically,” 71-75.

⁶⁷ J. Schwartz and T. Cook, “Archives, Records and Power: The Making of Modern Memory,” *Archival Science*: 2: 1 (September 2002), 1-19.

⁶⁸ WCAR, MS 3782/13/36/151: *Matthew Boulton Letter* (7 July 1800).

the wealthier, more educated industrialists.⁶⁹ This perspective means that the important experience of the illiterate brass workers has been lost. The study is therefore concentrated upon the political and logistical organisation of the industry rather than the everyday working conditions within brass houses. It is based on the written records of the educated men who shaped the industry and engaged with the political elite of the country.

Despite the limitations that are inherent in archival research, primary evidence from different archives provides many leads. Brass founders in Birmingham have left behind a great deal of correspondence which gives an insight into the trade through their discussions of transactions, events, and alliances. As Clare Brandt and Rebecca Earle have highlighted, letters continue to be important in eighteenth-century historical studies.⁷⁰ Brandt describes the range and diversity of letters in this time period as an invaluable source, but 'sprawling, huge and untidy.'⁷¹ As a result, generalisations about letters as historical sources are often problematic because of how different each individual letter is, but what makes letters so valuable is their immediacy, signalling what was important to individuals and groups at a precise moment in time. Andriana Benzaquen describes them as the unintentional records, private and intimate, written for a specific reader and with few exceptions not intended for public consumption.⁷² This creates a window into the private discussions concerning the brass trade, behind what was visible to the public, allowing for an analysis of not only how the brass

⁶⁹ H. Smith, "Propertied Society and Public Life: The Social History of Birmingham, 1780-1832" (University of Oxford, PhD Thesis, 2013).

⁷⁰ R. Earle, "Introduction: Letters, Writers and the Historian," in *Epistolary Selves: Letters and Letter-Writers, 1600-1945*, ed. R. Earle (Abingdon: Routledge, 1999), 2; C. Brandt, *Eighteenth-Century Letters and British Culture* (London: Palgrave Macmillan, 2006), 15.

⁷¹ Brandt, *Eighteenth-Century Letters*, 15.

⁷² A. Benzaquen, "Pray Let None See This Important Epistle: Children's Letters and Children in Letters at the Turn of the Eighteenth Century," in *Literacy Cultures and Eighteenth Century Childhoods*, ed. A. O'Malley, (London: Palgrave MacMillan, 2018), 77.

founders portrayed themselves publicly in newspapers and pamphlets, but also what was driving their actions privately. The public and private image of the industrial group differed greatly (Chapters Three, Four and Five). Whether publicly or privately, Boulton, Watt, and the leading figures in Birmingham brass provide a self-serving and one-sided perspective of the trade. As outlined throughout this work, many of their arguments and claims can be misleading and difficult to verify and offer only one side of a larger conversation. Various records and personal correspondence have been lost or destroyed over time, for example many of the most valuable sources concerning James Keir's work on copper alloy and brass chemistry were destroyed by the fire at his daughter's residence, Abberley Hall, Worcestershire, on 25 December 1845.⁷³ Accidental damage is not the only issue; Boulton finished one of his letters with the instruction 'burn this piece,' which was almost certainly not the only time he requested such action and suggests that there is important knowledge which will never be uncovered.⁷⁴

To account for the limitations of personal letters, as well as the organisational constraints and biases that exist within different archives, the thesis utilises many other types of sources. These include local property records, family papers, minutes from legal disputes, business listings, bankruptcy claims, and wills which have all been examined to verify some of the claims made in private correspondence. Another source of primary evidence is newspapers. Coverage of local news and events, through printed material such as *Aris's Birmingham Gazette*, is invaluable – and often contradicts the private letters. Uriel Hyed and Jeremy Black have highlighted the importance of newspapers for understanding eighteenth-century socio-

⁷³ A. Keir Moilliet, *A Sketch of the Life of James Keir* (London: Robert Edmund Taylor Publishing, 1868), 1-5.

⁷⁴ Kresen Kernow, Cornwall's Archives (KKCA), AD1583/1/47: *Letter from Boulton to Wilson Regarding meeting with Mr Pitt and various other matters* (10 February 1785).

economic history, and print culture is an important historiographical sub-theme.⁷⁵ Eighteenth-century newspapers were part of a far from enclosed system of information which, in common with printed matter such as books and magazines, and unprinted matter, such as newsletters and merchants' correspondence, served as common sources. The flow of information and opinion was varied and relatively unstructured.⁷⁶ Despite the ad-hoc organisation of information within newspapers, many insights can still be found. *Aris's Gazette* specifically, contains a variety of reports of the meetings of brass founders and their interactions with Parliament (Chapters Two, Three, Four and Five). *Aris's Gazette* was decried by its rivals as a mere register of sales or a broker's guide due its high number of advertisements, but Asa Briggs has described the 'eighteenth-century *Gazette* as one of the most important provincial papers, ranking with the *Liverpool Mercury* and the *Edinburgh Courant*.⁷⁷ The paper was widely-distributed and often became a focal point for much of the Birmingham population's access to information, which makes it a significant tool for historians of the region, especially for the diffusion of information.⁷⁸ A variety of criticisms of brass founders by the public is to be found within the paper, providing a vital insight when attempting to counter the one-sided perspectives of private letters and propagandistic pamphlets (Chapters Four and Five). The political role of the brass founders was often at odds with the public's perception – this is evident through study of the paper. To reduce the print to a simple broker's guide is unreasonable: it is an important source of knowledge regarding local news, businesses and how they advertised themselves.

⁷⁵ J. Black, *The English Press in the Eighteenth Century* (Abingdon: Routledge, 2011); U. Heyd, *Reading Newspapers: Press and Public in Eighteenth-Century Britain and America* (Oxford: Voltaire Foundation Publications, 2012).

⁷⁶ Black, *The English Press in the Eighteenth Century*, 60.

⁷⁷ A. Briggs, ed., *The Collected Essays of Asa Briggs: Words, Numbers, Places, People* (Chicago: The University of Illinois Press, 1988), 109.

⁷⁸ J. Money, "Taverns, Coffee Houses and Clubs: Local Politics and Popular Articulacy in the Birmingham Area in The Age of the American Revolution," *The Historical Journal*: 14:1 (March 1971), 15–47.

The use of advertisements of businesses in newspapers has been studied in conjunction with a third type of source, trade directories. Directories and guides of Midlands' businesses, such as Samuel Timmins's 1866 guide to *The Resources, Products and Industrial History of Birmingham* and Bisset's *Magnificent Guide or Grand Copper Plate Directory for the Town of Birmingham* (1800), have been used to create a clearer image of the number of brass businesses, and how they changed over time, in order to obtain an indication of the uneven growth of the industry (Chapter One).⁷⁹ Directories also have their limitations; businesses had to pay a fee for advertising space, so a number of firms are not included in their pages which therefore comprise incomplete listings.⁸⁰ Anne Hargreaves concludes that 'trade directories were compiled, with varying degrees of rigour and honesty, as a purely commercial venture and it was not an infrequent complaint at the end of the eighteenth century that the information was out of date.'⁸¹ Whilst this research is for a different industry from the one to which she refers, the sentiment remains relevant. Despite the gaps in knowledge, trade directories are still a useful gauge for the types of businesses that existed in Birmingham.

In addition to the gaps in recorded businesses, the companies that are included within directories must also be treated with caution, for example W.C. Aitken's chapter on brass in Timmins *Manufacturing Guide* in 1866.⁸² Aitken himself was involved in the brass industry and cannot therefore be considered entirely objective upon the subject – the book was an

⁷⁹ Timmins, *The Resources, Products, and Industrial History of Birmingham*, 229; J. Bisset, *Bisset's Magnificent Guide for Birmingham* (Birmingham: Swinney and Hawkins Publishing, 1808).

⁸⁰ Sketchley and Adams, *A Universal Directory for the Towns of Birmingham, Wolverhampton, Walsall, Dudley, and the Manufacturing Villages*.

⁸¹ A. Hargreaves, "Dentistry in the British Isles," in *Dental Practice in Europe at the End of the Eighteenth Century*, ed. C. Hillam (Amsterdam: Rodopi, 2003), 177.

⁸² Aitken, "Brass and Brass Manufacturers," 229.

opportunity for individuals to promote their trade to a wider audience. Some of the claims Aitken makes are bold, hyperbolic, and shamelessly self-congratulatory. Aitken concluded that ‘what Manchester is in cotton, Bradford is in wool, and Sheffield in steel, Birmingham is in brass,’ with relatively little evidence to support the statement.⁸³ One aspect of this thesis is to test the validity of this claim. Whilst much of what Aitken wrote may be exaggerated and should be treated with caution, he does refer to international dimensions that have not been covered by the work of recent historians. He describes articles of Birmingham brass to be:

Found in every part of the world; its gas fittings in every city and town into which gas has been introduced, from Indus to the Poles – on the railways of every country and on every sea, its locomotive and marine engine solid brass tubes generate the vapour which impels the locomotive over the iron road, and propels the steam-boat over the ocean wave – its yellow metal bolts, nails, and sheathing hold together and protect from decay “wooden walls” of our own and other countries ships – its “Manillas”, once made in tons, are the circulating medium of the natives of the Gold Coast – and its rings and ornaments of brass, sent out in immense quantities, are the chief decorations of the *belles* on the banks of the distant Zambesi.⁸⁴

The overzealous claims of business owners means that directories have received criticism as a source of eighteenth- and nineteenth-century business cultures for being inconsistent and

⁸³ Aitken, “Brass and Brass Manufacturers,” 229.

⁸⁴ Aitken, “Brass and Brass Manufacturers,” 229.

aimed at those who are wealthy and literate.⁸⁵ Despite the limitations of newspapers and directories however, they do still contain important information about the nature, variety, and numbers of businesses, as well as being a channel for popular public opinion (Chapters One, Two and Three). Timmins' important survey provides insights which offer directions for further investigation.

In addition to private letters, newspapers, trade directories, and archival research in a variety of institutions, Parliamentary Enquiries have been extensively researched (Chapters Four and Five). As the Birmingham brass trade expanded and became nationally significant, the founders of brass businesses were forced to contend with Parliamentary trade restrictions and industrial competitors in different urban centres of commerce. It is important to utilise the evidence left by Parliament during a time in which the Government's relationship to mercantile groups was drastically changing as Parliament shaped social and economic policy.⁸⁶ Michael Seery argues that one of the greatest sources of information in early modern local history is the Parliamentary Enquiries of the eighteenth century, where detailed data collection and analysis provides a rich source of information.⁸⁷ The eighteenth-century Parliamentary Enquiry still remains an underutilised tool for historians: this research demonstrates its usefulness, highlighting the political dimension of industrial groups within Birmingham (Chapter Four and Five). Bryan Gurrin describes Enquiry transcripts as 'frequent, detailed, often impressive in their thoroughness, and specifically focussed.'⁸⁸ This assessment

⁸⁵ J. Lorente and C. Targett, "Comparative Growth and Urban Distribution of the Population of Artisans in Victorian London," in *New Directions in Urban History*, eds. P. Borsay, R. Mohrmann and G. Hirschfelder, (Berlin: Waxmann, 2000).

⁸⁶ J. Innes, "Parliament and the Shaping of Eighteenth-Century English Social Policy", in *Transactions of the Royal Historical Society*: 40: 1 (December 1990), 63-92.

⁸⁷ M. Seery, *Proceedings of Enniskerry Local History*, (Dublin: Powerscourt, 2011), 4.

⁸⁸ B. Gurrin, "Three Eighteenth-Century Surveys of County Wicklow", *Analecta Hibernica*: 39: 1 (2006), 81-134.

proves to be accurate when reading the detailed Parliamentary minutes of the 1799 Parliamentary Enquiry into the State of the Copper Mines and Trades of the British Kingdom – a series of long interviews with various individuals which took place over a month.⁸⁹

Analysing the sources for Birmingham brass manufacturing provides a new perspective on the history of Birmingham and District's metal industries. Each type of source has its limitations, as do the institutions and collections in which they are found, but the range of evidence allows for a more substantial picture than revealed in published primary and secondary sources. The history that is uncovered through analysis of the evidence, allows the reader to track the evolution of the Birmingham brass industry during the eighteenth century, in more depth than has previously been attempted or accomplished. This research identifies the most important factors in the development of Birmingham brass manufacturing and emphasises the development of a politically conscious class of industrialists. This research uses evidence which begins in the sixteenth century with travel accounts by foreign merchants and finishes in 1801 with an exploration of how Birmingham-based industrialists were engaging with national policy makers.

⁸⁹ *Report from the Committee Appointed to Enquire into the State of the Copper Mines and Copper Trade of this Kingdom* (RCCT), (7 May 1799), 3-54.

Chapter Structure

The organisation of chapters is designed to outline and explore the central questions: topics are chronologically organised, but also divided into distinct themes, with several leitmotifs throughout. This introductory chapter is followed by a contextual Chapter One, which explores the first central question; how and why did brass foundry become so significant to the regional economy of Birmingham and District? It initially explores pre-eighteenth-century Birmingham's metalworking communities. It explains the origins of steel and iron working in the region, and then analyses how and why brassworking developed into such a prominent industry. The definition of the terms *brass founders* and *brass houses* are also outlined and are more complex than has previously been understood. The historical background of brass founding is necessary to give the reader context for the remaining chapters, as well as to introduce some of the most important factors that shaped later developments. The focus of the chapter is centred on the mid-eighteenth century, where major organisational developments occurred in the brass trade – especially between the period 1740 and 1754 after the introduction of Turner's Brass House. Much of the chapter is based on the travel diaries of European metalworkers and their descriptions of brass houses, as well as trade directories that give an indication of the growth of the industry after 1740.

Chapter Two primarily focuses on the second central question of the thesis; how was the brass trade organised as it expanded, and by whom? Questions three and four are also addressed. The chapter outlines the development of a political consciousness amongst the most important brass founders of Birmingham and District and the politicisation of the industry through the town's Commercial Committee, members of which pooled their

resources to safeguard the trade. Between 1765 and 1783 key moments and developments in how the Birmingham brass industry was organised are identified. The chapter proposes that the origins of political lobbying through the brass industry can be seen in petitioning campaigns during the 1770s and were instigated to combat trade restrictions, such as the damaging 1779 Privy Council Order Prohibiting the Exportation of Copper, introduced by the British Government as a result of increased political tension with America. The changing structure of the British Government also played a significant role in how brass founders were engaging with politicians and is a central theme.

Chapter Three primarily focuses on the third central question of this thesis: how did Birmingham-based brass founders respond to the threats of national and international competition? Whilst this question is also addressed in chapters Two, Four and Five, Chapter Three has the most comprehensive analysis. It focuses on important relationships, controversies, and conflicts that emerged towards the end of the 1780s between the Birmingham brass founders, Cornish mine owners, and the Welsh copper-magnate and richest man in Wales, Thomas Williams. The three factions clashed with one another to take control of the lucrative brass industry of Britain and to dictate copper prices and supplies. The conflict was exacerbated by William Pitt's 1786 Irish Propositions and an exodus of metalworkers to continental Europe, which resulted in new political strategies being devised by the Birmingham brass founders – advised by new contacts at the heart of Government. The chapter explores the different political relationships formed by the Birmingham Commercial Committee during the 1780s, including the initially productive relationship between Birmingham brass founders and Thomas Williams, who together created important

and lucrative technological achievements. Through private letters, newspaper coverage, and printed primary sources the deterioration of the relationship can be traced. The industrialists of Birmingham experienced a variety of setbacks between 1783 and 1799 as a result of the conflict, and the consequences are identified and outlined throughout- as is the extensive use of print culture for propaganda which began in this period.

The final central question of this thesis is, what was the nature of the links between these brass founders and elected MPs, and how did they use these links to try and influence legislation and Government policies? These issues are explored throughout both Chapters Four and Five – parts of which run concurrently. Chapter Four explores the height of the conflict between Birmingham brass founders, Thomas Williams, and Cornish mine owners. To resolve the increasingly acrimonious and public dispute, Parliament intervened via an Official Enquiry into the State of the Copper Industry. Individuals from all sides were called to Westminster to be questioned, and the minutes of this Enquiry are to be found in the Boulton and Watt Archives. Chapter Four uses the transcript of the extensive investigation to explore the conflict and the nature of the Birmingham brass trade and its organisers. The current historical analysis of the investigation is limited; in response this chapter produces new perspectives that highlight the sophisticated and unified political tactics and rhetoric of the Birmingham brass founders.

In conjunction with Chapter Four, Chapter Five explores the ‘pamphlet war’ that was conducted during and after the Parliamentary Enquiry. The use of printed propaganda in the

conflict adds new evidence for the emerging historical sub-theme of eighteenth-century pamphlet wars and demonstrates the speed with which political texts were being produced, as well as the money involved in Birmingham brass foundry. The length, nature and rhetoric of the Enquiry and pamphlet war outlines how important copper and brass products had become for Great Britain, and by extension highlights the significance of the network of Birmingham brass founders. The conclusion draws together the major themes from all the previous chapters, highlighting the sophisticated approaches to political engagement and organisational methods adopted by the Birmingham brass founders and outlines several ways in which research can be moved forward.

In sum, this thesis utilises a variety of primary sources to explore the development of the Birmingham brass industry and the importance industrialists placed on international trade. In doing so it shows that co-operation between brass founders was key to sustained economic success and highlights how their political strategies changed significantly during the eighteenth century.

Chapter One

The Emergence, Expansion, and Organisation of the Birmingham Brass Trade

Brass, along with its component elements copper, tin, and zinc, became vital for the growth and development of eighteenth-century Birmingham, but tracing the historic relationship between the town and the metal before the rapid expansion of commerce in the late-eighteenth and early-nineteenth centuries is difficult.¹ W.C. Aitken concluded in 1866 that:

It is a matter of regret that, with the exception of a brief, indefinite, and partial allusion to the brass trades of Birmingham, made by William Hutton, to be found in his celebrated history of the town, we have no record to guide us as to the introduction, rise, and progress of one of our now most important branches of local industry.²

This remains the case; there is no single account of how brass manufacturing became so widespread in Birmingham and no explanation as to why it became so important to the local economy. Hutton, in his original history of the town published in 1783, dedicates no more than a few paragraphs to brass founding and writes about the industry with a tone of derision, despite highlighting and praising many products that the metal was used to create such as buttons, buckles, guns and bellows. Hutton states that ‘the curious art of brass foundry is less ancient than profitable, that I shall not enquire whose grandfather was the first brass-founder

¹ W. Aitken, “Brass and Brass Manufacturers,” in *The Resources, Products and Industrial History of Birmingham and the Midland Hardware District*, ed. S. Timmins (London: Robert Hardwicke Publishing, 1866), 225-331.

² Aitken, “Brass and Brass Manufacturers,” 226.

here.’³ Despite his lack of enthusiasm for the origins of the industry, insights can be inferred from his account. Hutton believed the first brass founders of Birmingham began working during the reign of William III, between 1689 and 1702. The date Hutton provides is certainly plausible as brass was becoming more widely used in William’s navies. At this time, improvements in the casting of brass and iron enabled cannons to take a significantly higher charge.⁴ The early brass founders worked in relatively small workshops, and Hutton acknowledges that the first major works were not established until the 1740s.⁵ Whilst he showed little interest in elaborating upon the variety of specific brass businesses, Hutton acknowledged the popularity and extent of the trades that existed within his lifetime, suggesting that the industry expanded and became financially lucrative in the mid-eighteenth century. Exactly when, and how, has been uncertain and some of Hutton’s conclusions about the origins of brass have yet to be adequately scrutinised.

Much of the emphasis by historians specialising in the industrial history of Birmingham have focused upon the second half of the eighteenth century, after the evolution of processes of industrialisation.⁶ John Money, Eric Hopkins, and Peter Jones take 1760 as their point of departure.⁷ Birmingham’s history before 1760 has been neglected. Chris Upton provides some analysis of the origins of metalworking in Birmingham, spanning 1500 BC until the early

³ W. Hutton, *An History of Birmingham* (Birmingham: Pearson and Rollason Publishing, 1783), 79.

⁴ J. Ehrman, *The Navy in the War of William III, Its State of Direction* (Cambridge: Cambridge University Press, 1953), 7-8.

⁵ Hutton, *An History of Birmingham*, 80.

⁶ G. Reisman, *Capitalism: A Complete Understanding of the Nature and Value of Human Economic Life* (Ottawa ILL: Jameson Books, 1996), 127.

⁷ J. Money, *Experience and Identity: Birmingham and the West Midlands, 1760-1800* (Manchester: Manchester University Press, 1977); E. Hopkins, *Birmingham: The First Manufacturing Town in the World 1760-1840* (Birmingham: Weidenfeld and Nicolson Publishing, 1989); P. Jones *Industrial Enlightenment: Science, Technology and Culture in Birmingham and the West Midlands, 1760-1820* (Manchester: Manchester University Press, 2009).

modern period; his work is not satisfactorily referenced and therefore must be treated with caution.⁸ A more dependable account of pre-eighteenth century Birmingham and its metallurgical industries is contained in the works of Marie Rowlands, who supports her arguments with specific primary sources.⁹ Rowlands uses travel diaries, inventories, royal decrees, as well as personal and private business correspondence to construct an understanding of how Birmingham grew, and the significance of the metal industries in that process.¹⁰ More recently Richard Cust and Ann Hughes, in their general study of Tudor and Stuart Birmingham, make references to how metal industries were introduced into the town, but regional identity and religion are more prevalent themes in their work.¹¹ A variety of reasons can explain how Birmingham became a centre for metallurgical activity including the geography, natural resources of the region, and the increasingly diverse population, in addition to wider historical, political, and industrial developments.¹² There is no substantial explanation, however, as to how and why brass working became so significant for the growth of Birmingham before the eighteenth century.

This chapter shows that it was the specific industrial context of Birmingham which allowed the brass trade to become so prominent. It begins by exploring the historical context of metalworking in the region, showing that many of the techniques used to create brass items were directly transferred from the methods used by metalworkers in the manufacture of iron and steel in the fifteenth and sixteenth centuries. The history of iron and steel working is

⁸ C. Upton, *A History of Birmingham* (Birmingham: History Press Limited, 2011).

⁹ M. Rowlands, *Masters and Men in the West Midland Metalware Trades Before the Industrial Revolution* (Manchester: Manchester University Press, 1975); M. Rowlands, *A History of Industry in Birmingham* (Birmingham: City of Birmingham Education, 1977).

¹⁰ M. Rowlands, *Masters and Men*.

¹¹ R. Cust and A. Hughes, "The Tudor and Stuart Town," in *Birmingham: The Workshop of the World*, eds. C. Chinn and M. Dick (Liverpool: Liverpool University Press, 2016) 101-125.

¹² M. Dick, "The City of a Thousand Trades," in *Birmingham: The Workshop of the World*.

crucial to the understanding of why brass became so important to the local economy of eighteenth-century Birmingham and District, and why these brass products were of such a high standard. This chapter analyses the main developments in metalworking activities within Birmingham and District up to the establishment of Turner's brass house in 1740. Its establishment is identified as a watershed moment, as the structure and organisation of the brass industry changed significantly in the years following. The chapter then goes on to explore the following two decades to contrast the changes that occurred after 1740. It is evident from the research undertaken that brass became an important aspect of the town's economy during the remarkable growth of Birmingham in the eighteenth century, as measured by the expansion in its population.¹³

It was not until after 1740 that the extensive demand for Birmingham brass required manufacturers to establish larger, more complex businesses. In theory, the surviving archives might be expected to enable historians to begin to piece together the development of brass houses and the brass industry more clearly. Despite the increase in printed material and higher literacy levels in the second half of the eighteenth century, account books, day books, architectural designs and workers' contract details pertaining to brass houses have not survived. The specifics of the trade's everyday administration and structure continue to be shrouded in mystery.¹⁴ Sources pertaining to the expansion of the brass trade are difficult to locate, but a variety of inferences can be made from the evidence available. By using references to the industry in printed primary sources, archaeological evidence, local

¹³ The population of Birmingham increased from 15,032 in 1700, to 74,000 in 1800: P. Borsay, *The Eighteenth-Century Town: A Reader in English Urban History, 1688-1820* (Abingdon: Routledge, 1990).

¹⁴ S. Kord, *Women Peasant Poets in Eighteenth-Century England, Scotland, and Germany* (Woodbridge: Camden House, 2003), 39.

newspaper coverage, trade cards, personal letters between industrialists, and travel diaries, a clearer image of the origins of brass manufacturing, as well as how the industry was organised, can be established.¹⁵ The evidence sheds light on the history of Birmingham, the history of metals, and the importance of international demand. This chapter explores how and why brass foundry work become so significant to the regional economy of Birmingham and District, outlining the most significant factors in the origins and early development of the brass manufacturing industry within Birmingham, and arguing that its organisation was a significant factor in raising the profile of the town at both a national and international level.

Pre-Eighteenth-Century Metalworking

References to metalworking in Birmingham, and the quality of the local workforce, appear from the early-sixteenth century in the travel diaries of John Leland and William Camden; Cust and Hughes, however, argue that Birmingham's reputation for metalworking had spread before the descriptions of these travellers.¹⁶ The medieval town was mainly known for cattle-farming and the presence of tanners, bakers and tailors, but the Knights Templar purchased metal 'Birmingham pieces' from individuals in Balshall (sic) as early as 1308.¹⁷ Despite this, it was not until the 1379 Poll Tax that the presence of several smiths was recorded.¹⁸ Steven

¹⁵ J. Sketchley, *Sketchley's Birmingham, Wolverhampton and Walsall Directory* (Birmingham: J. Sketchley, 1767); S. Sketchley and O. Adams, *Universal Directory for the Towns of Birmingham, Wolverhampton, Walsall, Dudley and the Manufacturing Villages* (Birmingham: Sketchley and Adams, 1770); M. Swinney, *Swinney's Birmingham Directory* (Birmingham: Swinneys, 1774, 1775 and 1777); J. Bisset, *Bisset's A Poetic Survey and Magnificent Directory* (Birmingham: James Bisset, 1800).

¹⁶ W. Camden, *Britannia* (1590), (New York: Johnson Reprint Corporation, 1971); J. Leland, *Itinerary: Travels in Tudor England (1538-43)*, (Oxford: Thomas Hearne Publishing, 1768); Cust and Hughes, "The Tudor and Stuart Town," 105.

¹⁷ E. Gooder, "Birmingham Pieces," *Transcript of the Birmingham Archaeological Society*, 81: 1 (1978), 135.

¹⁸ S. Bassett and R. Holt, "Medieval Birmingham," in *Birmingham: The Workshop of the World*, 91.

¹⁸ Bassett and Holt, "Medieval Birmingham," 91.

Bassett and Richard Holt argue, ‘the increasing number of scattered references to Birmingham’s metal goods during the fifteenth century suggest that it was growing apace and by the time Leland visited, the town had an established identity as a metalworking centre.’¹⁹ Iron objects made in Birmingham can be traced back to the fourteenth century: trowels, horseshoes, hammers and adze heads originating from the locality of Deritend (modern day Digbeth) can be viewed in Birmingham Museum and Art Gallery.²⁰ William Camden, during his survey of Elizabethan England, recorded in 1586 that the region was ‘swarming with inhabitants, and echoing with the noise of the anvils, for here are great numbers of smiths and of other artificers in iron and steel, whose performances in that way are greatly admired both at home and abroad.’²¹

The reason for the high concentration of metal-based industries by the sixteenth century was the availability of iron ore and coal near Birmingham in the South Staffordshire and East Worcestershire coalfields.²² Leland makes reference to the natural resources of the region in 1538 by observing ‘that a great part of the towne is maintained by smithes who have their iron and sea-Cole out of Staffordshire.’²³ South Staffordshire also provided the ores necessary to extract metallic iron, a requirement in the making of pig iron, which in turn was one of the materials used to make steel.²⁴ Coal and iron ore were not the only important resources available to metalworkers, however. The region was naturally resourced with raw materials which were necessary in order to work with metal: wood for charcoal was accessible in large

¹⁹ Leland, *Itinerary*, 89.

²⁰ Birmingham Museum and Art Gallery, third floor: *Birmingham: Its People, Its History Exhibit* (2016).

²¹ Camden, *Britannia*, 609.

²² Hopkins, *Birmingham, The First Manufacturing Town in the World*, 4.

²³ Leland, *Itinerary*, 89.

²⁴ H. Ahmed, E. Mousa, M. Larsson and N. Viswanathan, “Recent Trends in Ironmaking Blast furnace Technology to Mitigate CO₂ Emissions: Top Charging Materials,” in *Ironmaking and Steelmaking Processes: Greenhouse Emissions, Control and Reduction*, ed. P. Cavaliere, (Geneva: Springer International Publishing, 2016), 109.

supply in the Forest of Arden, limestone was available in the Black Country and used as a flux in blast furnaces, and there were also coalfields in South Staffordshire and East Worcestershire for fuel and the creation of coke. Coke, the solid carbonaceous material derived from destructive distillation of low-ash, low-sulphur bituminous coal, had several important functions, including as a fuel and a reducing agent in smelting iron ore in blast furnaces.²⁵ Whilst coke did not become wide-spread until after Abraham Darby's establishment of a coke-fired blast furnace in 1709, it was already being used throughout the sixteenth and seventeenth centuries in the brewing of pale ale and the manufacture of metals, especially in the East and West Midlands.²⁶ In addition to these resources, the locality had access to water for use in industries such as metallurgy, tanning and wool. Many of the industries that required water were situated around the River Rea, including the metalworking trades that were dependent on water for cooling and driving the bellows by waterpower.²⁷

The availability of resources for metalworking was not the only factor that was attractive to prospective business owners: metalworking required minimal capital outlay. According to W. H. B. Court: 'A smith could set himself up with forge, anvil, bellows and hammer for as little as 10s in the early sixteenth century which made it an ideal occupation for a small, family work force.'²⁸ By the sixteenth century, demand for products that required metalwork was high throughout Europe and, as Birmingham goods had reached a relatively high standard

²⁵ Ahmed, Mousa, Larsson and Viswanathan, "Recent Trends in Ironmaking," 109.

²⁶ A. Birch, *Economic History of the British Iron and Steel Industry* (Abingdon: Routledge, 2006), 29; J. Weeks, *Special Reports on Petroleum, Coke and Building Stones* (Washington DC: Government Printing Office, 1884), 53.

²⁷ M. Hodder, C. Patrick, and S. Ratkai, "Discussion," in *The Bull Ring Uncovered: Excavations at Edgbaston Street, Moor Street, Park Street and The Row, Birmingham, 1997-2001*, eds. C. Patrick and S. Ratkai (Oxford: Oxbow Books, 2009), 316.

²⁸ W. Court, *Rise of the Midland Industries 1600-1838* (Oxford: Oxford University Press, 1938), 39-40.

compared to that of their European counterparts, customers began to notice the emerging town.²⁹ From the sixteenth century onwards, Birmingham metalworkers 'had been accustomed... to keep station at home, where they were visited by ironmongers and other dealers, who resorted to this town... from all parts of the country, to make their purchases.'³⁰ In addition to general customers, and those who dealt specifically with iron, the Monarchs of England also looked to Birmingham for supplies. According to Rowlands 'in 1511, 1513 and 1514 the clerk of ordnance purchased bridle bits, horseshoes and bill heads from Midland producers for the army of Henry VIII, at his behest.'³¹ According to Holt, Birmingham ironmongers were recorded as selling large quantities of billhooks to the Royal Armouries as early as 1514.³² By the 1550s Birmingham merchants were trading as far afield as London, Bristol and Norwich and in 1596 Birmingham men are recorded as selling arms in Ireland.³³ R.A. Pelham utilises newspapers to highlight how, by 1657, the reputation of the Birmingham market had reached the West Indies.³⁴ Birmingham products were being exported from the area across the Atlantic World as early as the sixteenth century. The combination of available natural resources, the relatively cheap cost of starting businesses, and a large demand for metal products, created a high concentration in Birmingham of those manufacturers who used iron and steel.

²⁹ J. Nef, "Mining and Metallurgy in Medieval Civilisation," in *The Cambridge Economic History of Europe, from the Decline of the Roman Empire: Volume 2, Trade and Industry in the Middle Ages*, eds. E. Miller, C. Postan and M. Postan (Cambridge: Cambridge University Press, 1987), 693-761.

³⁰ W. Smith, *Birmingham and its Vicinity as a Manufacturing and Commercial District* (London: W. H. Smith, 1836), 20.

³¹ Rowlands, *Masters and Men*, 28.

³² R. Holt, *The Early History of the Town of Birmingham, 1166-1600* (Birmingham: Dugdale Society, 1985), 125.

³³ D. Eversley, "Industry and Trade, 1500-1880," in *A History of the County of Warwick: Volume 7 the City of Birmingham*, ed. W. Stephens (Oxford: Oxford University Press, 1964), 81.

³⁴ R. Pelham, "The Growth of Settlement and Industry, c. 1100-1700," in *Birmingham and its Regional Setting: A Scientific Survey*, ed. M. Wise (Birmingham: British Association, 1950), 155.

Approximately a century after the earliest travellers' accounts of Birmingham were recorded, its iron industry had become famous and successful on a national level. Court asserts that 'by 1650 Birmingham was quickly monopolising the iron trade within England, to the extent that all or most of the London ironmongers buy all or most of their nails and petty ironwork... from Birmingham.'³⁵ By the late seventeenth century the trades were increasingly recognised internationally as well. Another traveller to the town, the French-born Milanese resident François Maximilien Misson, wrote in 1690 about goods that could be purchased in Milan, and observed that 'fine works of rock crystal, swords, heads for canes, snuff boxes, and other fine works of steel could be purchased in the city, but that they can be made better and cheaper in Birmingham.'³⁶ The quality of products, and importance of iron and steel for Birmingham's growth, demonstrated that the inhabitants of the town had acquired skill in the working of metals which they were able to adapt to working brass.³⁷ Many of the techniques for working iron and brass were similar, including the preparation of moulds and the style of the finish of the products through polishing by abrasion or friction. As Rowlands argues:

Brass and copper were softer than iron and the basic shapes could be stamped out with a small stamping press. The smiths of Birmingham did not need many new tools to work in the trade but some of them did begin to use a stamp and dies, a vice and draw bench to draw out the wire, and a lathe to turn the work.³⁸

Henry Hamilton has also raised this point, indicating that:

³⁵ Court, *Rise of the Midland Industries 1600-1838*, 29.

³⁶ C. Upton, *A History of Birmingham*, 28.

³⁷ W. Aitken, "Brass and Brass Manufacturers," 227-8.

³⁸ M. Rowlands, *A History of Industry in Birmingham*, 15.

In a former period the worker in metal worked equally well and with equal facility in all metals; there is therefore, every reason to believe that on the introduction of the new metal, brass into Birmingham, it found an almost readily-trained class of artisans to deal with it.³⁹

If the assertions of Rowlands and Hamilton are correct, the manufacturers of Birmingham literally, and metaphorically, had the tools with which to work brass as it became a popular metal for a variety of products. By looking at the longer history of metalworking in Birmingham, the embedded nature of skills and knowledge within manufacturing circles allows an understanding of the developments in the eighteenth century.

The Introduction of Brass

Whilst iron and steel were logical choices for local manufacturers, this was not so much the case for brass founders. Brass is a compound made primarily from copper, with the addition of zinc and tin, none of which were in abundant supply in the surrounding region. The characteristics of brass were versatile however and this may provide clues as to why it was appealing to Birmingham manufacturers. Brass has a relatively high level of malleability compared with other metals, and a relatively low melting point, depending on its composition. According to Andrew Ure, these important properties allowed its application for many purposes.⁴⁰ In a town of a 'thousand trades' these characteristics were ideal. Its low melting point gave the alloy flow characteristics that made it easy to cast and shape by

³⁹ H. Hamilton, *The English Brass and Copper Industries to 1800* (Abingdon: Routledge, 1967), 217-230,

⁴⁰ A. Ure, *A Dictionary of Arts, Manufacturers and Mines: Containing a Clear Exposition of their Principles and Practice* (London: Green, Longman and Roberts, 1860), 395.

hammering and embossing; brass enabled the individual handicraft workers of seventeenth-century Birmingham to shape and create merchandise they could not produce with other metals.⁴¹ It was also relatively easy to modify at a chemical level to suit the needs of manufacturers or chemists: zinc, tin, nickel, aluminium, phosphorus and other elements could be added to create a range of brasses with diverse properties.⁴² This allowed the metal, and its chemical composition, to be adjusted to make a multitude of goods.

Brass was used in products that required ornate and decorative qualities as it could be adjusted to have a gold-like appearance, and by the mid-eighteenth century the town of Birmingham became world famous for its luxury brass baths, ornate buttons, and elaborate coffin furniture.⁴³ Pierre-Joseph Macquer, a respected French chemist, referred to Birmingham bath metal as the 'Prince's metal' because, despite its relative cheapness to produce, an individual who owned products made of the brass alloy could project status. In his *Dictionary of Chemistry*, translated and edited by the Black Country-based chemist James Keir, Macquer highlighted how the English were the first to achieve convincing imitation gold in the mid-1600s.⁴⁴ An early reference to its use in Birmingham is by Willenhall physician Dr. Richard Wilkes in 1737, who states that 'Bath metal tho not here invented is here made and wrought into snuff boxes, buckles to the greatest degree of perfection.'⁴⁵ An example of a

⁴¹ R. Forbes, *Studies in Ancient Technology* (Vol. VIII), (Leiden: Brill, 1955), 272; H. Hamilton, *The English Brass and Copper Industries to 1800*; W. Aitken, "Brass and Brass Manufacturers."

⁴² Ure, *A Dictionary of Arts, Manufacturers and Mines*, 244.

⁴³ Birmingham Library Wolfson Centre for Archival Research (WCAR), MS 3782/12/87, item 27: J. Keir and J. Watt, *Facts Relative to Brass*.

⁴⁴ P. Macquer, *A Dictionary of Chemistry*, trans. J. Keir (Birmingham: Pearson and Rollason, 1789).

⁴⁵ Staffordshire County Records Office, item 5350; R. Wilkes, *Journal of Dr. Richard Wilkes, Physician of Willenhall (1736-1738)*: J. Lane, "Wilkes, Richard (1691-1760), physician and antiquary," *Oxford Dictionary of National Biography* (January 3 2002), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-29411>, accessed 11 May 2017.

brass product that was gold in appearance (Fig. 1.1) was created by his lock-maker father, John Wilkes, and can be traced back to as early as 1680, before Hutton's estimation of the earliest brass founders.⁴⁶



Fig 1.1. Victoria and Albert Museum, Brass and Engraved Steel Detector Lock, John Wilkes (maker), 1680. M 109-1926. This image was reprinted with permission of the V&A Museum.

The lock features a style of brass-alloy which flourished in local manufacturing; Nancy Cox's study of Midlands apprentices suggests that it was aimed at both well-to-do families and the poor, because of its wide appeal and cost.⁴⁷ The item is a functioning lock, but the skill evident in the finish and decoration elevates the piece to something that could be considered worthy

⁴⁶ W. Hutton, *An History of Birmingham*, 80.

⁴⁷ N. Cox, *Retailing the Language of Goods, 1550-1820* (Abingdon: Routledge, 2015), 128.

of a genteel family – or at least the illusion of one. Brass was a metal that was perfect for those who wished to convey the image of wealth. The lock is now in a collection in the Victoria & Albert Museum, and its description reveals the sophisticated processes that were included in its creation: the keyhole is concealed by the man's front leg, which operates on a pivot. When a button is pressed, the leg swings forward to reveal the keyhole. The door-bolt is released by tilting the man's hat. There is also a poem inscribed on the lock warning that 'If I had y gift of tongue, I would declare and do not wrong, who y are y come by stealth, to impare (sic) my masters wealth.'⁴⁸ The uniqueness of the object and skill used to create it, demonstrate why Birmingham and District brass products had become highly valued in the eighteenth century.

Alongside decorative uses, brass could be tailored to practical needs because of its effectiveness where low friction was required, such as in gears, bearings, doorknobs, ammunition casings and valves. Another use was in the making of musical instruments, such as horns and bells which required a combination of high workability and durability.⁴⁹ One of the most significant and financially beneficial applications was its ability to be adapted for naval usage (Chapter Three) because, unlike iron, it does not rust.⁵⁰ The flexible and robust nature of brass and copper allowed the manufacturers of Birmingham to capitalise on various shipping markets. Brass and one of its component elements, copper, began to be extensively used in the sheathing of ships in the second half of the eighteenth century, improving the effectiveness and efficiency of warships, East India Company trading vessels, and slave

⁴⁸ V&A Museum, British Galleries Room 56, the Djanogly Gallery, case 14, M 109-1926, given by Colonel Croft Lyons; Birmingham made brass and engraved steel detector lock, John Wilkes (maker), (1680).

⁴⁹ A. Baines, *Brass Instruments: Their History and Development* (New York: Dover Publications Inc, 1993), 19.

⁵⁰ J. Inglis, "On a Method of Recording and Comparing the Performances of Ships," in *Transactions of the Royal Institute of Naval Architects*, ed. S. Wooley (London: Henry Sotheran and Co, 1877), 173.

ships.⁵¹ This flexibility, durability and adaptability allowed industrialists to organise their businesses in a variety of ways depending on the needs of the manufacturer.

The religiously diverse and rapidly expanding population of Birmingham may have also contributed to the increased variety of metal products. The area's early reputation for religious tolerance could have been an attractive factor for communities to move to Birmingham. Joan Lane argues that the buckle industry was introduced from Staffordshire as craftsmen, driven from Walsall by religious persecution, started making buckles in brass and copper in Birmingham.⁵² Henry Hamilton suggests that the Clarendon Code, and acts seeking to religiously unify Britain, encouraged a diversification of the Birmingham population.⁵³ Specifically the 1665 Five Mile Act of the Code prohibited ministers of a nonconformist religion from being within five miles of a city or town in which they had preached or held a living, unless they took an oath of non-resistance. The Act forced many preachers and their followers out of industrial centres such as London, Liverpool, and Bristol. Birmingham happened to be more than five miles from any of the places mentioned in the Act, and so became a focal point for nonconformity. Birmingham's location could explain the arrival of people to the area who brought with them a more diverse skill set, which could be utilized within a range of different trades. Dissenters were welcomed in Birmingham, where they could practice their trades, unhindered by any guild restrictions.⁵⁴ These groups included the Quaker Lloyd family who moved to Birmingham in the late 1660s and became influential iron

⁵¹ M. McCarthy, *Ships' Fastenings: From Sewn Boat to Steamship* (Texas: Texas A&M University Press, 2005), 108-109.

⁵² J. Lane, *Apprenticeship in England 1600-1914* (London: UCL Press, 1996), 223.

⁵³ Hamilton, *The English Brass and Copper Industries*, 125.

⁵⁴ Hamilton, *The English Brass and Copper Industries*, 126.

and brass founders, and eventually influential bankers.⁵⁵ The interaction between this religiously diverse population and an already thriving metalworking business culture expanded the industry in new ways. James Lord highlights that:

At least twelve nonconformist divines, in many cases with their adherents, came to Birmingham when the Clarendon Code closed the corporate towns to them in 1661. Thus, the qualities of thrift and industry which the nonconformists inculcated enabled them to accumulate savings which they devoted to building up large businesses on the solid foundations laid by early metal workers.⁵⁶

These indicators of growth are confirmation of the continuing capacity of the local economy to draw in workers and migrants and sustain the prosperity of its artisan classes.⁵⁷ The religious persecution theory of Lane and Hamilton is not universally accepted, however, and Eric Hopkins warns that, as persuasive as these arguments may seem, it would be unwise to place too much emphasis upon them:

Although Birmingham's freedom to attract dissenters and to develop without guilds may well have been important results for the growth of industries, it must

⁵⁵ H. Lloyd, *Quaker Lloyds in the Industrial Revolution* (Abingdon: Routledge, 1975), xi.

⁵⁶ J. Lord, *Capital and Steam Power, 1750-1800* (Abingdon: Routledge, 1923), 40.

⁵⁷ Cust and Hughes, "The Tudor and Stuart Town," 101-125.

also be remembered that other industrial towns such as Wolverhampton had similar advantages, yet failed to develop so rapidly.⁵⁸

The difference between the two towns was that Birmingham's economy was larger, more diverse, and complex, making it a more attractive prospect than Wolverhampton, or smaller villages within the Black Country.

It was not simply the historical expertise of the Birmingham workforce, the versatility of the metal, or religious diversity, that played a role in the introduction and popularity of brass manufacturing to Birmingham. The restoration of Charles II is likely to have been a significant factor in the rise of the Birmingham brass industry: his court and the fashion trends that stemmed from it included a sharp increase in the demand for decorative items when compared to the puritanical period that preceded it. His father, Charles I, had worn elaborate and expensive fashion items, and 'after the interruption of the Commonwealth period, the taste for fashion revived with renewed strength with the return of Charles II from exile in France.'⁵⁹ Louis XIV of France was renowned for his extravagant tastes and French bronzes and brass were popular during his reign.⁶⁰ Charles II would have observed many brass- and bronze-based fashion styles in French courts and upon his return there was an increased use of brass in England. According to Julius Schnorr, French yellow cast brass was a popular choice to decorate 'candelabras, lamps, candlesticks, clocks, ornaments and imitations of ancient

⁵⁸ Hopkins, *Birmingham, The First Manufacturing Town in the World*, 4.

⁵⁹ G. Pagano de Divitiis, trans. S. Parkin, *English Merchants in Seventeenth Century Italy* (Cambridge: Cambridge University Press, 1990), 134.

⁶⁰ Brass is an alloy of copper and zinc, whilst bronze is a metal alloy consisting primarily of copper, usually with tin as the main additive, but sometimes with other elements such as phosphorus manganese, aluminium, or silicon.

Egyptian peculiarities.’⁶¹ Hutton maintained that ‘the only... the chief, manufacture of Birmingham from its earliest existence to the restoration of Charles II, was in iron.’⁶² After the return of the Stuart dynasty in 1660, there was a growth in demand for small articles such as shoe buckles and metal buttons, which then became increasingly popular in the fashionable world of the eighteenth century.⁶³ Consumption in seventeenth-century England allowed Birmingham manufacturers to flourish; brass could be worked more easily and fashioned into articles of greater artistic beauty than iron, and at the same time could be marketed more readily.⁶⁴ For a town that became famous for its toys and trinkets, the more elaborate and ornate stylistic trends of the late-seventeenth century provided the perfect marketplace for their small-scale metal workshops. Also, crucially after the outbreak of the Nine Years’ War in 1688, France, Birmingham’s main competitor for similar brass and bronze products, was removed from much of the European marketplace due to trade restrictions, encouraging more brass workers to move to Birmingham and to profit from this void in the European economy.⁶⁵

Other industrial towns also had a significant influence on the introduction of brass manufacturing to Birmingham at the beginning of the eighteenth century. Traditionally the British brass industry had been dominated by manufacturers in Bristol.⁶⁶ Blake Coleman suggests that by 1700 the most efficient and profitable companies in Great Britain were those

⁶¹ I. Schnorr, ed., *The Workshop, A Monthly Journal Devoted to Progress of the Useful Arts* (New York, E. Steiger, 1876), 18.

⁶² W. Hutton, *The History of Birmingham (Sixth Edition)*, (London: James Guest, 1835), 24.

⁶³ C. Gill and A. Briggs, *History of Birmingham: Manor and Borough to 1865* (Oxford: Oxford University Press, 1952), 60.

⁶⁴ Hamilton, *The English Brass and Copper Industries*, 123.

⁶⁵ D. French, *The British Way in Warfare, 1688-2000* (Abingdon: Routledge, 2014), 16.

⁶⁶ K. Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century* (Cambridge: Cambridge University Press, 1993), 22.

of Bristol brass founders, and the influence of Bristolian brass manufacturing upon Birmingham industries has been highlighted in a variety of secondary sources.⁶⁷ According to A.S. Darling Birmingham manufacturers of brass products were initially reliant on their Bristolian counterparts, who claimed that 'much of brass worked there (Birmingham) was initially imported from Europe, although by the middle of the century (eighteenth) it was all obtained from Bristol.'⁶⁸ Darling's knowledge about the Bristol brass industry is based on two main sources: the writing of author and spy, Daniel Defoe, and the records of copper-dealer Thomas Patten.⁶⁹ Whilst Defoe is an invaluable guide to many industrial secrets, his geographic distance from Birmingham must be taken into account as his visits to the Midlands were infrequent and short.⁷⁰ Patten on the other hand was a respectable businessman who frequented the region regularly and kept detailed records and transactions from copper works in Liverpool and brass wire firms in Bristol. His accounts corroborate many of Defoe's observations.⁷¹ A.D. Morrison-Low also refers to Defoe, and states that the trader travelled around Britain to produce pamphlets and publications on social and economic issues, in which he referred to the growing significance of Birmingham brassware.⁷² The small workshops of the Midlands purchased brass from Bristol metal companies to manufacture goods or parts

⁶⁷ B. Coleman, *Copper Wire and Electrical Conductors: The Shaping of a Technology* (Reading: Harwood Academic Publishers, 1992), 96; Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*; W. Aitken, "Brass and Brass Manufacturers"; J. Day, *Bristol Brass*; J.R. Harris, *The Copper King: A Biography of Thomas Williams of Llanidan* (Liverpool: Liverpool University Press, 1964).

⁶⁸ A. Darling, "Non-Ferrous Metals," in *An Encyclopaedia of the History of Technology*, ed. I. McNeil (Abingdon: Routledge, 1990), 91.

⁶⁹ Darling, "Non-Ferrous Metals," 92.

⁷⁰ P. Backscheider, "Defoe, Daniel (1660-1731), writer and businessman," *Oxford Dictionary of National Biography* (3 January 2008), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.0001/odnb-9780198614128-e-7421>. (Accessed 31 October 2019).

⁷¹ M. Shaw and J. Clarke, *Cheshire Historic Towns Survey, Warrington Archaeological Assessment* (Cheshire: Cheshire County Council, 2013); J. Fenwick, *Some Founders of the Chemical Industry* (Manchester: Sherratt & Hughes, 1906), v; Hamilton, *The English Brass and Copper Industries to 1800*, 127.

⁷² A. Morrison-Low, *Making Scientific Instruments in the Industrial Revolution* (Farnham: Ashgate Publishing, 2007), 43-44.

of products. As early as 1702 large brass production works began to be established in Bristol, and were so successful that several similar establishments were created next to streams in the town: by the 1720s two significant copper works in Bristol, situated upstream at Conham and Crew's Hole, were exclusively concerned with brass production.⁷³ These businesses became so lucrative that the Bristol Brass Wire Company 'extended its businesses by establishing warehouses not just locally but also in Birmingham and London.'⁷⁴ The success and expansion of Bristolian brass trade laid the foundation for later developments in Birmingham.

Despite these explanations, it is still difficult to conclusively explain why the brass trade initially became popular in Birmingham and District. This research suggests that it was the interplay between six main factors: firstly, there was a history of skilled iron and steel workers in Birmingham because of the natural resources available in the region, and techniques used in manufacturing iron and steel products were similar to those used in brass making. Secondly, the material characteristics and properties of brass meant a variety of products could be created with it which it made it popular with manufacturers. Thirdly, increased religious tolerance allowed further labour to arrive in the region. Fourthly, the court and fashions of Charles II and wider consumer culture meant brass products were increasingly in demand in England during the late-seventeenth century. Fifthly, France was removed as a supplier of brass products during the Nine Years' War, eliminating competition for brass founders in Birmingham. Sixthly, the success, influence, and expansion of the Bristolian brassware businesses laid the foundation for similar workshops to be established in

⁷³ Morgan, *Bristol and the Atlantic Trade*, 97.

⁷⁴ Morgan, *Bristol and the Atlantic Trade*, 98.

Birmingham and District. As a result of these six factors, the number of brass workshops in Birmingham increased in the early-eighteenth century. Roads to the town and transportation infrastructure also improved with the 1731 carrier service, and as the demand for brass products increased, larger brass houses like those in Bristol were necessary to satisfy national and international demand.⁷⁵ Of necessity, the organisation of the industry began to change: the establishment of Turner's Brass house in 1740 marked a significant turning-point in the town's relationship with brass.

Turner's Brass House (1740-1754)

A metalworking culture based on workshops had emerged in sixteenth- and seventeenth-century Birmingham including, in the second half of the seventeenth century, the brass trade. Sites of work, evidence from travel diaries, rate books, businesses directories and trade cards, demonstrate that larger brass houses (as they began to be called) came to be established in the mid-eighteenth century. At this point a distinct brass industry emerged amidst the diverse metallurgical trades and workshops of Birmingham.

Larger brass houses were first founded in Birmingham in 1740; printed primary sources, including histories of the town, agree on the importance of this date. Hutton claimed that the first major brass house of the town was established in this year: the 'manufacture of brass was introduced by the family Turner, about 1740, who erected those works at the south end

⁷⁵ T. Barker and D. Gerhold, *The Rise and Rise of Road Transport, 1700-1900* (Cambridge: Cambridge University Press, 1995), 14; A. Morrison-Low, *Making Scientific Instruments*, 43-44.

of Coleshill-street.’⁷⁶ Aitken also identifies 1740 as a turning-point for Birmingham brass manufacturing; it must be noted, however, that Aitken was probably using Hutton as a source. He is more specific than Hutton, stating that ‘[the demand for the raw material] in that year induced a spirited manufacturer of the name of Turner to embark in the manufacture of brass.’⁷⁷ This is almost certainly Thos Turner, who is recorded as having regularly paid rates on several properties between 1736 and 1751, including a listing for a foundry.⁷⁸ In addition to Hutton and Aitken’s accounts, as well as rate book references, Charles Pye concluded in the early-nineteenth century that:

This article (brass), so necessary to the manufactures in this town, was for a great length of time procured from the wealthy people of Bristol, which caused a manufactory of brass to be established here, about the year 1740. A map published in 1751 tells us that the first brass house erected in Birmingham was in Coleshill Street.⁷⁹

The location of Thos Turner’s brass house is visible on Samuel Bradford’s map of Birmingham in 1751, outlined by the red box (Fig 1.2). The brass house was located towards the eastern edge of town:

⁷⁶ Hutton, *An History of Birmingham*, 329.

⁷⁷ Aitken, “Brass and Brass Manufacturers,” 225.

⁷⁸ Birmingham Archives and Heritage Service: MS244501, Rate books, 1736 – 1745: MS244502, Rate Books, 1745-175.

⁷⁹ C. Pye, *A Description of Modern Birmingham* (Birmingham: Charles Pye, 1820), 46.

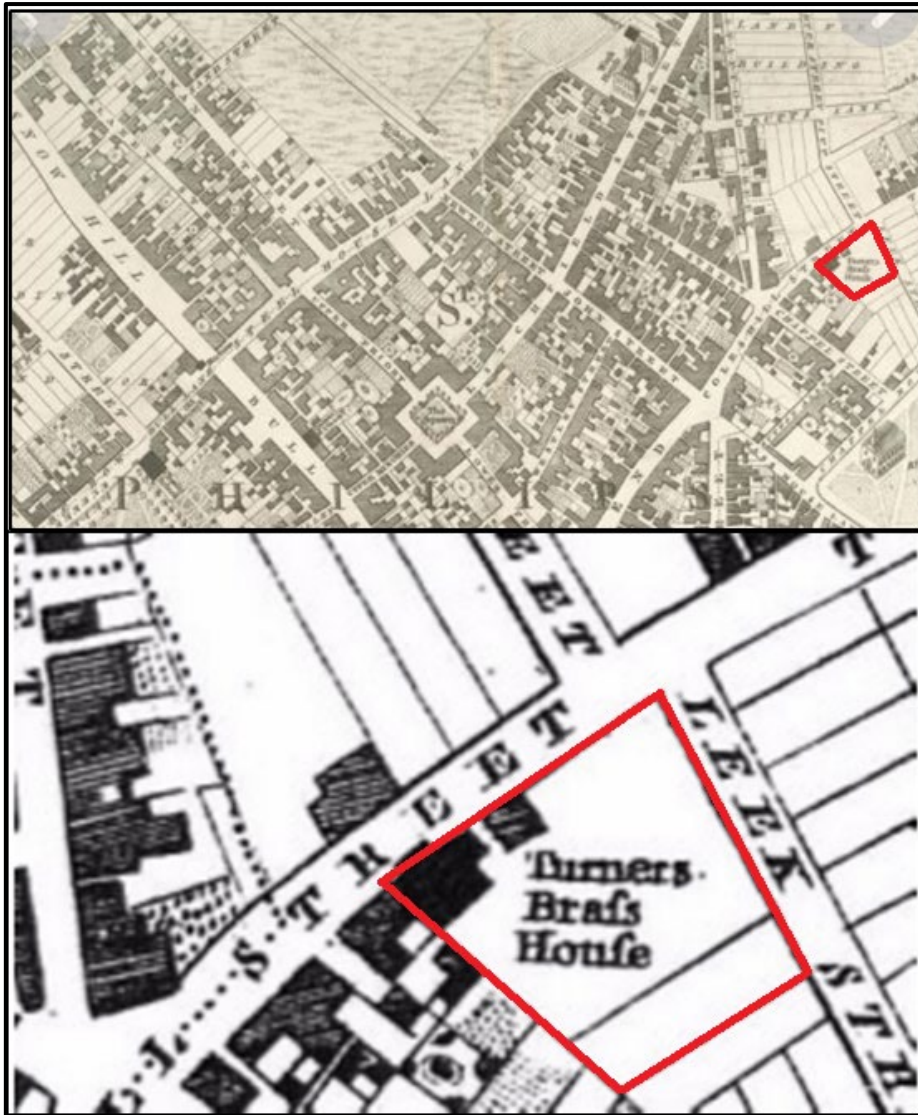


Fig 1.2. Edited image from S. Bradford, *Birmingham in 1750*, surveyed by Samuel Bradford and engraved and printed by Thomas Jeffreys (29 April 1751). Copyright Birmingham Images, The Library of Birmingham.

The Turner family brass house was the first establishment of its kind in Birmingham. It was a ‘brass house’ that manufactured brass, as opposed to a workshop that created components made from purchased pre-made brass - often acquired from Bristol.⁸⁰ There is an important distinction to make as the word ‘manufacturing’ is often interchangeably used to describe

⁸⁰ Morgan, *Bristol and the Atlantic Trade*, 98; Backscheider, “Defoe, Daniel (1660-1731)”.

both processes. Though brass products were being produced in Birmingham and District throughout the second half of the seventeenth century, the introduction of brass smelting in 1740 was new.⁸¹ It marked the beginning of the establishment of larger brass houses in the town, which were distinctly different from the workshops that existed previously. The introduction of smelting gave brass founders a greater level of autonomy, thereby removing them from over-reliance on Bristolian sellers; it would revolutionise the industry in Birmingham.

One of the most important insights into the differences between Turner's brass house and the workshops that existed before (and after it), is to be found in the pages of a diary of an eighteenth-century Swedish traveller, Reinhold Rucker Angerstein. Angerstein's diary helps in piecing together information concerning the Birmingham brass trade, but it has its limitations which include the natural imperfections of observation and artistic license, in addition to Angerstein's limited admittance into many businesses. Born in 1718 in Vikmanshyttan, Sweden, Angerstein was a civil servant, metallurgist, entrepreneur, and industrial spy.⁸² At the age of 31 he was financed by the Swedish Association of Iron masters (Jernkontoret), to produce detailed accounts of metalworking throughout Europe, with a special focus on British industrial practices.⁸³ The Jernkontoret was concerned that British ironworking and exports were a threat to its own prosperity. As Marilyn Palmer acknowledges in the introduction to the 2001 printed translation of the diary, it is unsurprising that 'a fair proportion of the 900

⁸¹ Wilkes, *Journal of Dr. Richard Wilkes*, 34.

⁸² N. Cox and K. Dannehl, *Perceptions of Retailing in Early Modern England* (Aldershot: Ashgate Publishing, 2007), 30.

⁸³ M. Palmer, "Introduction," in R. Angerstein, *Illustrated Travel Diary, 1753-1755: Industry in England and Wales from a Swedish Perspective*, trans. T. Berg and P. Berg (London: Cromwell Press, 2001), 44.

pages of the diary is devoted to the iron trade.’⁸⁴ Angerstein’s account, however, discusses centres of brass production in Birmingham and District, which suggests its local importance.

After visits to Germany, Hungary, Italy, France, and Spain, Angerstein arrived in Britain in 1753. His journey through England lasted two years and the resulting 900-page diary includes specific numbers of workers, intricate illustrations of workhouses and insights into industrial practices that would otherwise have been lost. His diary helps historians of mid-eighteenth-century British industry overcome the limitations of archaeological evidence and lost written records. Archaeological studies reveal that there was extensive use of copper alloys in eighteenth-century Birmingham; excavations in Park Street as part of the Bull Ring development revealed remains of brass, crucibles, and residues.⁸⁵ Crucibles with brass deposits in them were also found on the Birmingham Moat site.⁸⁶ Written sources to explain the items found there are lacking, and it is virtually impossible to date metal products, which is why Angerstein’s diary is so important. In an industry where secrecy was high and there is limited written evidence to investigate technological practices, the illustrations of brass workshops and houses are invaluable, although caution must be extended to the evidence of someone with limited access. The importance of the diary for British industrial history was first highlighted by Alan Birch and Michael Finn, whose research focused on the findings of Swedish travellers, but it was not until the completion of its English translation in 1992 that British historians were fully able to utilise the source and began to bridge some of the gaps in

⁸⁴ Angerstein, *Illustrated Travel Diary*, 44.

⁸⁵ Patrick and Ratkai, *The Bull Ring Uncovered*, 67-68 and 227-235.

⁸⁶ L. Watts, “Birmingham Moat, Its History, Topography and Destruction,” *Transactions of the Birmingham and Warwickshire Archaeological Society*, 81:1 (1978), 63-66.

the historical literature of eighteenth-century English and Welsh industrial centres.⁸⁷ Chris Evans, Göran Rydén, Jan Furnee, and Yvonne Jones have used the source in their research for evidence of industrial towns and practices.⁸⁸ The research here is part of this ongoing exploration.

The English translation is the result of work primarily by two different individuals (although there are other contributors); originally by Swedish-born Torsten Berg during the 1970s and eventually completed by his son Peter. Translated texts inevitably rely on the interpretation of phraseology by the individual translator and can often include personal bias or lose the nuances of the original text, although much of this text deals with specific numbers and details which are not subject to interpretation or bias.⁸⁹ In addition to translation issues, historical suspicion of industrial espionage, sample size, and access to industrial facilities are limiting factors of the diary. Many industrialists in the mid-eighteenth century were aware of industrial espionage and were particularly wary of Scandinavian travellers. John Harris highlights the example of Matthew Boulton writing to Josiah Wedgwood, describing a travelling Danish Professor, Mr Ljungberg, as 'probably employed by the Court of Denmark, to collect such knowledge in this country as might be useful in that.'⁹⁰ With this in mind it is not unreasonable to assume that many industrialists, especially within the Midlands, did not

⁸⁷ A. Birch, "Foreign Observers of the British Iron Industry During the Eighteenth Century," *Journal of Economic History*: 25:1 (1955), 23-33; M. Finn, "The Travel Diaries of Swedish Engineers of the Eighteenth Century as Sources of Technological History," *Transactions of the Newcomen Society*: 30: 1 (1957-58), 95-109.

⁸⁸ C. Evans and G. Rydén, *Baltic Iron in the Atlantic World in the Eighteenth Century* (Leiden: Brill, 2007), 121, 139, 152; J. Furnee, "A Dutch Idyll? Scheveningen as a Seaside Resort, Fishing Village, and Port, c. 1700-1900," in *Resorts and Ports: European Seaside Towns Since 1700*, eds. P. Borsay and J. Walton (Bristol: Channel View Publications, 2011), 29; Y. Jones, "John Baskerville, Japanner of Tea Trays and Other Household Goods," in *John Baskerville Art and Industry of the Enlightenment*, eds. C. Archer-Parre and M. Dick (Liverpool: Liverpool University Press, 2017); 80.

⁸⁹ A. Pym, *Method in Translation History* (Abingdon: Routledge, 1998), 1-24.

⁹⁰ J. Harris, *Industrial Espionage and Technology Transfer* (Abingdon: Routledge, 1998), 484.

allow Angerstein into their businesses. Angerstein recalls a visit to a button factory in Birmingham where:

I saw here the casting, stamping, turning, polishing, and scouring carried out very quickly and deftly, mostly with aid of the lathes... the owner of the works then came in and started to berate the workers for letting me in. I did not wish to become involved in any trouble with him, so I went on my way.⁹¹

Compared to other parts of the country he visited, stories of secretive businesses appear to be much more frequent within Birmingham brass- and copper-working industries. In a factory south of Birmingham, Angerstein was looking at a rolling mill for sheet boxes with narrow sheets of copper and silver-plated tin to be used for the manufacture of buttons. He recalled how:

This mill is not shown to strangers, but due to the recommendation of a file-cutter whom I had taken with me as company, I was let in. This upset the owner when he arrived a little while later, and he loudly upbraided the workers and the file cutter.⁹²

Birmingham's manufacturers were noticeably more cautious with regards to trade secrets; more detailed accounts were given of exactly what happened inside brass kettle workshops, brass workshops, and zinc-smelting factories in Bristol following tours by prominent

⁹¹ Angerstein, *Illustrated Travel Diary*, 44.

⁹² Angerstein, *Illustrated Travel Diary*, 39.

industrialists such as William Champion.⁹³ Secrecy was an important part of the industrial culture in Birmingham, meaning that Angerstein's sample sizes are dependent upon the limited knowledge he could obtain in each place he visited. His work may also have been rushed for fear of his being manhandled or escorted from foundries, which may in turn have led to some inaccuracies. Examples of inconsistencies have been identified by Nancy Cox and Karin Dannehl who describe his depictions of Lancaster's skyline as disappointing, roughly drawn, idealized, and stylised.⁹⁴ His romanticised visions of British scenery and landscapes are not necessarily extended to industrial practices, but possible inconsistencies must be taken into consideration when being used as evidence. Despite Cox and Dannehl's criticisms they acknowledge that sketches of this kind are rare or non-existent and are still valuable.⁹⁵

Angerstein arrived in Birmingham thirteen years after the establishment of Turner's brass works, so changes would have occurred after its initial opening. From his descriptions of the multiple furnaces, as well as the volumes of calamine and coal used, it is clear Turner's Brass House was much larger than the small workshops of pre-eighteenth century Birmingham. He wrote that it:

... consists of nine furnaces with three built together in each of three separate buildings. The furnaces are heated with mineral coal, of which fifteen tons is used for each furnace, and melting lasting ten hours. Each furnace holds nine pots, 14 inches high and 9 inches diameter at the top. Each pot is charged with 41 pounds of copper, and 50 pounds of calamine was first placed on the bottom of the pot,

⁹³ R. Angerstein, *Illustrated Travel Diary*, 128-147.

⁹⁴ Cox and Dannehl, *Perceptions of Retailing in Early Modern England*, 30.

⁹⁵ Cox and Dannehl, *Perceptions of Retailing in Early Modern England*, 30.

then came the mixture, which was packed tightly, followed by about a pound of copper in small pieces, and finally again coal and calamine without copper covering the top... the result of one charge was 75 pounds of brass, with a value of £4.10s per cwt.⁹⁶

To ensure the smooth running of the nine furnaces, Angerstein states there was a foreman and six workers, and part of the larger interior of Turner's brass house was illustrated (Fig. 1.3). He records that more than three hundred tons of brass was being created annually at the brass house and stamping was undertaken every twenty-four hours.⁹⁷ In Angerstein's drawing, the size of the sketched brass house, which is only one part of a more substantial complex, was probably larger than most of the workshops of Birmingham when compared to his other sketches, demonstrating how the industry was expanding and developing. The capability and capacity to produce large volumes of brass within Birmingham, rather than relying on brass from Bristol, was a milestone for the town as the merchants were no longer reliant on Bristol, or other centres, to obtain their brass.

⁹⁶ Angerstein, *Illustrated Travel Diary*, 38-39.

⁹⁷ Angerstein, *Illustrated Travel Diary*, 38-39.

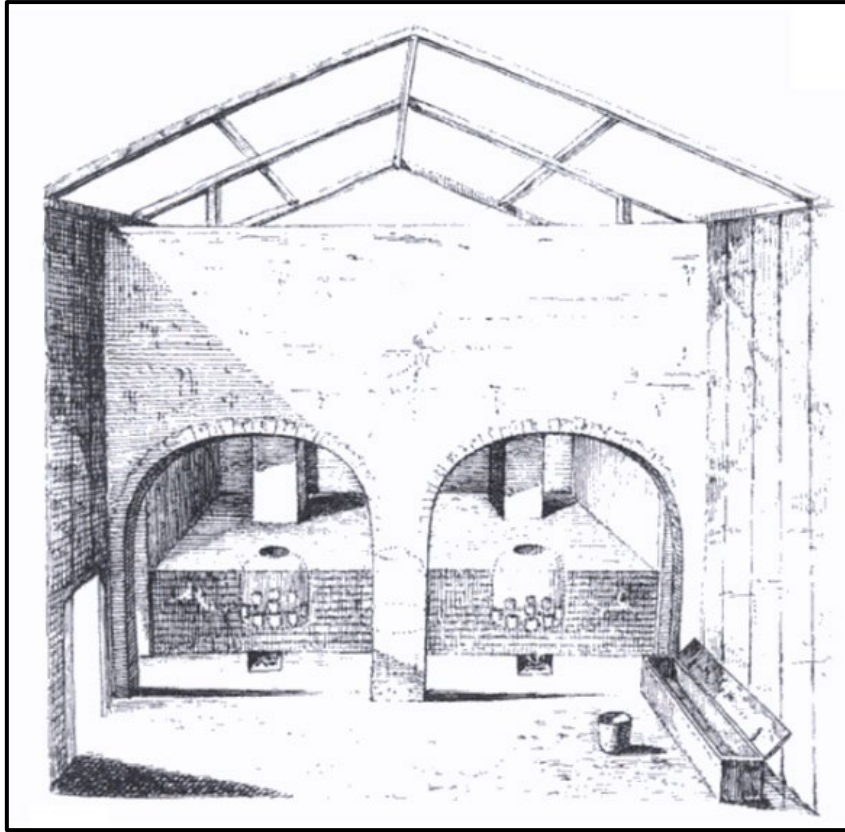


Fig 1.3. Sketch of the interior of a room in Turner's Brass House, including crucibles, and furnaces: R. R. Angerstein, *Illustrated Travel Diary, 1753-1755: Industry in England and Wales from a Swedish Perspective*, trans. T. Berg and P. Berg (London: Cromwell Press, 2001), 39. Peter Berg asserts his right to Copyrights of this image as the translator of the work.

The emergence of larger brass producing houses did not mean the smaller brass workshops that typified pre-eighteenth century Birmingham and District disappeared; brass products continued to be made there, often using brass purchased from Turner. The shorter distances required to transport the manufactured brass to metalworkers streamlined the manufacturing process, allowing smaller workshops to purchase brass, then produce products, at a much faster rate than when they were relying on Bristolian sellers.⁹⁸ The continued existence, and variety, of small brass workshops is confirmed by Angerstein, who

⁹⁸ Darling, "Non-Ferrous Metals," 91.

visited many of them during his journeys through Birmingham and District. In describing brass buckle production in Wolverhampton in 1754, Angerstein asserted that:

I saw some were occupied in forging the hook and the spike, others in filing them and others in assembling the ring. The buckle itself had its own workman, after which another files and polishes. All of these special tasks have their own way of being carried out.⁹⁹

The smaller workshops of the Midlands continued to thrive alongside Turner's brass house, as can be seen in the trade directories explored later.¹⁰⁰ The organisation of, and co-operation between, large- and small-scale brass houses in Birmingham fits the flexible models of industrial organisation discussed by Charles Sabel and Jonathan Zeitlin in their rethinking of mass production.¹⁰¹ The smaller businesses were able to purchase more brass from the larger centres and continued to specialise in very specific techniques and products, as can be seen in the items sketched by Angerstein taken from a small Wolverhampton buckle company (Fig 1.4):

⁹⁹ Angerstein, *Illustrated Travel Diary*, 45.

¹⁰⁰ Sketchley, *Sketchley's Birmingham, Wolverhampton and Walsall Directory*; Sketchley and Adams, *Universal Directory for the Towns of Birmingham, Wolverhampton, Walsall, Dudley and the Manufacturing Villages*; Swinney, *Birmingham Directory*; Pearson and Rollason, *Birmingham Directory*; Pye, *Birmingham Director*; Bisset, *A Poetic Survey and Magnificent Directory*.

¹⁰¹ C. Sabel and J. Zeitlin, eds., *World of Possibilities; Flexibility and Mass Production in Western Industrialization* (Cambridge: Cambridge University Press, 1997), 1-36.

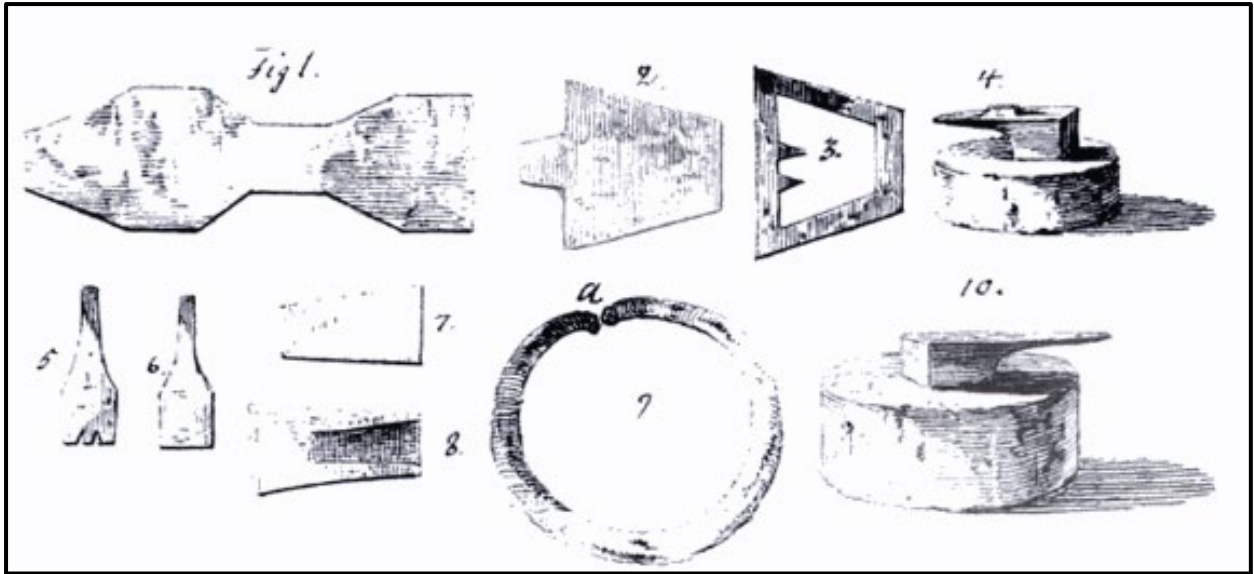


Fig 1.4. Sketch of Specialised Products from a Wolverhampton Buckle Manufacture: R. Angerstein, *Illustrated Travel Diary, 1753-1755: Industry in England and Wales from a Swedish Perspective*, trans. T. Berg and P. Berg (London: Cromwell Press, 2001), 45. Peter Berg asserts his right to Copyrights of this image as the translator of the work.

Image 1 shows the sheet metal that was cut into shape and hammered flat by one individual. Image 2 shows the same sheet folded over before being heated, soldered, and stamped in image 3. Different workmen created the spike which can be seen in images 5 through 9; techniques involved included hollowing, filing, and thinning. Eventually all the components were welded together and sold for sixpence.¹⁰² Angerstein describes how he saw a variety of specialised techniques and products in multiple workshops in Birmingham and District. His commentary shows how the division of labour was repetitive, but finely tuned.¹⁰³ Whilst records may have been kept within such businesses, none survive, but Angerstein's account reveals a complex, sophisticated, and organised manufacturing process to be found within the Midlands.

¹⁰² Angerstein, *Illustrated Travel Diary*, 45.

¹⁰³ Angerstein, *Illustrated Travel Diary*, 45-46.

Another Swedish visitor, metallurgist and industrialist, Samuel Schröder, also described the practices in brassworking establishments, as well as explaining the relationship between the larger brass houses and smaller workshops. Schröder, like Angerstein, had been educated in Sweden but had focused his studies additionally on chemistry instead of purely ironworking. He became a student of assaying and a member on the Board of Mines in Stockholm.¹⁰⁴ Looking to improve his knowledge of foreign metalworking he arrived in Birmingham in 1749, four years before Angerstein travelled there. Angerstein was explored in this chapter first, because of his specific comments on Turner's Brass House - unlike Schröder who makes more general comments about how larger brass producing centres (such as Turner's establishment) interacted with smaller workshops, changing the dynamic of the brass trade within Birmingham. Unfortunately for English-speaking historians, no full translation exists for Schröder's diary, but there are a number of lengthy quotations from his findings contained in the edited work of Patrick Manning and Daniel Rood, through a chapter by Göran Rydén.¹⁰⁵ Relying on the work of others is problematic; the same issues regarding translation exist in this text as in Angerstein's travel diary, however Manning and Rood's book *Global Scientific Practice in an Age of Revolutions* has been peer-reviewed and is praised for being 'one of the best overviews of developments in the field.'¹⁰⁶ The extracts taken from Rydén's chapter are translated from the original diary by Schröder.

¹⁰⁴ G. Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions of Economic Systems," in), *Global Scientific Practice in An Age of Revolutions, 1750-1850*, eds. P. Manning and D. Rood (Chicago ILL: University of Pittsburgh Press, 2016), 116-124.

¹⁰⁵ Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions," 116.

¹⁰⁶ G. McOuat, "Review of P. Manning and D. Rood, eds., *Global Scientific Practice in an Age of Revolutions, 1750-1850*," *Journal of Interdisciplinary History* volume: 48:1 (2017), 81: M. Kitching, "Review of P. Manning and D. Rood, Daniel, eds., *Global Scientific Practice in an Age of Revolutions*," *Edinburgh University Press Archives of Natural History*: 45: 2 (October 2018), 385.

Rydén highlights how Schröder's text includes more generalised observations, and the organisational methods in Birmingham that become apparent are the recurrent descriptions of the division of labour; 'treated from both a wide spatial angle, including the whole region and its metal trades, and from a perspective concentrating on what took place within the individual workshops.'¹⁰⁷ Angerstein concluded that 'Birmingham is the head for all Manufacturing Towns in iron, steel and brass;' this hierarchy is also referred to by Schröder in his diary. He identified that specialised industries were localised and relied on close interaction with similar centres to create and assemble entire products.¹⁰⁸ The many small and independent workshops involved in their particular tasks were attached to each other by the market mechanism, and in order to stay in business had to make goods of high quality but also sell them at the lowest price.¹⁰⁹ Components of the same final product were fashioned in different geographical areas of the region:

Willenhall was known for their locks... Walsall made goods relating to horses and riding, while Dudley and Stourbridge were known for their nailing. Birmingham was the marketing and financial centre for most of these trades, but also a production centre in its own right.¹¹⁰

Whilst products were being created throughout the West Midlands, Schröder recognised Birmingham as the administrative hub that oversaw quality control, the division of labour,

¹⁰⁷ Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions", 117.

¹⁰⁸ Angerstein, *Illustrated Travel Diary*, 40.

¹⁰⁹ Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions", 116-124.

¹¹⁰ G. Rydén, "Eskilstuna Fristad: The Beginnings of an Urban Experiment", in *Sweden in the Eighteenth-Century World: Provincial Cosmopolitans*, ed. G. Rydén (Abingdon: Routledge, 2016), 130.

and the variety of tasks that needed to be completed to create the products.¹¹¹ For example, gun-manufacturing was a thriving industry, and many components of guns such as locks, barrels, and decorations were made of brass, but the parts were created in different locations across the region.¹¹² Locks were manufactured in Willenhall, barrels in Aston and stocks in Birmingham where gun smiths would also assemble the component parts to create the final product.¹¹³ Birmingham was the epicentre of the West Midlands region in terms of market mechanisms, and within that system the brass trade had a similar structure.

Whilst Angerstein produced micro level insights from within Turner's Brass House, Schröder included comments on macro level organisation through his exploration of smaller workshops. He revealed that these 'lesser' independent businesses were connected to larger organisations such as Turner's Brass House. Schröder believed that:

The downside to this structure was that many workshops competed with each other. The wealthy merchants were not as numerous, and the balance of power was clear; a few merchants controlled the market... which is why the merchants profit, while the artisans hurt each other.¹¹⁴

It becomes clear throughout the second half of the century that Schröder's assertion is accurate as, by this point, a few influential brass founders controlled the many (Chapter Two). Within each business there would be what Schröder terms a 'headmaster.' It was the

¹¹¹ Rydén, "Eskilstuna Fristad: The Beginnings of an Urban Experiment," 130.

¹¹² D. Williams, *The Birmingham Gun Trade* (Cheltenham: History Press Limited, 2004), 28.

¹¹³ Williams, *The Birmingham Gun Trade*, 29.

¹¹⁴ Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions," 116-124.

headmaster's 'particular task to walk around as an inspector in all the different workshops and to keep an eye on the workers as well as to examine the goods when it pass (sic) from one worker to the next.'¹¹⁵ Each headmaster would answer to another higher within the chain of command. Schröder noted how 'the lesser masters and their workers... never have the opportunity to learn any craft in its full extent, but only a small part thereof (sic), such as hammering, filing, polishing, stamping, moulding etc.'¹¹⁶ The hierarchy of command forced individuals to focus on perfecting very specialised practices in which they could provide expertise, including the production of 'higher status goods and semi-luxury novelties.'¹¹⁷ Schröder's diary demonstrates that throughout the eighteenth century the key to producing brass goods was the division of labour and expertise; 'so that each individual process in the manufacturing of a product was handled by a specialist in that skill. The incomplete product would then be passed to another specialist to be finished.'¹¹⁸ The success of the brass manufacturing process was not simply due to the division of labour, but also to the monopolisation of knowledge. The larger brass houses were run by individuals who increasingly controlled the regional conveyor belt of manufacturing through their exclusive knowledge of the entire manufacturing process for specific products and trades. The men at the top of this chains would go on to organise the Commercial Committees throughout 1780s (Chapters Two and Three).

When studying the two Swedish travel diaries, and despite the limitations of the sources, it is clear that both individuals attempted to create an accurate image of the industry in order to

¹¹⁵ Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions," 119.

¹¹⁶ Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions," 120.

¹¹⁷ Evans and Rydén, *Baltic Iron in the Atlantic World in the Eighteenth Century*, 123.

¹¹⁸ Rydén, "How Eighteenth-Century Travelers in Trade Changed Swedish Perceptions," 121.

provide detailed information to the Swedish metallurgical industries. Their investigations show that in the 1740s and 1750s when they visited, the technology and organisation of the local brass industry was sufficiently important to be recorded. With the establishment of Turner's brass house came increased autonomy for manufacturers through the smelting of copper. Larger, more centralised brass houses began to dominate the smaller, independent workshops through secrecy of practices and exclusive knowledge, which hampered many of Angerstein's attempts at espionage. Independent workshops did not disappear following the creation of larger, more centralised centres of production, but became more dependent on them, leading to a powerful few controlling the conveyor belt of brass-manufacturing throughout the Midlands. From the mid-eighteenth century onwards however, the definition of what constitutes a brass house in Birmingham becomes increasingly difficult to identify.

Defining 'Brass House' and 'Brass Founder'

The term 'brass house' is first used in Birmingham with reference to Turner's 1740 establishment, which suggests that originally the label was associated with the larger establishments that produced brass and made chemical adjustments with zinc and copper, rather than with those that simply manufactured products from purchased brass. As the century progressed this was not always the case; increasingly individuals referred to their work centres as brass houses, or called themselves brass founders, despite only manufacturing products. Examples of this practice can be seen through the many trade directories and limited number of trade cards available from the second half of the eighteenth

century.¹¹⁹ James Sketchley's 1767 trade directory is the first to survive as a guide to the Birmingham manufacturing industries and manufacturers. Within it are listed various professionals and their addresses. The third edition of the Directory claims that great improvements had been made when compared to its earlier editions.¹²⁰ Whilst the author is evidently satisfied with the accuracy and extensive detail included, individuals had to pay for advertising space, meaning that smaller or less successful businesses and even larger establishments may not have been listed. Turner's Brass House for example is absent in the 1767 edition but is included in the 1770 version of Sketchley's guide. As explored in the introduction, directories do have their limitations as incomplete guides but are still useful for identifying trends and the popularity of specific industries.

Professions are listed in Sketchley's original *Directory* and often preceded with a short description of the trade and product. It is important to note that in 1767 there is not a single reference to a brass founder or brass house, but there are many references to brass being used in a variety of trades such as Candlestick Makers and Button Makers (which is the largest business entry totalling fifty three).¹²¹ Whilst brass was used extensively in many industries, specialising in brass was not an easily definable characteristic according to the 1767 Directory. In 1770 however, Sketchley produced a new edition of his trade directory with Orion Adams. In this edition forty-two individuals are registered as 'brass founders', making it one of the most numerous listed professions in Birmingham at the time. Brass founders continue to be

¹¹⁹ Sketchley, *Sketchley's Birmingham, Wolverhampton, and Walsall Directory*; Sketchley and Adams, *Universal Directory for the Towns of Birmingham, Wolverhampton, Walsall, Dudley and the Manufacturing Villages*; M. Swinney, *Swinney's Birmingham Directory*; Pearson and Rollason, *Birmingham Directory*; C. Pye, *Pye's Birmingham Directory*; Bisset, *A Poetic Survey and Magnificent Directory* (1800).

¹²⁰ Sketchley, *Sketchley's Directory*, i.

¹²¹ Sketchley and Adams, *A Universal Directory for the Towns of Birmingham*, 13-17.

extensively recorded throughout the trade directories of eighteenth-century Birmingham after 1770 with numerous listings in Swinney's 1774 *The New Birmingham Directory*, Pearson and Rollason's 1780 *Directory*, as well as Charles Pye's 1788 *Directory*.¹²² The label 'brass founder' and the references to 'brass houses' are imprecise though and the lack of definition means it is difficult to give an exact classification of what constitutes a brass founder or what is distinctive about a brass house. The phrase 'brass founder' emerged at some point during the late 1760s as an all-encompassing term for individuals who worked with brass, including casters, manufactures, makers and finishers, all of whom did very different jobs.¹²³ Similar trends and comparisons can be made with the 'Artists' of Victorian London. Pedro Lorente and Clare Targett conclude that 'it remained the case that whilst many professions had a defining qualification to make it clear who could practice them and, equally important, who could not, there was no single equivalent for the title *artist* whose definition can be very imprecise.'¹²⁴

It is not until the printing of James Bisset's *Magnificent Directory* in 1800, with the inclusion of annotations, that multiple definitions of 'brass founders' and 'brass houses' were demonstrated. One example of a brass house was described as 'very extensive works, belonging to the Smethwick Brass Company... in which the power of their steam engines is applied to the boring of cylinders, pumps, &c. (sic) to drilling, turning, or blowing smelting

¹²² Pearson and Rollason, *The Birmingham, Wolverhampton, Walsall, Dudley, Bilston, and Willenhall Directory*; M. Swinney, *The New Birmingham Directory and Gentleman and Tradesman's Compleat (sic) Memorandum Book* (Birmingham: Swinneys, 1774); Pye, *Birmingham's Directory*.

¹²³ G. Wills, *The Book of Copper and Brass* (London: Country Life Books, 1986), 19-22.

¹²⁴ J. Lorente and C. Targett, "Comparative Growth and Urban Distribution of the Population of Artisans in Victorian London," in *New Directions in Urban History*, eds. P. Borsay, R. Mohrmann and G. Hirschfelder (Berlin: Waxmann, 2000), 65-87.

furnaces.’¹²⁵ The label ‘brass house’ was not only attached to larger works with smelting furnaces, but also to the smaller businesses of manufacturers such as brass founder John Boyce’s umbrella-making shop, Neville and Lowe’s Coach-plater service on Great Charles Street, John Dolphin’s Prospect Row-based Commode and Cabinet-Making Works, as well as his coffin furniture and picture frame shop.¹²⁶ Each one of these individuals had an accompanying trade card to advertise their business. The different trade cards reveal the loose way in which terms were used.

The trade directories show that there was an extensive group of individuals who referred to themselves as brass founders or claimed to own a brass house by the second half of the eighteenth century (certainly by 1800, if not earlier). Unfortunately, there are few surviving trade cards which represent this burgeoning market. The Library of Birmingham has an eighteenth-century trade card collection, but only one refers to brass founders and brass houses, which is an image contained inside James Bisset’s *Magnificent Directory* in 1800 (Fig 1.5).¹²⁷

¹²⁵ Bisset, *A Magnificent Directory*, 18.

¹²⁶ Bisset, *A Magnificent Directory*, 47 and 49.

¹²⁷ Bisset, *A Magnificent Directory*, 69.



Fig 1.5. Brass Founder Trade Cards: J. Bisset, *Bisset's A Poetic Survey and Magnificent Directory* (Birmingham: James Bisset, 1800).

The illustration of thirteen brass founders' trade cards demonstrates that there was no uniformity to describe what took place inside their brass houses, which range from Boyce's umbrella workshop that incorporated brass components, to the Mogridge's canal-side brass- and copper-smelting works.¹²⁸ Searches in the Heal collection of the British Library, as well as the John Johnson Collection at the Bodleian Library in Oxford, resulted in similarly limited results. The John Johnson Collection contains just two brass-founding cards from Birmingham, both from the nineteenth century, whilst the Heal collection contains none. It is possible that more exist, especially within the Birmingham archives in other collections. Though the term 'brass founder' comprised a high percentage of businesses listed in the Birmingham trade

¹²⁸ Bisset, *A Magnificent Directory*, 69.

directories, either few businesses used cards or the cards themselves as ephemeral items have been lost or destroyed.

The few trade cards that do exist indicate how flexible the terms 'brass house' and 'brass founder' were in later-eighteenth century Birmingham. After 1767 when the terms appear, they seem to refer to both the larger businesses such as Turner's original establishment and the Smethwick works, as well as to the smaller workshops. It is possible that many of the smaller businesses used the term 'brass founder' or 'brass house' to give more credibility to their operations, or perhaps it was simply an all-encompassing term used in directories to cover businesses that undertook a variety of operations. Either way it is difficult to give a precise definition as to what a brass founder was, or to what happened inside a Birmingham brass house, during the second half of the eighteenth century. A brass founder could be an individual who produced brass for sale, or someone who manufactured products with purchased brass. A brass house could be a place in which brass was made in large quantities, or a small workshop in which brass products were made.

Conclusion

Aitken's lamentation that there is no guide to the introduction and expansion of the brass trade of Birmingham will never be entirely addressed. This chapter however, highlights some of the confusions and inaccuracies in the current historical literature and addresses some of the gaps in knowledge. The research in this thesis is the first substantial analysis of the introduction of the brass trade to Birmingham. It broadens perspectives beyond many of the current industrial histories of the town which begin in 1760, tracing the historical relationship

of brass products to the 1680s and highlighting the international dimensions of the trade.¹²⁹ Thos Turner did not introduce the brass trade to Birmingham as Hutton and Aitken claimed; there were many small workshops manufacturing products made of brass in the previous centuries.¹³⁰ Nor was there a sudden and dramatic shift towards large-scale production in the 1760s as Aitken asserted:

The evolving nature of this transfer of skills between metals, that developed into such an important industry was a slow and steady one and remained based on small-scale individual production for nearly a century. The position of the brass trade between 1689-1760 was that of making only – it had not reached the dignity of manufacturing – the former epithet referring to the production of a small, the latter to that of a very much larger number of individuals.¹³¹

The idea that Birmingham brass arrived in 1740 and by 1760 was engaged in large-scale manufacture is a misconception that over-exaggerates its rapid expansion. Rather, Turner's smelting facilities acted as a catalyst for change. Swedish travel diaries show that Turner's Brass House reduced the reliance of Birmingham-based manufacturers on Bristol's supply of brass, as large amounts of the metal began to be produced within the Midlands. The establishment of his brass house began the process of more people engaging in the trade and referring to themselves as brass founders. The terms brass house and brass founders can be misleading however, as trade directories and trade cards reveal. Despite the margins for error

¹²⁹ Hopkins, *Birmingham – The First Manufacturing Town in the World*; Jones, *Industrial Enlightenment: Science, Technology and Culture in Birmingham and the West Midlands*; Money, *Experience, and Identity*.

¹³⁰ Hutton, *An History of Birmingham*, 80; Aitken, "Brass and Brass Manufacturers," 225.

¹³¹ Aitken, "Brass and Brass Manufacturers," 226.

in trade directories, there were at least 42 brass founders located within Birmingham between 1740 and 1767, which only averages 1.56 brass businesses being established per year. Compared to a tradition of small-scale workshops, the period between 1740 and 1781 saw changes, but not the rapid monopolisation of the industry that Aitken promulgated: claiming that 'in a very few years after the introduction of a knowledge of that metal into the town, it rapidly absorbed, and may now be said to have almost monopolised the manufacture of articles in brass.'¹³² In reality the Birmingham brass trade developed slowly from the mid seventeenth-century, evolving alongside iron and steel, with a period of relatively fast expansion in the mid-eighteenth century, but growth was steady, as opposed to dramatic. The more significant development was the creation of the 1783 Commercial Committee where brass founders began to work together and developed a political presence, as is explored in Chapter Two.

¹³² Aitken, "Brass and Brass Manufacturers," 226.

Chapter Two

Birmingham Brass Manufacturing Networks:

The Development of a Political Presence (1765-1783)

Birmingham's reputation as a metalworking centre increased throughout the eighteenth century. More particularly the number of registered brass founders and brass houses in Birmingham increased significantly after 1740, as can be seen in numerous trade directories (Chapter One). The division of labour within workshops, the hierarchy and organisation of the trade, as well as the flexibility of the brass workers within the Midlands, gained recognition nationally and internationally.¹ The histories of Birmingham's metal trades have often focused on contributions made by industrialists to the local and national economy, such as the work by Eric Hopkins, who surprisingly neglects the significance of international markets for Birmingham's economic expansion.² Hopkins concluded that the success of Birmingham was 'largely driven by the domestic market and based on increased national prosperity.'³ More recently however, Peter Jones has highlighted how foreign trade was the dominant factor for the growth of the town by the 1760s and 1770s.⁴ This is not to say that Hopkins' analysis on domestic trade is redundant, but new perspectives can be applied to his examination of eighteenth-century Birmingham to fill potential gaps in knowledge of the local economy. Richard Price has argued that there is still a need to explore the relationship

¹ W. Aitken, "Brass and Brass Manufacturers," in *The Resources, Products and Industrial History of Birmingham and the Midland Hardware District*, ed. S. Timmins (London: Robert Hardwicke Publishing, 1866), 229.

² E. Hopkins, *Birmingham: The First Manufacturing Town in the World, 1760-1840* (Birmingham: Weidenfeld and Nicolson Publishing, 1989), 12.

³ Hopkins, *Birmingham: The First Manufacturing Town in the World*, 12.

⁴ P. Jones, *Industrial Enlightenment: Science, Technology and Culture in Birmingham and the West Midlands, 1760-1820* (Manchester: Manchester University Press, 2009), 46.

between politics and industry in eighteenth-century Birmingham, as the links have never been addressed in any depth.⁵ This chapter explores two crucial elements that are missing from the history of Birmingham brass, namely politics and international trade. This research explores how Birmingham's brass industry was significantly shaped by processes and changes at work in international markets and examines how Birmingham brass founders responded to such challenges. In doing so, it demonstrates the important and interconnecting nature of politics and international trade within Birmingham's brass industry.

Since the work of Hopkins in 1989, Maxine Berg, in her research on British manufacturers, has emphasised the importance of international connections for Birmingham metalworkers. Her comments on Birmingham metal, however, comprise a short section within a much larger body of work.⁶ More recently Carl Chinn and Malcolm Dick have produced a history of Birmingham, with international dimensions, in their edited volume, *Birmingham: Workshop of the World*.⁷ The work of Jones, Berg, Chinn, and Dick is far more reflective of the international histories that have permeated academia in recent years (as outlined in the Introduction). The research in this chapter expands upon Hopkins' work and extends some of the themes introduced by Berg, Jones, Chinn, and Dick, suggesting that industrial processes in Birmingham were more internationally inflected than has previously been acknowledged. This thesis proposes that between 1765 and 1783 the brass trade was dominated by the emergence of a politically conscious group of industrialists who orchestrated a national

⁵ R. Price, "Review of Eric Hopkins, *Birmingham: The First Manufacturing Town in the World, 1760-1840*," *The American Historical Review*: 95: 5 (December 1990), 1536-1537.

⁶ M. Berg, *The Age of Manufacturers, 1700-1820: Industry, Innovation and Work in Britain* (Abingdon: Routledge, 1994) 251.

⁷ C. Chinn and M. Dick, ed., *Birmingham: The Workshop of the World* (Liverpool: Liverpool University Press, 2016).

political petitioning campaign, mainly in response to international threats. Julian Hoppit has explored the content and nature of petitions from interest groups between 1660 and 1800, to the Government, but stressed the need for more case-studies because of the thousands of petitions that existed.⁸ This chapter provides a case-study of such an interest group.

The analysis presented in this chapter is primarily based on archival material found within the Wolfson Centre for Archival Research (WCAR) in the Library of Birmingham, in a series of folders listed as *American Disputes*. These folders mainly cover the period between 1765 and 1783, and reveal that the American War of Independence, Government trade restrictions, international copper consumption, migration of workers, and industrial espionage, were all important in the development of the Birmingham brass industry.⁹ The conclusions in this chapter are based on private letters from eminent Birmingham businessmen, petitions, local and national newspapers, as well as printed primary sources. Influential local industrialists such as Matthew Boulton, Samuel Garbett and John Wilkinson corresponded about the importance of international trade; surprisingly, many of the private letters within these folders have not previously been referenced by historians of Birmingham. There are ninety-seven documents in total within the folders, the first twenty of which are mostly petitions to Parliament regarding trade with America in the late 1760s and early 1770s. These petitions were produced by different trade groups from a variety of industrial towns within the United Kingdom. There are also newspaper cuttings from *Aris's Birmingham Gazette*, *Swinney's Birmingham and Stafford Chronicle*, and the *London Evening Post*. Items listed as 'forty-one' to 'sixty' are a mixture of financial accounts and records of individual brass companies along

⁸ J. Hoppit, "Petitions, Economic Legislation, and Interest Groups in Britain, 1600-1800", *Parliamentary History*: 37: 1 (July 2018), 52-71.

⁹ Wolfson Centre for Archival Research (WCAR), MS 3782/12/87: *American Disputes Folders*.

with their links to America and France, as well as private letters covering topics such as the chemistry of brass, further trade restrictions, and the formation of secret committees to safeguard the brass industry. The twenty-seven remaining documents relate to the formation of the Birmingham Brass Committee and the Commercial Committee, Commercial Treaties with Ireland, as well as the National Chamber of Commerce: the aims of these groups are outlined, and the numbers and memberships involved are specified. This collection of diverse primary sources, some of which appear to be entirely unstudied, illuminate the motives behind industrial action in the 1770s and 1780s. The importance of understanding the international context in which the brass trade of Birmingham developed is emphasised.

The Birmingham brass founders faced strong competition, forcing them to adapt their strategies to maintain a position of power within national and international markets. This chapter analyses the challenges faced by Birmingham brass founders, as well as their strategies to cope with international pressures and national demands: it explores how the brass trade was organised as it expanded, and by whom. The obstacles they faced were threefold: political unrest in America, increased competition within continental Europe, and trade restrictions. The strategies put in place to combat these obstacles can be divided into two distinct periods. The first phase was from 1765 and continued throughout much of the 1770s. It was characterised by petitioning and was accompanied by political lobbying of targeted MPs. Following the mixed success of these strategies, a second phase can be seen developing in the early 1780s when formal industrial committees and groups were formed. Within these networks, brass founders pooled their resources and formed what might be understood to be a political lobbying group, dominated by a few influential members who

were often reacting to developments in the national and international marketplaces, including prices and availability of copper.

International Copper Markets

The global market for copper, one of the primary elements of brass, forms a vital context for analysing the political and industrial developments of the 1760s, 1770s and 1780s. Copper emerged as a very profitable industry during the mid-eighteenth century; England became the dominant force in brass and copper trading internationally, forcing the traditional overseas manufacturers, mainly the Japanese, into decline. According to Ryuoto Shimada: 'declining profits per unit in the Japanese copper trade marked the close of the eighteenth century...this was a result of competition with the English.'¹⁰ Birmingham brass founders specialised in copper-based alloys, such as brass or bath metal, because of the high demand for those products nationally and internationally. Chris Evans and Olivia Saunders argue that British copper products, as well as the raw material, were mainly exported via the Atlantic market during the eighteenth century, although also in India after the 1760s.¹¹ Berg additionally suggests that increased exportation from the Midlands in finished brass products, which required high amounts of copper to produce, was shaped by the markets and fashions of London, France, Italy, Germany, Russia and the American colonies. By the mid-eighteenth century brass buttons, buckles, bells, gun parts and toys were being exported to these

¹⁰ R. Shimada, "The Golden Age of Japanese Copper: The Intra-Asian Copper Trade of the Dutch East India Company," in *Intra-Asian Trade and the World Market*, eds. H. Kawakatsu and A. Latham (Abingdon: Routledge, 2006), 31.

¹¹ C. Evans and O. Saunders, "A World of Copper: Globalising the Industrial Revolution, 1830-70," *Journal of Global History*: 10: 1 (2015), 3-26.

locations in large quantities.¹² The Birmingham brass and copper industries in the early-eighteenth century had relied on individual skill and artistry in small-scale workshops (Chapter One). The 1760s, however, saw the introduction of stamped brass foundry products, which were cheaper to produce than casting.¹³ Assisted by the growth and expansion of canals after 1768, the brass industry entered a new age of production, physically connected to the rest of the world. Improved transport links, combined with international demand, led to a sharp increase in exports of brass and copper products, thereby making the industry lucrative for the town's brass founders.

Many of the leading manufacturers, including Matthew Boulton, saw brass as a vital element not only in their own personal business ventures, but also for the growth and success of Birmingham's economy.¹⁴ The manufacture of copper alloy products was not a business that was uniquely associated with Birmingham: in 1778 in a letter to an unknown associate, Boulton lamented that the 1760s had seen copper mines and manufactories being established throughout the world to cater for global demand:

Copper was produced in great quantities and well refined in Sweden also in England – in Russia – in Siberia – in the electorate of Hanover – in Hungary – in Transylvania – in Barbary – Mansfeldt in Germany – at Reglesthorf – in Hoels – in the Electorate of Cologne – near Friest and various other places upon the

¹² M. Berg, "Commerce and Creativity in Eighteenth-Century Birmingham," in *Markets and Manufacture in Early Industrial Europe*, ed. M. Berg, (Abingdon: Routledge, 1991), 181.

¹³ Berg, "Commerce and Creativity in Eighteenth-Century Birmingham," 293.

¹⁴ WCAR, MS3782/13/97, item 39: *Boulton letter*, 1800.

continent of Europe – There are Copper mines in France... there are also many very rich mines of copper in both south and north America.¹⁵

The increased number of copper mines in Europe and the Americas allowed for more brass manufacturing workshops and brass houses to be established during the 1760s and 1770s, creating unwelcome competition for Birmingham industrialists. It was not simply the number of brass houses that was of concern; there was also an increased quality of products being produced elsewhere. Boulton concedes ‘that some make better brass than any that is made in England...by the fine wire they make – their tinsel – their latten – their false leaf gold – and their lace, which the English brass is not fine enough for.’¹⁶ Fortunately for the Birmingham brass founders, many of the emerging businesses struggled to remain profitable. Copper-mining and smelting companies failed as quickly as they were being established; James Watt referred in 1784 to numerous mines being ‘forced to close in Swisserland’ throughout the 1760s and 1770s.¹⁷ By the 1770s copper-mining and brass manufacturing had become over-saturated and unstable marketplaces; the Birmingham manufacturers however had an advantage through their links with the colonial American marketplace which purchased copper and brass products at a very high rate. This chapter argues that the loss of these markets was a primary factor in the drastic reorganisation of the Birmingham brass industry, resulting in its politicisation in order to safeguard its profitability.

¹⁵ WCAR, MS 3782/12/87, item 27: M. Boulton, *Facts Relative to Brass* (1778).

¹⁶ Boulton, *Facts Relative to Brass* (1778).

¹⁷ Kresen Kernow, Cornwall’s Archives (KKCA), AD1583/1/17: J. Watt, *Letter to Wilson Regarding the Copper Market* (27 January 1784).

The American War of Independence and Birmingham

By the mid-eighteenth century, Birmingham had developed many industrial and intellectual links with America. The Lunar Society embodied both spheres: enlightened thought and industrial ingenuity. Robert Schofield, Gavin Budge, and Jenny Uglow have asserted that this informal group was the most important private scientific association in eighteenth-century England.¹⁸ Individuals in the group, many of whom were engaged in brass manufacturing, ‘maintained close links with other major centres of the Age of Enlightenment, particularly the universities of the Scottish Enlightenment, the Royal Society in London, and scientists, philosophers and academicians in France, Sweden, Saxony, Russia and America.’¹⁹ Lunar Society members William Small and Matthew Boulton had links with America, socially and professionally. Both corresponded with Thomas Jefferson and Benjamin Franklin. Small, a prominent Scottish physician who lived in Birmingham, had taught Jefferson at William and Mary College in Virginia and left a lasting impression on the young man.²⁰ There was a mutual respect between the men of Birmingham and America, as well as a long-standing and flourishing trade in brass products. Geoffrey Wills has argued that: ‘The fame of Birmingham as a manufacturing centre for such things had reached across the Atlantic, and other immigrants to the New World setting up in braziers and coppersmiths were proud to give their place of origin as the English Midlands.’²¹ Wills catalogued a large number of copper and

¹⁸ R. Schofield, *The Lunar Society of Birmingham: A Social History of Provincial Science and Industry in Eighteenth Century England* (Clarendon Press: Wotton-under-Edge, 1963) ix; G. Budge, “Science and Soul in the Midlands Enlightenment,” *Journal for Eighteenth Century Studies*: 30: 2 (October 2008), 157; J. Uglow, *The Lunar Men: The Inventors of the Modern World, 1730-1810* (London, Faber and Faber, 2010).

¹⁹ Jones, *Industrial Enlightenment*, 104.

²⁰ J. Meacham, *Thomas Jefferson: The Art of Power* (New York: Random House Publishing, 2012), 17.

²¹ G. Wills, *The Book of Copper and Brass* (London: Country Life Books, 1968), 25.

brass products produced in Birmingham and exported to America, or made by Birmingham manufacturers who lived in America.²² Thomas Pugh, a brass and bell-founder from Birmingham who lived in New York, advertised his work in 1768 in the *New York Gazette*; he announced that he 'makes and casts all sorts of work in the Birmingham brass founding way.'²³

In the late-seventeenth and early-eighteenth century, British colonial policy had encouraged Americans to purchase goods from the English manufacturers, including toolmakers, and cultivated the colonies as a major market for their products.²⁴ The handicraft businesses of Birmingham had supplied products to American markets in large numbers:

Birmingham area metalworkers supplied London, provincial England, Wales, Ireland and the American colonies with a wide range of nails, locks, and other forged metal wares as early as the mid-seventeenth century... small wares flowed into the colonies and were readily available to most American consumers.²⁵

In 1817 historian C.H. Gifford wrote a summary of the extent of trade between Birmingham and America, detailing the importance of Birmingham buttons, nails and lamps to the North Eastern American towns, and how twenty to twenty-five thousand workmen in Birmingham

²² Wills, *The Book of Copper and Brass*, 26.

²³ *New York Gazette*, 2 May 1768.

²⁴ J. Gaynor and N. Hagedorn, eds., *Tools: Working Wood in Eighteenth-Century America* (Williamsburg VA: The Colonial Williamsburg Foundation, 1993), 8.

²⁵ Gaynor and Hagedorn, *Tools: Working Wood*, 9.

had struggled to make a living wage since severing trade with the colony.²⁶ Whilst it is difficult to gauge the precise extent of British dependence on American markets, J.R. Ward has estimated that at least two-fifths of the increment of manufactured output went to protected imperial markets after 1660, whilst success in selling industrial products in North America and other markets augmented the revenues that helped Great Britain to win its battles in India.²⁷ The profitable market appeared to thrive until the 1760s with the outbreak of political unrest in America. The correspondence between Thomas Jefferson and William Small highlights the continued problems facing trade between the two nations following the outbreak of war. Referring to the Boston Tea Party, 1773, which was incited due to British taxation, Jefferson told his former teacher that 'we have received the unhappy news of an action of considerable magnitude between the King's troops and our brethren of Boston.'²⁸ He went on to conclude that it 'seemed to doom prospects for a peaceful resolution.'²⁹

Stephen Conway has explored the impact of the American War of Independence upon the politics and economy of Britain.³⁰ He has also analysed how the wars in which Britain was engaged during the mid-eighteenth century transformed the structure of state, public finance, and economy. An analysis of the effect of the American Revolution on Birmingham industry and politics however is limited. A central theme of Conway's work is 'partnerships', whether between nation states or different political groups and private enterprises which

²⁶ C. Gifford, *History of the Revolution: with Biographical Sketches of the Public Characters of Europe* (London, W. Lewis, 1817), 895.

²⁷ J. Ward, "The Industrial Revolution and British Imperialism, 1750-1850," *Economic History Review*: 47: 1 (February 1994), 44-65.

²⁸ T. Jefferson, *Printed Memoirs, Correspondence, and Private Papers of Thomas Jefferson Volume I*, ed. T. Randolph (London: Henry Colburn and Richard Bentley, 1829), 149.

²⁹ Jefferson, *Printed Memoirs*, 150.

³⁰ S. Conway, *The British Isles and the American War of Independence* (Oxford: Oxford University Press, 2000), 1-11.

jostled for power in the newly-emerging hierarchy of the British state system.³¹ Within the power systems that were forming, the Birmingham brass founders emerged as a new faction that lobbied for some semblance of autonomy and control. The relationships they formed in the second half of the eighteenth century, granted them influence few could have predicted during the times of Angerstein and Schröder's visits to Birmingham brass houses in the 1740s and 1750s (chapter One), and enabled them to petition against the trade restrictions which had been so damaging on both sides of the Atlantic.

Petitioning

The American War of Independence led to a restrictive British trade policy with the North American markets, including the banning of musket sales, the prohibition of tools that could be used to make weapons, and an embargo on copper that could be used for naval purposes.³² Without British manufactured goods, America was forced to purchase elsewhere, to introduce methods to stimulate their own economy, and to promote the manufacture of American products.³³ Whilst the trade restrictions successfully cut the supply of British-made weapons and products to the American Revolutionary armies, they were also severely damaging to British manufacturers, the effects upon whom can be seen via the number of petitions that were organised by merchant groups within Britain. Newspapers reported with

³¹ S. Conway, *War, State and Society in Mid-Eighteenth Century Britain and Ireland* (Oxford: Oxford University Press, 2006), 3.

³² R. Smith, *Manufacturing Independence: Industrial Innovation in the American Revolution* (Yardley PA: Westholme Publishing LLC, 2016), 127.

³³ L. Peskin, *Manufacturing Revolution: The Intellectual Origins of Early American Industry* (Baltimore MD: John Hopkins University Press, 2007), 45.

increasing frequency on the hive of activity in the House of Commons, where matters of war and trade were inexorably linked: *Swinney's Birmingham and Stafford Chronicle* reported that amendments were made to a bill for the better regulation of marine forces when on shore, alongside a bill to repeal an act to prevent the exportation to foreign parts of the utensils used in the woollen trade and other manufactories.³⁴ Throughout 1775, *Swinneys* reveals that merchants throughout England and Scotland regularly petitioned the House of Commons to allow the continuation of trade with America; petitions flooded in from trade committees in London, Bristol, Norwich, Glasgow and Birmingham.³⁵ Many of these urban centres had been built on trade, but in a world at war the morality of trading with enemies of the state became a contentious issue.

Petitions had been a useful gauge of public opinion from the time of the English Civil War. David Zaret argues that the historical significance of petitioning as a source signals the origins of democracy, especially for its public sphere, 'where political discourse arises from rival appeals to public opinion in a marketplace of ideas with normative authority for setting a political agenda.'³⁶ The organisation of petitions by Birmingham brass founders in the mid-1770s underlines the beginnings of a political consciousness within the Birmingham brass trade. Petitioners promulgated their own point of view, and an analysis of the arguments and facts presented in a petition therefore requires a critical attitude towards historical sources.³⁷ Birmingham brass founders continually petitioned Parliament under the guise that their trade

³⁴ Conway, *War, State and Society*, 3.

³⁵ WCAR, MS3782/12/87, item 3: *Swinney's Birmingham and Stafford Chronicle* (SBSC) (2 February 1775).

³⁶ D. Zaret, "Petitions and the Invention of Public Opinion in the English Revolution," *American Journal of Sociology*: 101: 6, (Chicago, 1996), 150.

³⁷ Lex Heerma Van Voss (ed), *Petitions in Social History* (Cambridge: Cambridge University Press, 2002), 9.

was suffering and stagnating, despite the number of people employed within the trade growing throughout the second half of the eighteenth century.³⁸ Matthew Boulton, who purchased large amounts of copper for the production of goods, estimated that there were at least ten thousand inhabitants of Birmingham who in some manner relied on the brass and copper industries for their income.³⁹ In a town of approximately seventy-three thousand inhabitants the level of restrictions being placed on the copper trade had the potential to disadvantage a large proportion of the Birmingham population. Boulton's estimate must be treated with caution; it is unclear how this number was calculated, and it has been difficult to verify. Misinformation and twisted facts were frequently used by Boulton and the brass founders of Birmingham (Chapters Four and Five).

It is difficult to assess the full impact of the restrictions, but the industrialists of Birmingham would have been anxious to minimise the repercussions experienced by manufacturers elsewhere, after witnessing the economic strain placed upon manufacturing towns such as Leeds. Samuel Elam, a merchant of Leeds, wrote to *Aris's Birmingham Gazette* (ABG) in 1775 describing the distress of that town:

The stagnation of the North American trade... that the want of employment, and that great distress prevails among the poor labouring manufacturers, in

³⁸ J. Sketchley, *Sketchley's Birmingham, Wolverhampton and Walsall Directory* (Birmingham: J. Sketchley, 1767); S. Sketchley and O. Adams, *Universal Directory for the Towns of Birmingham, Wolverhampton, Walsall, Dudley and the Manufacturing Villages* (Birmingham: Sketchley and Adams, 1770); M. Swinney, *Swinney's Birmingham Directory* (Birmingham: Swinneys, 1774, 1775 and 1777); J. Bisset, *Bisset's A Poetic Survey and Magnificent Directory* (Birmingham: James Bisset, 1800).

³⁹ Boulton, *Boulton letter*.

consequence of the non-importation agreement... that a great number of cloth workers in this town are now out of employment, and that many more do not earn half the wages sufficient to support their families.⁴⁰

Wages in the cloth community in Leeds fell by 28 per cent between 1771 and 1774. There was an unusually high number of bankruptcies throughout the 1770s; three hundred and fifty three master clothiers signed a petition in 1775 because they had become unemployed due to a lack of trade with North America, and the Coloured Cloth Hall was left with an excess of nearly nineteen thousand cloths at the height of the recession.⁴¹ It was not simply that the American markets were closed; after the French entered the war, the Mediterranean trade also suffered.⁴² Leeds merchants had been slow to react to the crisis, and the earliest tactics employed by Birmingham brass founders to avoid similar economic turmoil mirrored the efforts of groups in other British towns. Birmingham brass founders organised petitions: as revealed in the newspaper coverage of ninety five industrialists who had signed a document calling for continued trade with America.⁴³ At this stage, the main strategy of Birmingham manufacturers revolved around petitions to Parliament, drawing attention to the importance of colonial marketplaces. In a petition that reached Parliament on 27 January 1775, the Birmingham petitioners demanded that restrictions on the export of brass to America were lifted and addressed their 'losses and distresses solely to the unhappy disputes now subsisting between Great Britain and the Colonies.'⁴⁴ The number of similar petitions suggests that

⁴⁰ WCAR, MS3782/12/87, item 4, ABG (6 February 1775).

⁴¹ R. Wilson, *Gentlemanly Merchants: The Merchant Community in Leeds, 1700-1830* (Manchester: Manchester University Press, 1971), 48-49.

⁴² Wilson, *Gentlemanly Merchants*, 48.

⁴³ ABG (6 February 1775).

⁴⁴ WCAR, MS3782/12/87, item 5: *Petition to Parliament from the Inhabitants of Birmingham* (27 January 1775).

international trade was far more important to brass founders in Birmingham than has been suggested previously.

The sheer volume of petitions from different manufacturing groups throughout Britain must have diluted their impact, but that was not the sole obstacle in using petitions as a tactic to achieve change. Douglas Hay notes that petitioning campaigns of such ambition raised questions regarding the petitioners' standing to represent a town or region.⁴⁵ The town of Birmingham had been without an MP prior to the 1832 Reform Act; until then it had been represented by the two MPs of Warwick.⁴⁶ Carlos Flick concludes that few inhabitants of the town felt represented by, or identified with the political or social culture of Warwickshire, and the two MPs for Warwickshire rarely raised Birmingham-specific issues in Parliament.⁴⁷ This thesis proposes that, from the onset of the political petitioning and networking of the 1770s, up until the political movements of the 1820s, industrialists of Birmingham, many of whom were brass founders, behaved as de facto political representation for the town.

The Birmingham manufacturers were still operating on a small scale in the 1760s and 1770s. They had little experience of unified political lobbying, as a result of which the petitions proved ineffective with little reaction from Parliament which stood by its trade restrictions. As such, this narrative corresponds with wider research into manufacturing and social petitioning of the 1770s. James Bradley concludes that in this decade 'traditional channels of

⁴⁵ D. Hay, "Legislation, Magistrates and Judges: High Law and Low Law in England and the Empire," in *The British and their Laws in the Eighteenth Century*, ed. D. Lemmings (Woodbridge: The Boydell Press, 2005), 59-79.

⁴⁶ Parliamentary Archives, London; HL/PO/PU/1/1832/2&3W4n1471832 *Reform Act, Birmingham Detail*, 1832.

⁴⁷ C. Flick, *The Birmingham Political Union and the Movements for Reform in Britain, 1830-1839* (Birmingham: Archon Books, 1978), 27-28.

political expression were inadequate... their pleas were easily ignored by authorities, and in the case of America, neglected by the opposition.⁴⁸ Characteristically Birmingham petitioners forwarded their case as if on behalf of the people at large:

... but what right did they have to do this? In what sense did they represent the people? If their petitions were rejected, what became of their claim to represent the popular will, as against Parliament's claim to do just the same thing?⁴⁹

Despite having no mandate, the Birmingham brass founders considered that they had the credibility to represent the town, and labelled their petitions from *The Inhabitants of Birmingham* rather than simply from *Brass Founders* or *Manufacturers* like other merchant groups.⁵⁰ The lack of a response from the British Government did not deter the Birmingham-based petitioners: over eighty different brass founders and merchants from Birmingham and District throughout the 1770s and 1780s were regularly listed in dozens of petitions. Similar petitions were also sent to counterparts in North America, including merchant groups in New York, Boston, and Philadelphia, urging for the Revolution to end for the sake of both sets of traders.⁵¹ The petitions to America seem particularly futile and desperate; there was little chance of the American Revolution being halted because brass founders from Birmingham requested it. What should be noted however, is the difference in tone and language used by

⁴⁸ J. Bradley, *Popular Politics and the American Revolution in England; Petitions, the Crown and Public Opinion* (Macon GA: Mercer University Press, 1986), 121.

⁴⁹ Bradley, *Popular Politics*, 121.

⁵⁰ *Petition to Parliament from the Inhabitants of Birmingham* (27 January 1775).

⁵¹ WCAR, MS3782/12/87, item 1: *Names of Inhabitants of Town and Neighbourhood of Birmingham to North America* (1787).

the Birmingham brass founders when compared to groups from other industrial towns. Bristolian and Mancunian groups wrote flattering letters to Parliament swearing loyalty to George III, whilst simultaneously wishing the monarch well in resolving trade disputes with the unruly American colonies. The Bristolian representatives stated that:

As British subjects, we testify our abhorrence of this unnatural rebellion... may your Majesty's councils ever prevail to the extirpating of licentiousness; and by a firm establishment of real liberty, may you triumph over the enemies of our glorious contribution.⁵²

Merchant groups from Coventry and Liverpool were also supportive of the war, but with noticeably more hesitation and concern for their own welfare. Over one hundred and sixty Coventry traders signed a petition to the King in 1775 wishing him and Parliament well, but also acknowledged that many measures had been ineffective:

It is with the greatest concern we reflect, that the measures hitherto pursued to bring sense of their duty and interest, have not, as yet, had the desired effect; but we ardently hope that they will soon be sensible of their error, and return to a

⁵² WCAR, MS3782/12/87, item 15, 16, and 17: *Address of the Gentlemen, Clergy, Traders and Principal Inhabitants of Coventry to the King of Great Britain* (September 1775); *The Address of the Mayor, Burgesses, Clergy, Freeholders, and Inhabitants, of the city of Bristol to the Majesty of Great Britain*; *Address of the Gentlemen, Clergy and Merchants, and Traders of the Town of Liverpool to his Majesty* (17 August 1775).

due acknowledgement of the power of the British Legislature; that the joys of peace and tranquillity may be restored.⁵³

The merchants of Birmingham were much less obsequious towards the King. Their petitions resembled the aggressive tone sent from Dublin merchants, who were anti-war and anti-Parliamentary intervention. The Dublin petitioning groups wrote strongly worded petitions:

It would be highly improper in us, at this alarming crisis of affairs, to observe a criminal silence, and an unfeeling indifference. We see the horrors and calamities of civil war raging in America, the hands of fellow subjects imbued in the blood of each other... we cannot hesitate to pronounce its effects destructive to the British Empire at large, and particularly and essentially ruinous to the limited commerce of this kingdom.⁵⁴

In a similar manner, the Birmingham petitioners described the trade restrictions as 'destructive, calamitous and ruinous.'⁵⁵ This uncompromising and aggressive attitude was typical of the way in which they conducted themselves in the 1760s and 1770s.⁵⁶ The refusal to join in many of the deferential letters of support attracted criticism from various quarters, especially from the patriotic British public which was reading predominately negative

⁵³ *Address of the Gentlemen, Clergy, Traders and Principal Inhabitants of Coventry to the King of Great Britain* (September 1775).

⁵⁴ WCAR, MS3782/12/87, item 13: *Address of the Traders, Merchants and Manufacturers of Dublin* (August 1775).

⁵⁵ *Petition to Parliament from the Manufacturers of Birmingham* (27 January 1775).

⁵⁶ *Names of Inhabitants of Town and Neighbourhood of Birmingham to North America* (1777).

coverage of events from across the Atlantic. In 1775 an incensed reader of the *London Evening Post* wrote a response to the petitioning of the manufacturers of Birmingham, which indicates that this was an issue that had received some national coverage. This individual felt that the Birmingham brass founders were sympathetic and sycophantic towards the Americans' cause and, by extension, their French supporters:

Through a very remarkably cruel & vengeful petition, the manufacturers are not only treated with contempt & derision all over the kingdom, but stamped with indelible disgrace by the... epithet of bloody petitioners... Birmingham like other large towns is not without those toad-eating sycophants.⁵⁷

Newspapers printed many opinion pieces, so this view should not be considered representative of the entire national sentiment towards Birmingham brass founders. This letter, however, was printed as front page news in local and national newspapers in February 1775; clearly the issue had gained some credibility.⁵⁸ Birmingham had garnered a reputation for non-conformism since the Clarendon Codes (Chapter One) and had historically been anti-establishment. Clarendon himself described Birmingham as a 'town of as great fame for hearty, wilful affected disloyalty to the King as any place in England.'⁵⁹ The town's people were perceived by many to be radical in thought and action; in a time of global uprisings the

⁵⁷ WCAR, MS3782/12/87, item 25: *London Evening Post* (9 February 1775).

⁵⁸ WCAR MS3782/12/87, item 3: *Swinney's Birmingham and Stafford Chronicle* (2 February 1775); *London Evening Post* (9 February 1775).

⁵⁹ J. Bund, *The Civil War in Worcestershire, 1642-1646* (Birmingham: Midland Educational, 1905) 84.

reputation did little to encourage sympathy for the merchant traders who promoted a better relationship with a rebellious America.

The petitions produced by Birmingham throughout the 1760s and 1770s suggest that the industrial strength of the town was at least partially reliant on access to international markets, not simply domestic demand. Birmingham brass founders, and industrialists who used copper, were still limited in their ability to overcome international challenges, and their partnerships with one another were also restricted and confined to signing petitions of mutual interest. The Birmingham brass founders in the 1770s were lacking in support and power and their petitions were not impactful enough to instigate change, which is why MPs from outside the town were contacted for support.

Edmund Burke and Political Connections

Other than the tactic of petitioning Parliament, another movement that continued to define the political awakening of Birmingham industrialists was the increased links and support from targeted MPs and influential figures. Perry Gauci begins his book *Regulating the British Economy, 1660-1850* by suggesting there is no linear narrative over this period, but generally the long eighteenth century was a new age of debate regarding the State's role and effect on the economy and regulating trade.⁶⁰ Networking and lobbying was an important part of this process, with distinct regional variants. The brass founders of Birmingham and their lobbying

⁶⁰ P. Gauci, ed., *Regulating the British Economy, 1660-1850* (Abingdon: Routledge, 2013), 2.

movement is a unique and unexplored narrative within the larger context of state regulations explored by Conway and Gauci.⁶¹ The brass founders secured prominent allies in the 1770s; in theory this would grant them influence, but in reality, success was limited. One of the most vocal and early supporters of Birmingham brass founders was the political theorist and Bristol MP Edmund Burke. A controversial figure, Burke complained of his own Bristolian constituency's lack of interest in or sympathy for matters regarding Birmingham and American trade, despite the fact that Bristol exporters to America had particularly close contacts in and around Birmingham and other manufacturing towns in the West Midlands.⁶² By the 1770s, in some brassware markets Bristol was being overtaken by Birmingham as the main British centre for products, and Burke's frustration with Bristolian merchant groups is evident. He encouraged free trade and inspired other industrial centres to demand revisions to trade acts, even when his own constituents in Bristol urged him to do otherwise. Regarding his support for free trade he believed that:

If, from this conduct, I shall forfeit their suffrages at an ensuing election, it will stand on record an example to future representatives of the Commons of England, that one man at least has dared to resist the desires of his constituents when his judgment assured him that they were wrong.⁶³

⁶¹ Conway, *War, State and Society*; Gauci, *Regulating the British Economy, 1660-1850*.

⁶² F. Lock, *Edmund Burke: volume 1, 1730-1784* (Wotton-under-Edge: Clarendon Press, 1998), 410-411; K. Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century* (Cambridge: Cambridge University Press, 1993), 104.

⁶³ J. Prior, *Life of the Right Honourable Edmund Burke* (London: George Bell and Sons, 1878), 175.

Burke passionately believed that Birmingham brass founders were right to question the Government's trade restrictions, even though the opinion was unpopular, and he was willing to publicly back them, risking his own position as MP.

James Bradley, James Rawley and Stephen Behrendt have explored the damage to various Bristolian industries during the American uprising;⁶⁴ the damage to the brass manufacturing trade of both Birmingham and Bristol as a result of export restrictions with America is clear, but the response of both towns to the limitations was different. Despite being Bristol's MP, Burke became an important ally for the manufacturers of Birmingham; he had been strongly opposed to the stern Parliamentary response to the American colonies, and regularly clashed with Prime Minister North.⁶⁵ North's stance on trade restrictions strengthened after 1776 and 'rather than ease the discriminatory trade restrictions in place, the political leadership in Great Britain imposed new ones intended to limit further the access of the United States to imperial markets.'⁶⁶ Jerome Reich emphasises how Burke realised that the additional retaliatory actions against America were popular and inevitable, but continued to argue that North's policies had backfired and British commerce and industry were suffering as a consequence.⁶⁷ A mutual respect grew between the industrialists of Birmingham and Burke as a result of their similar views on America, in stark contrast to the relationship he had with his own constituents. In February 1775, this admiration is demonstrated via the Birmingham

⁶⁴ Bradley, *Popular Politics and the American Revolution in England*, 190; J. Rawley and S. Behrendt, eds., *The Transatlantic Slave Trade: A History* (Lincoln, NE: University of Nebraska Press, 2005), 198.

⁶⁵ P. Burke, *The Public and Domestic Life of the Right Hon. Edmund Burke* (London: Nathaniel Cooke, 1854), 126-127.

⁶⁶ P. Conze, *From Revolution to War: State Relations in a World of Change* (Ann Arbor: University of Michigan Press, 2000), 129.

⁶⁷ J. Reich, *British Friends of the American Revolution* (Abingdon: Routledge, 1998), 59.

brass manufacturers' public gratitude to Burke in the popular London newspaper *Lloyd's Evening Post*, for his attempts to help the cause of their town:

The merchants and manufacturers, who have had a principal share of the American trade from this town and neighbourhood, beg your acceptance, through our hands, of their warmest acknowledgments for your liberal support of our petition to the honourable House of Commons, wherein are stated the evils we already feel, and the greater we have yet to apprehend from a continued stagnation of so important a branch of our commerce as that with North America.⁶⁸

This was the first visible show of public support for a Member of Parliament by the Birmingham brass founders, which developed into an important approach later in the century (Chapters Four and Five): it demonstrated loyalty that might be repaid in the future. Burke however championed many other unpopular causes, including supporting Sir George Savile's attempts to repeal some of the penal laws against Catholics.⁶⁹ He also called capital punishment 'the butchery we call justice in 1776, and in 1780 he condemned the use of pillory for two men convicted of attempting to practice sodomy.'⁷⁰ His controversial views led to the loss of Burke's seat in 1780. As seen in the *London Evening Post*, the pro-American trade stance of Birmingham merchants, coupled with their association with such a divisive

⁶⁸ WCAR, MS3782/12/87, item 6, Letter of thanks from the Merchants, Traders and Manufacturers of Birmingham, concerned in the Trade to America, to Edmund Burke, *Lloyd's Evening Post* (13 February 1775).

⁶⁹ Letter of Thanks from the Merchants, Traders and Manufacturers of Birmingham (13 February 1775).

⁷⁰ J. Laughton, "Sir Edmund Nagle," *Oxford Dictionary of National Biography*, (May 2005); <http://www.oxforddnb.com/view/article/38133>, accessed 13 June 2017.

individual as Burke, gained them little sympathy from Parliament or from certain citizens of England.⁷¹ It would be an important lesson for the future, and Birmingham industrialists showed greater caution when choosing their allies as the century progressed (Chapters Three and Four). There was a stubbornness, naivety, and lack of willingness to compromise in the 1770s which changed over time. As with their ineffective petitioning, the singular support of a controversial MP suggests that Birmingham brass founders were still a relatively uninfluential group in 1776. They were negatively affected by trade restrictions with America, but powerless, divided, and too politically naïve to instigate change. The problems of the mid-1770s were also exacerbated by further trade restrictions, especially as a result of the 1779 Privy Council Order Prohibiting the Exportation of Copper, which extended trade restrictions to important European markets.

The 1779 Privy Council Order Prohibiting the Exportation of Copper (PCOPEC)

Despite the efforts of the Birmingham-based petitioners to influence the Government through petitions and political connections, further restraints were placed upon trade as tensions between Britain and other European nations increased throughout the 1770s. Vivien Dietz believes that the 'Crown and the Privy Council were the great dispensers of gifts which, in the economic sphere, took the form of monopolies, charters, and other exclusive privileges.'⁷² Whilst the two institutions could grant gifts, they could also greatly restrict

⁷¹ *London Evening Post* (9 February 1775)

⁷² V. Dietz, "Before the Age of Capital: Manufacturing interests and the British State, 1780-1800," (Princeton University PhD Thesis, 1991), 20.

manufacturers ability to trade as well, and in 1779 the PCOPEC was introduced.⁷³ In 1786 a retrospective summary of the order was criticised by Samuel Garbett, who used brass extensively in his products. He concluded that the 'British government had banned the exportation of copper under a mistaken notion that it would cut off our enemies from the means of copper sheathing their ships.'⁷⁴ He also criticised the lack of specificity of the order, which restricted exportation of a variety of products manufactured in Birmingham that contained copper but had no naval applications and posed no danger to Britain in the same way that copper sheathing did.⁷⁵ Like Garbett, industrialists James Keir and James Watt also produced retrospective essays on the 1779 PCOPEC and outlined costly anecdotes of their brass and copper exports being severely restricted;

A capital merchant from Vienna who had an order for a considerable quantity of goods, the profits of which would amount to £1,000 pounds... but it would be annexed to the order, as an express condition that the goods should not be sent or would not be admitted into the Emperor's dominions.⁷⁶

Keir and Watt indicated that restrictions from the Government resulted in time, money, work, and finished articles being wasted. The restrictions put in place by Parliament demonstrates

⁷³ The National Archives, Kew, Privy Council Catalogue, PC 1/15/128; *Draft Order Prohibiting the Exportation of Copper* (September 1779); *Order by the Privy Council, Prohibiting the Exportation of Copper* (24 September 1779) found in J. Edmond, H. Guppy, D. Lindsay, J. Lindsay and A. Philips, eds., *Handlist of Proclamations Issued by Royal and Other Constitutional Authorities, 1714-1910, George I to Edward VII: Together with an Index of Names and Places* (London: B. Franklin, 1917), 141.

⁷⁴ WCAR, MS 3782/12/87, item 22: S. Garbett, *Observations on the Copper Trade of England & the Dangers of Exporting the Tools & Machines Used Therein* (1786).

⁷⁵ Garbett, *Observations on the Copper Trade* (1786).

⁷⁶ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

how concerned the British Government was about rival nations and their military capabilities; any export of products, no matter how tenuously connected to naval construction or capabilities was prohibited. Birmingham brass founders argued that many of the tools they produced that had been prohibited had little to do with the armies of France, Spain, or Holland; all nations that had supported the American War of Independence. Birmingham brass founders were more famous for 'fashion accessories, toys and practical utensils – vices, files, bellows, axes, augers etc.'⁷⁷ The Birmingham button and coin trades were also affected but had little to do with the navies of rival countries. As Kier and Watt highlighted;

The buttons manufacture, to which the German order was directed, is one of the principal in Birmingham... the shells of buttons, & the external coverings of buttons, have been exported in considerable quantities to France, or to other parts of the continent, during the last twelve months, if not for longer term.⁷⁸

The producers of many brass and copper items felt they were being unfairly punished by the new trade laws: America, France and the Dutch all posed a threat to Britain and its naval supremacy, but the small toys and trinkets manufactured in Birmingham were not to blame.⁷⁹ Many industries suffered due to the Government's fear of foreign nations copper sheathing their navies.

⁷⁷ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁷⁸ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁷⁹ R. Harding, *The Emergence of Britain's Global Naval Supremacy: The War of 1739-1748* (Woodbridge: The Boydell Press, 2010), 1.

The application of copper to sheathe ship bottoms in the 1770s created an enormous new demand for copper internationally.⁸⁰ Copper sheathing was expensive but had several advantages over unprotected wooden hulls. Charles Hyde identifies three main hazards to wooden hulls: the teredo navalis shipworm which bored into timbers, barnacles which grew on ship bottoms and sides reducing speed and manoeuvrability, and rotting which is exacerbated by the first two problems.⁸¹ The British Government began copper-sheathing its navy in 1779, putting restrictions on copper exportation in an attempt to maintain its advantage.⁸² There were two main reasons behind the prohibition of exporting copper and copper products: the fear that copper production could be used against Britain in a military capacity, and the fear that other nations would learn the Birmingham art and mystery of making and selling brass, as well as other copper-based alloys.⁸³ The British Government contended that copper and brass products manufactured in Birmingham were being purchased by other European nations because of their quality, and could be used against England during periods of war, especially in the sheathing of ships and providing components for weapons.⁸⁴ Birmingham had a number of brass cock and sword manufacturers who provided gun and sword parts to France and further afield, so international trade was further affected.⁸⁵ As the international demand for brass and copper grew to cater for weapons and for sheathing ships, the number of copper mines and brass manufacturers increased on the

⁸⁰ C. Hyde, *Copper for America: The United States Copper Industry from Colonial Times to the 1990s* (Tucson, AZ: The University of Arizona Press, 1998), 10.

⁸¹ Hyde, *Copper for America*, 11.

⁸² *Draft Order Prohibiting the Exportation of Copper* (September 1779); *Order by the Privy Council, Prohibiting the Exportation of Copper* (24 September 1779)

⁸³ WCAR, MS3782/12/87, item 25: J. Keir and J. Watt, *Exportation of Tools & Raw Materials* (19 June 1786); WCAR, MS3004/9: *Articles of the Birmingham Brass Company*.

⁸⁴ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1786).

⁸⁵ WCAR, *guide to eighteenth century firms*: Listed manufacturers of brass cocks and swords include Mr Armfield, Thomas Lakelin, Francis Shepard.

continent and provided significant competition for Birmingham brass founders.⁸⁶ The industrialists of Birmingham, who were already suffering because of the loss of trade with America, suddenly had the newly profitable European copper-sheathing market closed to them; hundreds of European competitors entered this vacuum.⁸⁷

The instability of the industry as a result of British foreign policy alarmed Birmingham industrialists.⁸⁸ In addition to restrictions on international trade, between 1779 and 1799 the average price of British copper in cake per tonne nearly doubled.⁸⁹ The reason for this rise is debatable (Chapters Three, Four and Five), but the consequence of increased prices meant it cost more money to produce goods that required copper or brass components, which in turn increased the price of the finished product to ensure a profit. Consequently, British brass businesses became unattractive compared to other markets. Even in industries where products were not banned (such as tools) Birmingham commodities were less financially competitive. Samuel Garbett observed, in a report on the export of tools and machines used within the copper trade of England, that ‘the industry was one of the most flourishing branches of our manufacturers of commerce until the exportation of copper was prohibited in the year 1779.’⁹⁰ The need for copper to produce brass meant that the trades were intricately linked, and the success or failure of one had an impact on the other. The effects of limiting international trade as a result of war had more of an impact on Birmingham brass founders than has previously been acknowledged.

⁸⁶ Boulton, *Facts Relative to Brass* (1778).

⁸⁷ Boulton, *Facts Relative to Brass* (1778).

⁸⁸ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1786).

⁸⁹ WCAR, MS 3782/13/97, item 37: *Prices of Copper Sold to the East India Company*.

⁹⁰ Garbett, *Observations on the Copper Trade* (1786).

According to H.V. Bowen, historical research into the effects of war upon Britain's society and economy have focused primarily on the twentieth century. The focus on the twentieth century processes can be misplaced though, 'because war also exerted considerable influence over the earlier development of Britain's society and economy. This was especially true during the long eighteenth century.'⁹¹ Bowen's assertion is relevant to the Birmingham brass trade between the 1760s and 1780s. After the lucrative Birmingham-America trade was severed, the 1779 PCOPEC was introduced because of war, severely restricting the ability of the brass founders to trade with European powers. The contraction in access to markets was a pressing and clear concern, as seen in the writings of Garbett, which suggests that the domestic economy was not the only focus of the industrialists.⁹² In 1780, a year after the copper exportation ban, the Anglo-Dutch war began and whilst the war was an economic disaster for the Dutch, it also had lasting ramifications for the English economy and trade, especially in Birmingham as another lucrative market became unavailable.⁹³ Days after the war with the Dutch broke out another order from the Privy Council extended the prohibition of exporting copper, which emphasised their concern and commitment to the policy.⁹⁴ The wars of the late-eighteenth century have not been taken into account when analysing the Birmingham brass industry. The war-time trade restrictions with America, followed by the prohibition of certain European markets, led to yet another challenge for the Birmingham brass founding community – an exodus of workers.

⁹¹ H. Bowen and M. Kirby, *War and British Society 1688-1815* (Cambridge: Cambridge University Press, 1998), 1.

⁹² Garbett, *Observations on the Copper Trade* (1786).

⁹³ J. Postma, *The Dutch in the Atlantic Slave Trade, 1600-1815* (Cambridge: Cambridge University Press, 1990), 208 and 288.

⁹⁴ *Order by the Privy Council, Continuing the Prohibiting of the Exportation of Copper* (14 December 1780) found in *Handlist of Proclamations Issues by Royal and Other Constitutional Authorities*, 151.

Industrial Espionage

In Garbett's summary of the copper trade in 1786, in which he expressed deep concern for the brass industry, he concluded:

When sheet copper had been banned from being exported, to prevent the sheathing of ships, rods and rolls of copper began being transported to the continent instead - as there was little knowledge of how to work them by foreign work forces. The fabrication of these rolls, is a work of considerable difficulty & has not been performed with success, except by certain workmen in Great Britain.⁹⁵

Whether the skill of Birmingham metalworkers was unparalleled on the continent is unclear, but what became apparent is that British workers were migrating to continental Europe during the 1770s and 1780s. As the possessors of tacit knowledge about brass manufacturing processes, and often with the ability to produce manufacturing tools, Birmingham workers were paid handsomely by foreign industrialists who wanted to learn the secrets of their industry. It is unsurprising that foreign businesses began to entice dissatisfied workmen away from Britain; as the copper and brass industries of England suffered and the ability to make money decreased, the incentive for individuals to stay in Birmingham became less attractive. James Keir and James Watt, who both used brass extensively in their products, claimed that:

⁹⁵ Garbett, *Observations on the Copper Trade of England* (1786).

The production of buttons with ornate metalwork required a workforce with the highest level of skill in fine craftsmanship and with specific tools (often made by the workmen themselves) & some able workmen were enticed away, especially if the makers of the tools were among them.⁹⁶

Industrial espionage is a theme explored by John Harris who concludes that as policies of states were often driven by the envy of other states' territory and colonies, they were frequently pursued by Clausewitz's other means of war, 'so the envy of new and desirable technologies developed by other countries commonly led to the transfer of technology by the "other means" of industrial espionage.'⁹⁷ Sarah Lowengard has explored this idea through the case study of Josiah Wedgwood, the English ceramic manufacturer, who had ongoing concerns about the theft of secrets, consistently sharing his suspicions with colleagues.⁹⁸ This research is another case-study providing evidence for industrial espionage.

The concerns expressed by Birmingham brass founders were well-founded; according to Monsieur Camus Delim, an influential Frenchman, he had 'seduced several English workmen thither & got rolls from England.'⁹⁹ He claimed that the Government of France had patronised his undertaking and given him twenty thousand *louis d'ors* to support it; they also provided him with a contract for sheathing and other copper materials for the king's arsenals at Brest,

⁹⁶ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1786).

⁹⁷ J. Harris, "French Industrial Espionage in Britain in the Late Eighteenth Century," *French Revolutionary Symposium*, Royal Society of Arts (January 1989).

⁹⁸ S. Lowengard, "Colour Printed Illustrations in Eighteenth-Century Periodicals," in *Book Illustration in the Long Eighteenth Century: Reconfiguring the Visual Periphery of the Text*, ed. C. Ionescu (Cambridge: Cambridge Scholars Publishing, 2011), 71.

⁹⁹ Garbett, *Observations on the Copper Trade* (1786).

Rochefort and Toulouse.¹⁰⁰ Whilst this may be a case of an individual embellishing his own importance, other anecdotal accounts exist that suggest this practice was taking place elsewhere. Thomas Hadley, an exporter of brass goods, told Parliament in 1799 how he lost workers throughout the 1770s and 1780s and knew many individuals who had left for France and Austria, including two Birmingham brass founders who set up workshops in Paris, as well as a Mr. Winwood who had been given a £2,000 advance to move to Vienna.¹⁰¹ At an independent council in 1783, investigating the claims of Birmingham brass petitioners, Mr. Leonard Pickering, a clerk from Oxford, revealed that he 'lived as a clerk to Mr. Orsell who went from Birmingham to Paris and who had been a merchant at Birmingham. That he (Mr Orsell) established a manufactory at Paris of buttons in imitation of the English manufacture.'¹⁰² It would appear that the 1779 PCOPEC not only failed to prevent the creation of new navies abroad, but also had the counterproductive effect of providing the catalyst for foreign merchants to improve their own manufacturing by recruiting workers from Birmingham to operate new processes. By restricting trade and exportation from the brass and copper industries in Great Britain, many workers left the country.

In this time of relative crisis, Birmingham brass founders significantly transformed their safeguarding strategies in response to Governmental restrictions by moving away from ineffective petitioning, counterproductive criticism of the Government, and links to controversial MPs such as Burke. The 1779 PCOPEC compounded the loss of trade links to America by closing lucrative markets with Europe and provoking an exodus of skilled workers.

¹⁰⁰ Garbett, *Observations on the Copper Trade* (1786).

¹⁰¹ *Report from the Committee Appointed to Enquire into the State of the Copper Mines and Copper Trade of this Kingdom* (RCCT), (7 May 1799), 44.

¹⁰² WCAR, MS3782/12/87, item 36: L. Pickering, *Hearings of Counsel on Second Reading Brass Exportation Bill*.

Conversely it provided a catalyst for co-operative action between brass founders which led to the politicisation of their industry. Before 1779 the strategies implemented by Birmingham brass founders had proved ineffective; after 1779 the industrialists created more formal methods of organisation to overcome challenges and threats to their industry.

The Broad Street Brass House

Less than one and half years after the 1779 PCOPEC, on 21 February 1781, according to *Aris's Birmingham Gazette*:

On Friday, at a respectable meeting of the principal merchants and manufacturers of this town, respecting erecting a brass works in order to relieve the manufacturers from the uncertainty of Brass, from the Report Committee, a subscription was opened for the purpose, and the sum of twenty thousand pounds subscribed for its execution.¹⁰³

The £20,000 raised by manufacturers was a huge sum of money, equivalent to £3,505,538.46 in 2019 according to The Bank of England's inflation calculator.¹⁰⁴ A celebratory speech from the meeting was published in the same edition of *Aris's Birmingham Gazette*, by an unnamed man who proclaimed to his fellow brass founders:

¹⁰³ *ABG* (21 February 1781).

¹⁰⁴ Bank of England UK Inflation Calculator - <https://www.bankofengland.co.uk/monetary-policy/inflation>, accessed 20 February 2020.

You have surprised all Europe in invention and executions. You have sought honour and profit, and it has been found in every quarter of the globe... your competitors watch every opportunity to share with you a trade they cannot equal.¹⁰⁵

Whilst his words were hyperbolic, the sentiment focused on international trade, which suggests that the industrial and political organisation of brass founders was primarily a result of international concerns, not domestic. The man, later speculated to be Boulton by W.C. Aitken, asked the crowd:¹⁰⁶

Shall so respectable a body of merchants and manufacturers become the dupes of a set of capricious monopolists in the article of brass and spelter on which their trade depends?... be no longer governed by strangers when you have the power to help yourselves at home.¹⁰⁷

The exhortation included in the reported speech highlights how the industrialists sought a strategic move away from focusing on the tumultuous international markets towards a concerted attempt to dominate domestic copper and brass markets. In 1781, although international trade was not abandoned, it was a stable domestic situation that was deemed vital to securing the brass industry as a whole. Moreover, it was understood that by working together the brass founders of Birmingham were stronger and more capable of instigating change.

¹⁰⁵ ABG (21 February 1781).

¹⁰⁶ Aitken, "Brass and Brass Manufacturers," 229.

¹⁰⁷ ABG (21 February 1781).

The Broadstreet Brass House operated as a means of organising the brass trade in Birmingham; it was more than a building, it was the physical manifestation of the formation of a Birmingham political lobbying group. The Brass House was a substantial complex with at least six chimneys, a large administrative centre that had the appearance of a Georgian mansion, a series of workshops and a water pump attached to the canal (Fig 2.1):



Fig. 2.1. Sketch of The Birmingham Brass House, Bisset's Magnificent Guide: J. Bisset, *Bisset's A Poetic Survey and Magnificent Directory* (Birmingham: James Bisset, 1800).

The number of brass founders involved in the establishment of the Broad Street Brass House is evident in the shareholders' records of the works, where over two hundred shares were

distributed between seventy-four individuals or companies.¹⁰⁸ Forty-one years after the founding of the Turner family brass house, seventy four manufacturers of similar interests united and centralised their business interests to take control of their industry, creating the largest brass house in Birmingham, to produce brass for themselves and stabilise their industry in difficult international circumstances. For many of the smaller establishments this was a considerable investment and suggests a confidence and trust in the ability of the network to create a successful venture that satisfied all parties. It also suggests that there was a concern about the state of the brass trade due to increased competition, fluctuating prices, and exportation restrictions. It is unlikely that the numbers seen in this venture would have united for any other reason. Throughout the 1780s and 1790s there were frequent adverts in *Aris's Birmingham Gazette* for meetings of 'Brass Founders' and those involved in the 'Consumption of Copper', as well as printed summaries of meetings. The men chairing these meetings and spearheading the brass founders were part of a broader social, industrial, and political movement occurring in Birmingham during 1780s, in which a permanent, yet ever-changing, forum was created to represent the interests of manufacturers - the Birmingham Commercial Committee.

The 1783 Commercial Committee

In 1783, two years after the establishment of the Birmingham Brass House, the Birmingham Commercial Committee was created to formalise the meetings between manufacturers; many of those who had signed petitions and contributed money towards the Broad Street

¹⁰⁸ Warwickshire County Record Office, QS/77/42/9: *Broad Street Brass House Shareholders*, 287-299.

Brass House were included in the first incarnation of the Commercial Committee.¹⁰⁹ It was established with the explicit intention of protecting brass interests, sometimes being referred to as the Brass Committee, but as it evolved it increasingly sought to protect a variety of industries. In its first incarnation, the Committee represented at least forty-seven companies.¹¹⁰ Names of members exist, as well as summaries of meetings in which their aims and goals are listed. The list of members included numerous smaller businesses and manufacturers who have received little or no academic attention, but it also reads as a Who's Who of powerful industrialists. They included the chairman of the organisation, metallurgist and chemist Samuel Garbett, the influential Matthew Boulton, iron master John Wilkinson and the famous Quaker gun-manufacturing family, the Galtons.¹¹¹ Where once the industry had been scattered and divided, consisting of hundreds of smaller establishments whose owners had autonomy over their own businesses, by the mid-1780s the industry was increasingly dominated and run by a group of influential industrialists with larger businesses, who had political connections and involvement in wider intellectual movements.

The Commercial Committee was one of many similar national groups. Many towns in England, as outlined by Asa Briggs, formed manufacturing networks to defend industry interests in the final decades of the eighteenth century.¹¹² Josiah Wedgwood spoke of the common danger in which manufacturing groups of Britain found themselves, saying that 'the influence and

¹⁰⁹ *Petition to Parliament from the Inhabitants of Birmingham* (27 January 1775); *Broad Street Brass House Shareholders*, 287-299.

¹¹⁰ There is no full membership list, early records are incomplete. These figures are based on printed notices of meetings, circulated minutes/reports; WCAR, Birmingham Chamber of Commerce: *Chronicles of the Birmingham Chamber of Commerce 1813-1913*; J. Langford, *A Century of Birmingham Life: Or, A Chronicle of Local Events, from 1741-1841* (Birmingham: E.C. Osborne, 1868); R. Bennett, *Local Business Voice*, (Oxford: Oxford University Press, 2011), 165.

¹¹¹ *Birmingham Chamber of Commerce*.

¹¹² A. Briggs, *The Age of Improvement, 1783-1867* (Harlow: Longman, 1979), 101.

experience of the whole being collected at a common centre, they will be the better enabled to effect any useful purposes for their common benefit.’¹¹³ Between 1783 and 1787 many of these national groups corresponded with one another to form a General Chamber of Manufacturers in defiance of William Pitt’s restrictive trade policies.¹¹⁴ The Birmingham Committee was heavily influenced by its brass founders, whilst the Manchester Committee was dominated by cotton factory owners.¹¹⁵ The historical literature about these organisations heavily focuses on the divisions between the various national groups, which led to an ineffective and fragmented national movement, resulting in failure to instigate policy reform. J. M. Norris highlights how Birmingham’s Committee continually excoriated Bristol brass-makers and concludes that Manchester, Glasgow, Sheffield and Norwich groups found little common ground with regards to strategy.¹¹⁶ Briggs identifies 1787 as the year in which the General Chamber of Manufacturers Coalition had completely demised.¹¹⁷ Despite the numerous failures of the national movement, the Birmingham Commercial Committee, driven by the town’s brass founders, continued to evolve and gained a variety of successes that have not previously been explored. Their continued existence, whilst others disbanded, also suggests an element of success that had previously not been experienced by the Birmingham brass founders.

The Birmingham Brass Committee was a unique group compared to many of the other Committees and the research presented in this thesis highlights the successes that have been

¹¹³ J. Wedgwood, *Sketch of a Plan of the General Chamber of Manufacturers of Great Britain* (4 June 1785).

¹¹⁴ Briggs, *The Age of Improvement*, 101.

¹¹⁵ Briggs, *The Age of Improvement*, 102.

¹¹⁶ J. Norris, “Samuel Garbett and The Early Development of Industrial Lobbying in Great Britain,” *The Economic History Review*: 10: 3 (1958), 450.

¹¹⁷ Briggs, *The Age of Improvement, 1783-1867*, 101.

overlooked by historians. In a printed leaflet marked *Birmingham Hotel, September 19th, 1783*, the aims of the Birmingham Brass Committee were outlined. The publishing of their aims is significant because it was a signal of intent to others. The group members saw themselves as more than just a simple trade group. They actively tried to exert wider social and political influence in the region, declaring that 'the Commercial Committee, was appointed for the purpose of watching over and conducting the public interest of the Town and Neighbourhood.'¹¹⁸ Their aims include export policy proposals, such as:

The introduction of hardware into Portugal and other European states, and the inconveniences which the trade of this town and neighbourhood suffer from the exportation of brass, tin, rolled steel, rolled pinchbeck metal, rolled plated metal, button moulds, and other parts of buttons, and parts of other goods.¹¹⁹

Additionally, the brass founders who made up the group also wanted to make changes to the infrastructure of the town, demanding that the Postmaster General of the town should report to them:

To consider... an intended alteration at the Post Office in this Town, not only as to the security of bills sent in letters, but that a more speedy dispatch of correspondence between London and Birmingham would be a material Accommodation to this town and neighbourhood.¹²⁰

¹¹⁸ WCAR, MS3782/12/87, item 75: *A Meeting of the General Commercial committee* (September 19, 1783).

¹¹⁹ *A Meeting of the General Commercial Committee* (1783).

¹²⁰ *A Meeting of the General Commercial Committee* (1783).

To achieve their aims those in charge of the Committee delegated roles and gave instructions to the membership:

... that members of this committee, who have connexions in foreign parts, are earnestly requested to make the following Enquiries, relative to Copper, Brass, Tin, Calamaris, and Bath Metal... whether there is any bath metal made in foreign countries; and in what manufacturers, and of what colour?¹²¹

Industry connections, manufacturing research, and collective action were clear directives from the Committee, which provided the public sphere in which the brass founders conducted their business. The group met formally with the intention of creating policy and aimed to safeguard industry secrets by using their connections to investigate and influence the wider national and international community. The most influential of the group, such as 'Messrs. Welch, Startin, Palmer, Perkins, Glover and Garbett, are requested to form such letters, or give such orders as may be proper.'¹²²

Leadership and Influence

The way in which the Commercial Committee was run was predominantly dictated by an influential few, whose role in the organisation, as well as their greater social and political influence, needs to be examined to understand how they were effective in their administrative positions, as well as the way in which they raised the profile and capital of the

¹²¹ *A Meeting of the General Commercial Committee (1783).*

¹²² *A Meeting of the General Commercial Committee (1783).*

brass trade. The Chairman of the Committee at its establishment in 1783 was Samuel Garbett.¹²³ Norris has provided an overview of the life and work of Samuel Garbett, while R.H. Campbell summarises Garbett's life for the *Oxford Dictionary National Biography*, highlighting Garbett's socio-political role within Birmingham, and concern for the exodus of British manufacturers to the continent.¹²⁴ The research here extends these findings, which ignore the wider community of brass founders who were aiding his political activity.

Garbett made his fortune by refining precious metals and manufacturing sulphuric acid. His career was characterised by a desire for quality, and quality control. Kenneth Quickenden highlights that Garbett had given evidence to a Parliamentary Committee appointed to determine whether Birmingham and Sheffield should be granted assay offices, the creation of which in 1773 gave a legitimacy and credibility to local metalwork that was recognised globally.¹²⁵ During his career, he made numerous personal and business connections that increased his financial worth, as well as his reputation and influence. Garbett also made significant contributions to manufacturing through his 1749 collaboration with influential Sheffield-born industrialist John Roebuck by improving the process of using sulphuric acid and its containers.¹²⁶ In Birmingham their 'influence on the industrial life of the area was widespread as they acted as consultants to many.'¹²⁷ In addition to his industrial work and connections Garbett's 'political lobbying in general, and correspondence with Shelburne in

¹²³ R. Campbell, "Garbett, Samuel (1717–1803)," *Oxford Dictionary of National Biography* (September 2013): <http://www.oxforddnb.com/view/article/40491>, accessed 2 March 2017.

¹²⁴ Norris, "Samuel Garbett and the Early Development of Industrial Lobbying in Great Britain," *The Economic History Review*: 10: 3, 450-460; Campbell, "Garbett, Samuel (171-1803)."

¹²⁵ *Minutes of the Committee on Sheffield and Birmingham Petitions, Goldsmith Company* in K. Quickenden, "Samuel Garbett and Early Boulton and Fothergill Assay Silver," *Matthew Boulton: Enterprising Industrialist of the Enlightenment*, eds., K. Quickenden. S. Baggott and M. Dick, (Abingdon: Routledge, 2013), 127.

¹²⁶ R. Campbell, "Roebuck, John (bap. 1718, d. 1794)," *Oxford Dictionary of National Biography*, (September 2013), <http://www.oxforddnb.com/view/article/23944> (accessed 1 March 2017).

¹²⁷ Campbell, "Roebuck, John (bap. 1718, d. 1794)."

particular, make him a significant figure in national politics.’¹²⁸ He also gained admirers within enlightened circles because, despite his manufacturing interests, he publicly criticised the slave trade. Eric Williams has highlighted Garbett’s efforts to combat cruelty to slaves:

At a meeting of many respectable inhabitants of Birmingham on January 28, 1788, Samuel Garbett presiding, it was decided to send a petition to Parliament. The petition stated, that “as inhabitants of a manufacturing town and neighbourhood your petitioners have the commercial interests of this kingdom very deeply at heart; but cannot conceal their detestation of any commerce which always originates in violence, and too often terminates in cruelty.”¹²⁹

The quotation from Williams is another example of members of the Birmingham political lobbying group petitioning and criticising the Government. This is not to say that Garbett was a prominent figure in abolitionist movements, but his opinions were admired by many. Garbett played a prominent role in local politics and the development of the town, including police proposals and the development of Birmingham’s canals.¹³⁰ Garbett was an appropriate chairman for the brass group, given the influence and links he had made throughout his career: he was someone who could lobby for their group’s agenda on a national level. Garbett’s life highlights several key features of the Birmingham brass and copper network: using industrial success to make links with individuals of national importance, using lobbying as a technique to influence policy-making decisions, as well as being involved in local social

¹²⁸ Norris, “Samuel Garbett and the Early Development of Industrial Lobbying in Great Britain,” 450.

¹²⁹ E. Williams, *Capitalism and Slavery* (Chapel Hill, NC: The University of North Carolina Press, 1944), 158.

¹³⁰ J. Money, *Experience and Identity: Birmingham and the West Midlands, 1760-1800* (Manchester: Manchester University Press, 1977), 30.

and cultural developments. Brass was an important element in his life. His early career had been as a brass worker and he later became an agent for a London merchant in the purchase of Birmingham ware.¹³¹ This meant he knew the specifics of the industry well and had important connections with London, where he was honoured on a copper token for his work there (Fig. 2.2).



Fig. 2.2. Baldwin Coin Collection, London: British Eighteenth Century Token, Samuel Garbett, Uniface Copper Halfpenny, bust in Profile. Copyright Baldwin's.

His ambition was evident throughout his career, and he brought this vision to the Commercial Committee. Whilst Garbett was concerned initially with local industries, R. H. Campbell believes that 'he was convinced of the need to be able to exert wider influence by collective action.'¹³² The increasingly influential and unified group of lobbyists that formed during this period was crucial to the ongoing success of brass manufacturing in the town and the effectiveness of those lobbying campaigns relied heavily on the connections, professional

¹³¹ Campbell, "*Garbett, Samuel (1717–1803)*," (accessed 2 March 2017).

¹³² Campbell, "*Garbett, Samuel (1717–1803)*," (accessed 2 March 2017).

expertise and influence of men such as Garbett who were catalysts for such movements. Garbett actively promoted the group, and his admiration of its members was evident in his writings:

There are three hundred gentlemen who are connected with that association that have more property and more knowledge of the state of general commerce than 300 that might be named in the House of Commons. In this neighbourhood there are many who have transactions in every considerable town in Europe... I rejoice they have met and united and that I have been a material instrument in occasioning it.¹³³

Garbett's assessment, whilst inevitably biased towards his own network of professionals, encapsulates how the Birmingham manufacturers of brass and copper had developed over the eighteenth century. A formal lobbying group, united by brass, existed in Birmingham by 1783 because of international pressures and whose combined membership built collective brass houses, and regularly interacted with Parliament.

Letters within the Boulton and Watt collection from Samuel Garbett to Matthew Boulton, referring to the collective action of the Commercial Committee, also highlight the importance of private communication with politicians. In a letter written on 22 May 1783, Garbett tells Boulton that:

¹³³ British Museum, Garbett, Vol I, folder 168: S. Garbett, *Letter to Lansdowne* (26 July 1785).

I sketched a petition as on the other side with some additions of Mr. W. Russels and Mr. Richards, the former offered his assistance in parliament and I offered to write to Lord Lewisham, Sir Rob. Lawley and Sir Shuckburgh in the name of the Committee.¹³⁴

The men mentioned in his letter were all brass founders and the petition included on the back of the letter is softer in tone than some of the earlier attempts: 'your petitioners therefore humbly pray this honourable house to take the premises into consideration, and permit them to be heard by themselves or council against the said bill passing into a law.'¹³⁵ The softer tone demonstrates a shift in policy from earlier petitions, but an accompanying letter that was not sent to Parliament, reveals a frustration that the Government was still reluctant to believe the group were struggling financially, and that 'foreigners are acquainted into the different qualities of our brass so as to adopt them to different purposes.'¹³⁶

Matthew Boulton, the recipient of Garbett's letter, is one of the most important figures in the emergence of a political force within Birmingham manufacturing circles. Boulton, like Garbett, was influential in the establishment of the Birmingham assay office after he had petitioned Parliament: 'though the petition was bitterly opposed by London goldsmiths, he was successful in getting Parliament to pass an act establishing assay offices in Birmingham and Sheffield, whose silversmiths had faced similar difficulties in transporting their wares.'¹³⁷

¹³⁴ WCAR, MS 3782/12/87, item 37; S. Garbett, *Letter to Matthew Boulton Regarding the Brass Committee* (22 May 1783).

¹³⁵ Garbett, *Letter to Matthew Boulton* (22 May 1783).

¹³⁶ Garbett, *Letter to Matthew Boulton* (22 May 1783).

¹³⁷ S. Baggott, "I Am Very Desirous of Being a Great Silversmith: Matthew Boulton and the Birmingham Assay Office," in *Matthew Boulton: Selling What All the World Desires*, ed. S. Mason (Birmingham: Birmingham City Council, 2009), 47; J. Tann, "Boulton, Matthew (1728–1809)," *Oxford Dictionary of National Biography* (September 2013), <http://www.oxforddnb.com/view/article/2983> (accessed 20 March 2017).

In 1775, when his business partner James Watt's original patent for the steam engine had lapsed, it seemed as though their joint enterprise was under threat – but Boulton's lobbying of Parliament resulted in an act extending Watt's patent until 1800.¹³⁸ Throughout his life Boulton had demonstrated his ability as a skilled negotiator and an astute campaigner for his own manufacturing interests. He had learnt early on in his career how to negotiate with MPs; in 1759 he gave evidence before a select committee on the manufacture of buckles, and in 1761 he did the same for a disputed Lichfield election.¹³⁹ E. Robinson has explored Boulton's political lobbying, but like Norris' analysis of Garbett, the wider community of brass founders who supported him is absent. Boulton's experience in manufacturing and local politics made him a significant asset to the Birmingham Commercial Committee, and to brass manufacturers in general.¹⁴⁰ Boulton and another business partner, John Fothergill, were 'interested in the supply of raw materials for their Manufactory, and one of these was brass.'¹⁴¹ It was in his best interests to help secure the industry and he did so through political lobbying. Whilst Boulton often had an acrimonious relationship with the Commercial Committee, leaving it on several occasions, his ability to persuade Parliament to support him, and to organise persuasive campaigns, was crucial in the continued success of brass interests in Birmingham, especially as foreign competition intensified.¹⁴² His ability to successfully petition MPs would have been due in part to his own personality and aptitude to articulate a point, but also due to his connections and the reputation he had cultivated during his career.

¹³⁸ J. Andrew, "The Soho Steam Engine Business," in *Matthew Boulton: Selling What All the World Desires*, ed. S. Mason (Birmingham: Birmingham City Council, 2009), 63.

¹³⁹ E. Robinson, "Matthew Boulton and the Art of Parliamentary Lobbying," *The Historical Journal*: 7: 2 (1964), 209–229.

¹⁴⁰ Robinson, "Matthew Boulton and the Art of Parliamentary Lobbying."

¹⁴¹ H. Dickinson, *Matthew Boulton* (Cambridge: Cambridge University Press, 2010), 109.

¹⁴² Dickinson, *Matthew Boulton*, 110.

Boulton was involved in a variety of nationally significant industries, none more so than his work with coinage. James Watt wrote in his obituary of Boulton: 'Had Mr Boulton done nothing more in the world than what he has done in improving the coinage, his fame would have deserved to be immortalised.'¹⁴³ The combination of Boulton's and Watt's professional careers allowed for coins to be mass-produced by steam for the first time. Previously, 'the lack of copper money led to much counterfeiting of coins, often in backstreet workshops in Birmingham.'¹⁴⁴ The improvements he made in coin-producing techniques revolutionised the industry, increased the profitability of the Royal Mint and solidified Boulton's reputation as a manufacturer of national significance. The entrepreneurial talent which was evident in Boulton's business activities, and his close attention to fashionable design, were most noticeable in the manufacture of brass buttons; 'these formed an important part of Boulton's output aimed at a mass market. However, he specifically targeted royalty and aristocracy in the first instance.'¹⁴⁵

Boulton dedicated much of his career to the production of luxury goods and fashion items aimed at the affluent.¹⁴⁶ Many of his products were made of brass, or variants of the copper alloy. During the late 1760s and early 1770s Boulton began the extensive production of the luxury product, ormolu. This was made of metal, usually brass, bronze or copper, which was enhanced by the process of mercurial gilding and did not require assaying. Some of his ormolu was purchased by George III and Queen Charlotte for Windsor Castle and Buckingham

¹⁴³ J. Watt, *Memorandum Concerning Mr Boulton, Commencing with my First Acquaintance with him* (17 September 1809), in S. Smiles, *Lives of Boulton and Watt: A History of the Invention and Introduction of the Steam-Engine* (London: John Murray, 1866), vi.

¹⁴⁴ S. Tungate, "Matthew Boulton's Mints: Copper to Customer," in *Matthew Boulton: Selling What All the World Wants*, ed. S. Mason (Birmingham: Birmingham City Council, 2009) 81.

¹⁴⁵ Tann, "Boulton, Matthew (1728–1809)."

¹⁴⁶ Royal Collection Trust, *Matthew Boulton Candle and Perfume Vase, 1770-1809*: <https://www.rct.uk/collection/21669/candle-and-perfume-vase> (Accessed 14 August 2020).

Palace.¹⁴⁷ Examples of his work, including a bronze gilt candle holder and perfume vase, are still on show at Windsor Castle today (Fig 2.3), and are a testament to the influential customers for whom Boulton was catering.¹⁴⁸



Fig 2.3. Royal Collection Trust, Windsor Castle, King's Bed Chamber, RCIN 21669: Matthew Boulton, Blue John, Gilt Bronze and Ebony Candle and Perfume Vase. Copyright RCT.

Boulton's desire to cater to the rich can also be seen in his letters:

¹⁴⁷ Royal Collection Trust, *Matthew Boulton Candle and Perfume Vase*.

¹⁴⁸ Examples of Boulton's work, designs and influence can be found in Royal buildings, collections and used as gifts to important national allies: including a Candlestick and perfume vase (1770-71) in the state bedroom of Windsor Castle, a Candelabra in the Queen's ballroom also in Windsor Castle and a pair of candlesticks in the Presidential Guest House (Blair House) in Washington DC.

In future we shall take care to have something new in the Button way against every Birth Day of our Sovereign... and shall present to such of the Nobility as we can make so free with (and such as are most dressy) some setts to garnish their Cloaths (sic) with on that Day.¹⁴⁹

His products received praise from Royalty: Queen Charlotte of Great Britain described the 'real beauty' of a fan made by Boulton, that she had sent as a gift on King George's behalf.¹⁵⁰ The high-society circles Boulton moved in and catered for, his manufacturing ingenuity and fashion-conscious products, made Boulton friends in high places, such as the well-connected former Secretary of the State for the Colonies, the Second Earl of Dartmouth.¹⁵¹ Despite the petitions of the 1770s and the distress many of the brass founders described, Boulton admitted to Dartmouth that 'on the contrary the trade of Birmingham in general is remarkably good at present.'¹⁵² It appears that the distress of the Birmingham brass founders was somewhat exaggerated in public. Boulton's social and industrial links enabled him to be an asset to the Commercial Committee and to its continued success. The use of copper and brass became inexorably linked to the success of the industrial elite of Birmingham.

In addition to the significant influence and experience brought to the Commercial Committee by Garbett and Boulton, other industrialists in the group were involved in lucrative manufacturing businesses with international connections and access to foreign markets. John Wilkinson who predominantly worked with iron, but also used copper, brass and bronze in

¹⁴⁹ WCAR, MS 3782/13/9/130: M. Boulton and J. Fothergill, *Letter to John Perchard* (6 August 1771).

¹⁵⁰ Royal Archives, GEO/MAIN/36431, *Letter from Queen Charlotte to George, Prince of Wales* (April 1795).

¹⁵¹ Robinson, "Matthew Boulton and the Art of Parliamentary Lobbying," 209-229.

¹⁵² Staffordshire County Records, MSS, no. 1099: M. Boulton *Letter to Dartmouth* (12 January 1775).

his casts for cannons, made technical improvements to boring techniques that were implemented by Boulton and Watt for their steam engines: Wilkinson made the cylinders for the engines and large numbers of iron water pipes. The engine parts were exported to Paris with the collaboration of both governments, despite France joining in the American War of Independence. According to John Harris, the presence of Wilkinson's water pipes on British wharves gave rise to the belief that he supplied the French with cannons during the war.¹⁵³

In addition to Wilkinson, the Galton family, in particular Samuel Galton junior, amassed a large personal fortune from supplying large quantities of arms to both the British Government and the East India Company, as well as 'profiting from warfare and slavery through the sales of guns to traders in West Africa.'¹⁵⁴ Brass was used in a variety of components in the guns that Galton sold. He received criticism from a variety of people and was prevented from entering certain Quaker meetings in Warwickshire.¹⁵⁵ Despite the moral questions over some of the commercial activities and customers of these men, it is clear they were involved in lucrative international businesses with substantial capitals and significant connections. The Galtons, as well as many members of the Birmingham Commercial Committee, were manufacturing examples of the stimulated industrial resourcefulness outlined in Priya Satia's *Empire of Guns*, whom navigated the rapid industrial and political changes of the mid-eighteenth century with remarkable flexibility.¹⁵⁶ Throughout the wars of the second half of the eighteenth century the Commercial Committee's members were forced to adapt and find new markets and

¹⁵³ J. Harris, "Wilkinson, John (1728–1808)," *Oxford Dictionary of National Biography* (September 2013), <http://www.oxforddnb.com/view/article/29428>, (accessed 15 March 2017).

¹⁵⁴ H. Smith, "Galton, Samuel (1753–1832)," *Oxford Dictionary of National Biography* (September 2013), <http://www.oxforddnb.com/view/article/105102> (accessed 15 March 2017).

¹⁵⁵ B. Smith, "The Galtons of Birmingham: Quaker Gun Merchants and Bankers, 1720-1831," *Business History*: 9: 1 (1967), 132-150.

¹⁵⁶ P. Satia, *Empire of Guns: The Violent Making of the Industrial Revolution* (London: Duckworth Overlook, 2018), 149-51.

customers, and together they proved stronger and more adaptable. The Galtons continued involvement with the Birmingham Commercial Committee was yet another example of the influence and power that was to be found within the organisation.

The role of the more famous and influential manufacturers of the Commercial Committee, such as Garbett, Boulton, Wilkinson and the Galtons, is relatively easy to piece together due to the range of primary and secondary source material.¹⁵⁷ However, there were hundreds of other individuals who helped invest in the Broad Street Brass House, and were part of the Commercial Committee, but who have received little academic attention, mainly due to the scant source material concerning them and their firms. One of the most important individuals in the organisation of the brass trade, who has received no academic attention, was a brass founder and magistrate called George Simcox. Simcox is primarily listed as a brass founder in both the Commercial Committee Records and on his own trade card in Bisset's *Magnificent Directory*.¹⁵⁸ However it is clear from James Bisset that Simcox was much more than a simple brass founder:

In 1789 the author had the honour, in conjunction with George Simcox, Esq. (now one of our worthy magistrates), and several gentlemen in the neighbourhood of St. Paul's, forming the first committee, and establishing a nightly patrol in that district, for preserving the peace, and securing the property of the inhabitants.

¹⁵⁷ Some of which can be found in The Soho Archives; Dickinson, *Matthew Boulton*; Quickenden, Baggott and Dick, *Matthew Boulton, Enterprising Industrialist*; Norris, "Samuel Garbett and The Early Development of Industrial Lobbying."

¹⁵⁸ Bisset, *A Magnificent Directory*, 79; Birmingham Chamber of Commerce: *Chronicles of the Birmingham Chamber of Commerce 1813-1913*; Langford, *A Century of Birmingham Life*: Bennett, *Local Business Voice*, 189-90, 667-9.

The laws and regulations were approved of and soon after adopted by the town, which was afterwards divided into 13 districts, each governed by a committee of their own... and as one of the Committee always attends the patrol, in their nocturnal perambulations, every member of the society cheerfully obeys the summons of the Night Constable, whenever it comes to his turn.¹⁵⁹

The quotation demonstrates that the members of the Commercial Committee, many of whom were brass founders, were succeeding in their original aim of literally 'watching over and conducting the public interest of the Town and Neighbourhood.'¹⁶⁰ To categorise the Broad Street Brass House founders or Commercial Committee as purely industrial is to ignore the powerful social force it became as the boundaries between the industrial, political, and social dimensions of the group were blurring. John Money has alluded to this process concluding that 'any distinction there may ever have been between the political and commercial aspects of Birmingham was rapidly disappearing.'¹⁶¹ The Birmingham brass founders of the Commercial Committee, such as Simcox, were literally a law unto themselves, creating and implementing policy within the town. The expansion, diversification, and organisation of the brass industry made a lot of individuals a lot of money, and with that money came power and influence to make significant social and political change within the town. These influential manufacturers were the nucleus of not only the Commercial Committee, but also in many ways the town of Birmingham itself, which lacked a charter, as a result of which the system of local government in Birmingham was rudimentary.¹⁶²

¹⁵⁹ Bisset, *A Magnificent Directory*, 23.

¹⁶⁰ WCAR, MS3782/12/87, item 75: *A Meeting of the General Commercial committee* (September 19, 1783).

¹⁶¹ Money, *Experience and Identity*, 212.

¹⁶² Hopkins, *Birmingham: The First Manufacturing Town in the World*, 97.

Individuals in the Committee were active participants in helping to improve the infrastructure of the town throughout the eighteenth century, as well as being involved in manorial and parochial affairs and law enforcement. The Birmingham Street Commissioners were charged with 'the laying open and widening certain ways and passages within the Town of Birmingham, and for cleansing and lighting the streets, ways, lanes, and passages there, and for removing and preventing nuisances and obstructions therein.'¹⁶³ Initially established to improve street conditions and lighting in an attempt to reduce crime, the fifty street commissioners were tasked with an increasing number of duties throughout the second half of the eighteenth century, including the organisation of lighting the city, control and reorganisation of markets and the ability to appoint policing watchmen. Amongst these commissioners were Samuel Garbett, Samuel Galton junior, Sampson Lloyd, John Ryland, and William Russell who were also members of the Commercial Committee and involved with the brass trade. As the town became one of the largest and fastest-growing locations in the country, these ad hoc bodies secured an enormous amount of power and influence.¹⁶⁴ The Commercial Committee was increasingly a part of, or associated with, almost all branches of civic society in Birmingham, including judicial, medical, transport and local governance structures.

The political lobbying group continued to expand into the late-eighteenth and early-nineteenth centuries: an additional thirty-one representatives were added between 1790 and 1795, and by 1813 the total number of establishments and businesses represented totalled

¹⁶³ R. Dent, *The Making of Birmingham: Being a History of the Rise and Growth of the Midland Metropolis* (Birmingham: Allday, 1894), 133.

¹⁶⁴ G. Cherry, *Birmingham: A Study in Geography, History and Planning* (Chichester: Wiley, 1994), 58.

one hundred and twenty six.¹⁶⁵ The steady expansion of the organisation highlights its continued success. Prominent local and national figures such as Boulton's business partner James Watt, and the son of the founder of Lloyds Bank, Samuel Lloyd, also joined the co-operative.¹⁶⁶ The group, which originally consisted predominantly of manufacturers, diversified as time continued: enlightened figures, bankers and even bailiffs joined the organisation, suggesting that the networks of Birmingham merchants were becoming stronger and more complex.¹⁶⁷ From the humble beginnings of rudimentary brass-working, manufacturers who used the compound in their products had become a highly influential, organised and powerful manufacturing force with strong social and political connections on national and international levels.

Conclusion

This chapter has outlined the main developments that occurred in the organisation of the Birmingham brass community between 1765 and 1783, a narrative that has been absent from the historical literature, and has provided evidence that international markets played a much more significant role in the political and industrial organisation of the town than has previously been acknowledged by Norris or Hopkins.¹⁶⁸ The steady profitability of the trade that occurred throughout the first half of the eighteenth century (Chapter One) was disrupted

¹⁶⁵ These figures are based on printed notices of meetings, circulated minutes/reports; Birmingham Chamber of Commerce: *Chronicles of the Birmingham Chamber of Commerce 1813-1913*; Langford, *A Century of Birmingham Life*; Bennett, *Local Business Voice*, 19, 189-90, 667-9.

¹⁶⁶ J. Price, "Lloyd, Sampson (1699–1779)," *Oxford Dictionary of National Biography* (2004), <http://www.oxforddnb.com/view/article/37682> (accessed 25 January 2017).

¹⁶⁷ Printed notices of meetings, circulated minutes/reports; Birmingham Chamber of Commerce (1783, 1790-95, 1813).

¹⁶⁸ Norris, "Samuel Garbett and the Early Development of Industrial Lobbying in Great Britain," 450; Hopkins, *Birmingham: The First Manufacturing Town in the World*.

by the outbreak of the American War of Independence. The 1760s and 1770s were characterised by increased trade restrictions imposed by the British Government that hampered the ability of the Birmingham brass founders to trade with the American colonies, a market that had proved lucrative and vital for many brass founders. To combat these restrictions, the brass founders followed the example of many British trading communities and engaged in a petitioning campaign throughout the 1770s, which initially proved ineffective. Whilst it is easy to assume the petitions were similar to one another, Birmingham's brass founders were much more critical of the British Government, something not acknowledged in the historical literature of petitioning campaigns of the 1770s. The petitions of Birmingham brass founders, as well as their links to controversial figures such as Edmund Burke, led to criticism. The failure of the brass founders to resolve international obstacles meant that more restrictions were introduced to limit trade with enemies of Britain, culminating in the disastrous 1779 PCOPEC, which led to an exodus of Birmingham manufacturers to the continent to work unrestricted by the British Government.¹⁶⁹ Before 1779, despite the importance of international trade, Birmingham brass founders were unsuccessful at tackling the restrictions placed on their trade as a result of international conflicts in which the British state was engaged.

After 1779 the brass founders became a more effective cooperative political pressure group, creating a brass-producing centre on Broad Street in 1781 and establishing a forum through the creation of a Commercial Committee in 1783, dominated by an influential group of politically-conscious industrialists. The careers of Boulton, Garbett, and Simcox created a

¹⁶⁹ *Draft Order Prohibiting the Exportation of Copper* (September 1779); *Order by the Privy Council, Prohibiting the Exportation of Copper* (24 September 1779), 141.

powerful and influential group of individuals who met regularly to discuss the safeguarding of the brass and copper trades. Whilst Norris and Robinson have explored Garbett and Boulton's political lobbying, their findings have been extended and expanded upon in this chapter, to include the role of brass founders and their changing tactics. The formally-organised brass founders engaged with the political elite of the country and helped to run the administration of the town, behaving in a manner similar to that of MPs. The industrial organisation and political role inhabited by the 1783 Commercial Committee was a direct result of the international trade restrictions placed upon Birmingham by the Government; their activities served as the best way to protect copper and brass interests. The brass lobbying group achieved more success in securing reforms to national policy throughout the 1780s however, and within Britain it continued to grow in influence and strength; engaging in a political campaign against competitors within England and Wales to solidify a position of power within the rapidly changing British state. Chapter Three explores the partnerships which the political pressure group of Birmingham formed within Great Britain between 1783 and 1792, as the brass founders attempted to safeguard their industry and overcome a series of controversies.

Chapter Three

The Birmingham Commercial Committee and the Economic and Political

Controversies of 1783-1792

The restrictive trade policy pursued by the British Government in response to the American War of Independence, including the damaging 1779 Privy Council Order Prohibiting the Exportation of Copper (PCOPEC), resulted in the thriving Birmingham brass industry experiencing a variety of obstacles.¹ The price of copper, a vital element used to create brass, fluctuated in an unstable and competitive international marketplace, making it difficult for brass founders to plan ahead or calculate business expenses. The loss of international markets during the 1760s and 1770s initiated whole-scale organisational change within the local brass industry. Influential figures, such as Samuel Garbett and Matthew Boulton, attempted to safeguard the industry through petitioning, political relationships, and pooled resources-visible through the creation of the 1781 Broad Street Brass House in Birmingham and the 1783 Commercial, or Brass, Committee.² Much of the co-ordinated action explored in Chapter Two was the result of brass founders seeking to stabilise the price of copper and gain some control over their industry in a world at war. Despite the political lobbying by the brass founders of the Birmingham Commercial Committee, there was no lifting of many of the international trade restrictions, and the price of copper in Britain reached new highs by the 1790s.³ This chapter explores how the Birmingham political lobbying group attempted to tackle the

¹ Wolfson Centre for Archival Research (WCAR), MS 3782/12/87, item 22: S. Garbett, *Observations on the Copper Trade of England & the Dangers of Exporting the Tools & Machines Used Therein* (1786).

² *Aris's Birmingham Gazette* (AGB) (21 February 1781); WCAR, MS3782/12/87, item 75: *A Meeting of the General Commercial committee* (September 19, 1783).

³ WCAR, MS3782/13/97, item 37: *Prices of Copper sold to the East India Trade Company* (1787-1799).

soaring costs of copper between 1783 and 1792, through the creation of new business relationships and the development of aggressive protectionist strategies.

The effects of the 1779 PCOPEC, as well as the unpredictable cost of copper, were not the only issues with which the brass founders of Birmingham had to contend. Between 1783 and 1792 there was a series of economic and political controversies including the 1785 Irish Propositions, the Tool Acts, and the behaviour of the monopolistic Welsh copper magnate Thomas Williams. It is also important to acknowledge the role and significance of William Pitt the younger. Pitt's ascendance as Prime Minister in December 1783, shortly after the establishment of the Birmingham Commercial Committee, created a variety of new grievances for Birmingham brass founders. The start of his tenure coincided with a series of debates regarding free trade throughout the Empire as the British Government began to change to accommodate for prolonged periods of war.⁴ In general terms, Birmingham's brass founders continued to gain influence and wealth throughout this economically and politically transformative period through their pragmatic and flexible approach to the domestic politics of the copper trade; along with their navigation of broader industrial and economic developments. Yet the brass founders' success in tackling some of the controversies proved to be limited, and in some cases disastrous. As the industrialists expanded their influence throughout Britain, tensions significantly escalated between Birmingham brass founders and the owners of copper mines in Wales and Cornwall.⁵ The navigation of these controversies

⁴ J. Livesey, "Free Trade and Empire in the Anglo-Irish Commercial Propositions of 1785," *Journal of British Studies*: 52: 1 (January 2013), 103-127.

⁵ C. Evans and L. Miskell, *A Global History; Swansea Copper* (Baltimore, MD: John Hopkins University Press, 2020), 66-67.

further shaped the political development and rhetoric of the Birmingham brass founders. This chapter explores how the industrialists dealt with national and international competition, outlines the strategies introduced by Birmingham-based brass founders to tackle the controversies, highlights the links between the different issues, and assesses the successes and failures of the Commercial Committee. This is the first time that the controversies facing the Birmingham brass founders, during the period 1783 -1792, have been fully assessed. The response of the Birmingham industrialists to many of the aforementioned issues has previously received limited academic attention.

Related Primary and Secondary Material

The context of the British Government is important in understanding the controversies facing the Birmingham Commercial Committee: Peter Mathias, Patrick O'Brien and John Brewer's research has effaced the old picture of a small, amateurish, and corrupt central apparatus largely maintained (between sporadic wars) to dignify the crown and assist gentlemanly plunder.⁶ Philip Harling and Peter Mandler claim that 'between 1780 and 1830 the structure of the state and government transformed into one of the largest and most efficient in Europe through a ruthlessly regressive tax system.'⁷ The reasons for these changes are debatable. Peter Jupp argues that the changes were driven by men of business, not the traditional landed gentry – highlighting the increased number of MPs who did not own land and who helped to

⁶ J. Brewer, *The Sinews of Power: War, Money, and the English State, 1688-1783* (Abingdon: Routledge, 1989); P. Mathias and P. O'Brien, "Taxation in Great Britain and France, 1715-1810: A Comparison of the Social and Economic Incidence of Taxes Collected for the Central Government," *Journal of European Economic history*: 5: 1 (1976), pp. 601-650; P. O'Brien, "The Political Economy of British Taxation, 1660-1815," *Economic History Review*: 41: 1 (1988), 1-30; P. Harling and P. Mandler, "From 'Fiscal-Military' State to Laissez-faire State, 1760-1850," *Journal of British Studies*: 32: 1 (January 1993), 44-70.

⁷ Harling and Mandler, "From Fiscal-Military State to Laissez-faire State," 44.

facilitate a laissez-faire approach to trade via streamlined services and select committees.⁸ Harling and Mandler, however, disagree with Jupp and assert that the traditional ruling elite, responding to war and foreign policy concerns, as well as adapting and enhancing the increased responsibilities of Government. They refer to a 'retooling of the landed elite': a protracted process that began during the 1780s as Pitt endeavoured to centralize bureaucracy during times of war, making instruments of authority more effective and less expensive. Whilst this chapter does not explore who was driving changes to government and the state, it outlines how the Birmingham brass founders were responding to these changes. In 1783, towards the beginning of this transformative period, America had gained independence: Britain was left dealing with spiralling debts and the loss of political power throughout the Atlantic, changing the priorities of the Government which needed to re-establish itself internationally and tackle the significant obstacles facing the economy.⁹ As a result, the political system was open to external influence and change, encouraging manufacturing groups to utilize their political contacts to push for industrial reform.

Vivien Dietz explores the relationship between British politicians and manufacturing groups in the 1780s and emphasises the importance of manufacturing groups forming political connections:

⁸ P. Jupp, "The Landed Elite and Political Authority in Britain 1760-1850," *Journal of British Studies*: 29 (1990), 53-79.

⁹ V. Dietz, "Before the Age of Capital: Manufacturing interests and the British State, 1780-1800," (Princeton University PhD Thesis, 1991), 12.

No matter how sophisticated its internal organisation, the manufacturing interest had to be on good terms with legislators and government officials alike... regional committees knew this and generally bemoaned the fact that they lacked the proper connections.¹⁰

Whilst the brass founders had reorganised their industry following the 1779 PCOPEC, it was still not enough to change national policy – their political allies, such as Burke, were simply not powerful or popular enough (Chapter Two). Between 1783 and 1792 the brass founders of Birmingham formed new political and economic partnerships in an attempt to navigate the legislative maze of central government, and to dispute Pitt's more divisive policies. The tensions between Birmingham manufacturers and the political elite is evident throughout the period of this chapter, and may be explained by Dietz's assertion that the central government often treated manufacturers like clients rather than partners; there was a feeling within manufacturing groups that 'legislators failed to understand the complexities of the industries they were regulating, not to mention the principles of international trade.'¹¹ After the loss of America, and a near constant war in India during the Anglo-Maratha and Anglo-Mysore Wars, Parliament was unsurprisingly focused on the macro level reorganisation of Empire, including a proposed policy of economically and politically reintegrating India, to ensure the East-India Company remained the dominant economic power in the sub-Indian continent.¹² Manufacturers however were focused on the specifics of their individual trades. The differing

¹⁰ V. Dietz, "Before the Age of Capital," 95.

¹¹ V. Dietz, "Before the Age of Capital," 95.

¹² A. Amin, *Second Anglo-Mysore War 1780-84: A Vast Military and Naval Struggle from Europe to South India* (Create Space: Scott's Valley, CA, 2017); A. Athale, *Struggle for Empire, Anglo-Maratha Wars, 1679-1818* (Reliance: New Delhi, 2001).

priorities of central government, and local manufacturing groups, created tensions that shaped the controversies between 1783 and 1792. The Birmingham brass founders were operating in the wider context of an on-going struggle between the government and its manufacturers over the fundamental issue of taxation, during a period 'when industrial production was accelerating at unprecedented rates and when a new political era of "liberal Toryism" was ushered in with the ministry of Pitt the younger.'¹³

Harling and Mandler build upon Dietz's research, highlighting examples of united industrial movements in the early- and mid-nineteenth century. They believe that few groups had enough political clout to preserve trade restrictions, or change them when they felt it to be advantageous; groups with that power include the northern industrial districts during the repeal of the Orders in Council, the Birmingham Political Union, and the Anti-Corn Law League.¹⁴ This chapter reveals that there was concerted pressure-group activity in Birmingham before the more famous nineteenth-century Political Union, resulting in some level of success in challenging the government and securing new commercial policies. It also identifies the Birmingham brass founders' perspective on issues of trade throughout the Empire, in response to Pitt's policies and changes to government bureaucracy.¹⁵ The individual controversies outlined in this chapter have all received some form of academic

¹³ V. Dietz, "Before the Age of Capital," 12.

¹⁴ J.E. Cookson, *The Friends of Peace: Anti-War Liberalism in England, 1793-1815* (Cambridge: Cambridge University Press, 1982), 215-238; C. Flick, *The Birmingham Political Union and the Movements for Reform in Britain, 1830-1839* (North Haven, CT, Archon Books, 1978); Harling and Mandler, "From Fiscal-Military State to Laissez-fair State," 68; N. McCord, *The Anti-Corn Law League, 1838-1846* (Abingdon: Routledge, 1958).

¹⁵ J. Livesey, "Free Trade and Empire," 103-127.

attention, but rarely from the perspective of Birmingham industrialists – and usually studied separately, rather than as a series of interconnected issues.¹⁶

The escalating tensions between Birmingham brass founders and copper mine owners during the mid-1780s and early-1790s, are documented in the Boulton and Watt archives in the Library of Birmingham, via printed pamphlets addressing the 1785 Irish Propositions, and private letters discussing the Tool Acts. In the Library there is a box listed as *Cornish Mines*. Similar to the *American Disputes* box discussed in Chapter Two, the sources therein have seemingly received little analysis. The collection includes accounts of copper sold to the East India Company by the Birmingham Metals Company in 1787, expenses for individual Cornish mines, and booklets produced by Birmingham brass founders summarising various meetings which were held in the local Swan Hotel.¹⁷ These sources shed light on the political organisation of the Birmingham brass industry between 1783 and 1792, tensions that existed between British industrial groups, and advances in copper sheathing technology. Whilst Chapter Two focuses on Birmingham brass founders through a study of a Birmingham-based archive, this chapter uses a geographically wider base of sources, seeking to fill potential gaps in the *Cornish Mines* folders. Alongside the Boulton and Watt papers, this research utilises sources held in the Cornwall Archives at Kresen Kernow and the Cornish Studies Library in Redruth, and comprises personal letters, newspaper coverage of the conflict, detailed financial accounts of individual businesses, several registered patents, and printed

¹⁶ D. Jeremy, "Damming the Flood: British Government Efforts to Check the Outflow of Technicians and Machinery, 1780-1843," *The Business History review*: 51: 1 (1977), 1-34; J. Harris, *Industrial Espionage and Technology Transfer; Britain and France in the Eighteenth Century* (Abingdon: Routledge, 1998), 461-472; J. Livesey, "Free Trade and Empire," 103-127;

¹⁷ WCAR, MS3782/13/97, folder 6.

propaganda created by both sides of the dispute. The primary evidence helps to create a layered narrative of the reasons behind the political and economic controversies and the ways in which brass founders responded, which often centred around the formation of important business partnerships – arguably the most important of which was with Thomas Williams, the richest man in Wales.

In a biography, John Harris refers to the tumultuous relationship between the Birmingham manufacturers and Welsh copper magnate Thomas Williams. The troubled transactions and businesses of the Birmingham Commercial Committee in the south-west of England are referenced in histories of Cornish copper.¹⁸ The analysis of Birmingham in these works is brief however and focuses on the perspective of Thomas Williams and the Cornish mine owners and miners; the viewpoint of the Birmingham brass founders is not explored in detail, creating a one-sided, and therefore incomplete, account of the tensions. This chapter outlines the origins of the different disputes, as well as the tactics employed by both sides in the power struggle, and examines the relationships undertaken by the Birmingham group to demonstrate how their political acumen and power increased over the period. It provides a better understanding of the activities in Birmingham, such as the continued development of a political presence within the local brass foundry community, and the discontent evident in Cornwall because of the influence of Birmingham industrialists. It does this by examining the

¹⁸ J. Harris, *The Copper King: A Biography of Thomas Williams of Llanidan* (Liverpool: Liverpool University Press, 1964), 94, 186 and 194; J. Symons, "The Mining of Copper: 1760-1820," in *Cornish Mining – Essays on the Organisation of Cornish Mines and the Cornish Mining Economy*, ed. R. Burt (Newton Abbot: David and Charles Publishers, 1969).

relationships, and changing dynamics, between the Birmingham manufacturers of brass, the mining community in Cornwall, and the Anglesey copper magnate, Thomas Williams.

Birmingham Brass Founders and Thomas Williams

After the establishment of the Commercial Committee in 1781, the priority of the Birmingham brass founders was to negotiate a supply of cheap copper.¹⁹ During the late 1770s and early 1780s Birmingham industrialists had been struggling to deal with the effects of the 1779 PCOPEC, and it was during this time that Thomas Williams and Birmingham brass founders began to work together.²⁰ The owners of the Birmingham Broad Street Brass House (Chapter Two) first contacted Williams in 1781.²¹ Harris believes that ‘in business terms his power was greater than any of the other industrialists in this period.’²² Born in Anglesey, Williams had spent his early career as a lawyer and achieved success representing wealthy families. One of his most influential clients was the Tory MP Nicholas Bayly (1709-1782), who owned a considerable amount of land in North Wales, including several copper mines.²³ Bayly’s most significant asset was the copper-rich Parys Mountain, and he dominated the world’s copper market during the 1770s when the mine was the largest in Europe.²⁴ The land, which was of

¹⁹A. Darling, “Non-Ferrous Metals,” in *An Encyclopaedia of the History of Technology*, ed. I. McNeil (Abingdon: Routledge, 1990), 91.

²⁰ Garbett, *Observations on the Copper Trade of England* (1786); WCAR, MS3004/9: *Articles of the Birmingham Brass Company*.

²¹ Kresen Kernow, Cornwall’s Archives (KKCA), AD1583/2/66; M. Boulton, *Boulton to Williams* (20 June 1781).

²² J. Harris, “Williams, Thomas (1737–1802),” *Oxford Dictionary of National Biography* (May 2005), <http://www.oxforddnb.com/view/article/38133> (accessed 24 May 2017).

²³ P. Thomas, “Bayley, Nicholas (1709-82), of Plas Newydd, Anglesey,” *History of Parliament*: <http://www.historyofparliamentonline.org/volume/1715-1754/member/bayly-nicholas-1709-82> (accessed 24 May 2017).

²⁴ R. Bevins, *A Mineralogy of Wales* (Cardiff: National Museum of Wales, 1994), 19.

enormous value, was disputed however and a complicated lawsuit ensued concerning an area that contained significant amounts of precious minerals. Williams' skill and tenacity as a lawyer earned him admiration and gratitude.²⁵ As a result of his successful handling of the case, Williams was given part-ownership of a number of profitable mines in the region in 1778, including shares in the valuable Parys Mountain. After he gained the rights to the mines, Williams worked closely with the East India Company Director and London banker John Dawes to increase his number of copper-purchasing clients.²⁶

Williams used his own mines in Parys as a source of copper, but also took the opportunity to help his business partners in Cornwall, at the request of mine owners in the region, to market their vast stocks of unsold copper.²⁷ This request began a profitable relationship for all parties. A natural alliance was easy to broker as many in Birmingham already had links to the south west; Boulton and Watt in particular had numerous links to Cornish industries-and had been involved for many decades due to the use of their steam engines in Cornish mines. As William Bowden asserted, 'the mid-century decline in the productivity of the Cornish mines was checked by means of the more efficient engines constructed by Boulton and Watt.'²⁸ In the early 1780s the triple alliance between Thomas Williams, Birmingham brass founders, and Cornish suppliers of copper was a union of serious influence and power within the copper and brass trades of Britain, suggesting that Birmingham brass founders had successfully stabilised their industry and were prospering because of the shrewd business relationships they had

²⁵ J. Harris, "Williams, Thomas (1737–1802)."

²⁶ D. Bentley-Smith, *A Georgian Gent: The Life and Times of Charles Roe & Co., of Macclesfield* (London: Landmark Publishing, 2005), 413.

²⁷ Darling, "Non-Ferrous Metals," 92.

²⁸ W. Bowden, *Industrial Society in England Towards the End of the Eighteenth Century* (New York: The Macmillan Company, 1925), 145.

forged. After the tumultuous 1770s and the loss of many valuable international markets, these links were key to the prosperity of Birmingham brass founders: Williams was not merely a supplier of cheap copper, but an influential ally within a government that was reforming economic and trade policy. As Dietz has acknowledged, these connections were crucial.²⁹

Boulton wrote about the quality of copper sold to Birmingham industrialists from Williams' mines in Wales after 1779, describing it as the 'finest I have ever used.'³⁰ He purchased approximately £6,000 worth of copper annually for his Soho manufactory (equivalent to £911,440 in 2019 according to the Bank of England inflation calculator), and encouraged other brass founders to do the same.³¹ The relationship between Thomas Williams, his Cornish links, and the Birmingham manufacturing network was initially mutually beneficial; Williams supplied the Midlands-based brass founders with the copper they needed, for a reasonable price, and the Birmingham brass founders provided steady business for the mine owners during a time of instability throughout the 1780s. This relationship was not merely a simple supply and demand dynamic, however: Williams employed manufacturers and technologists in Birmingham to help him create new copper technologies.³² His partnership with Birmingham brass founders resulted in an important milestone in copper technology, when his employees in Birmingham perfected the technique for producing copper bolts for sheathing ships.³³ In a time of prolonged periods of naval warfare, in which the Government

²⁹ V. Dietz, "Before the Age of Capital," 95.

³⁰ KKCA, AD1583/2/66 M. Boulton, *Boulton to Wilson* (26 January 1784).

³¹ Bank of England Inflation Calculator; <https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator> (accessed 7 April 2020); Boulton, *Boulton to Wilson*, (26 January 1784).

³² Great Britain Patent Office Records, W. Collins, *Patent 1388: Copper Bolts*, granted 22 October 1783; Great Britain Patent Office Records, J. Westwood, *Patent 1398: Hardening and Stiffening Copper*, granted 14 November 1783.

³³ D. Fisher, "Williams, Thomas (1717-1802), of Llanidan, Anglesey and Temple House, Berks.," *History of Parliament*: <http://www.historyofparliamentonline.org/volume/1790-1820/member/williams-thomas-1737-1802> (accessed 23 April 2018).

was investing in the navy and attempting to re-establish Britain as a naval power, the widespread copper sheathing of ships and the patent for copper bolt technology provided lucrative rewards.

Copper Bolt Technology

Ships had traditionally been sheathed with wood below the water-level. Such processes were problematic however; the sheathing rapidly became worm-eaten and encrusted with weeds and barnacles, and often ships had to undergo lengthy repairs to the hull before they were fit for a further voyage (Chapter Two). The outcome was greater expense, delays and, inevitably, a shortened working life for the vessel.³⁴ If repairs were not undertaken, ships became slower and less manoeuvrable, and eventually damage to the hull became irreparable. This was especially true of ships that spent extensive amounts of time in tropical waters. As British companies, merchants, and individuals had investments in the Atlantic World and Asia, this was financially damaging. HMS *Alarm*, for example, cost the British Government substantial amounts of money in maintenance: its wooden hull was often in a terrible condition after returning from long trips, as water damage and worms from the waters took a significant toll on the vessel's wooden hull.³⁵ George Bass highlights how experiments with lead had proved more 'effective than wood at mitigating these problems, but (lead) was too heavy and reacted badly with the iron bolts of the ships.'³⁶ Copper sheathing of hulls proved to be the most

³⁴ J. Harris, "Copper and Shipping in the Eighteenth Century," in *Essays in Industry and Technology in the Eighteenth Century: England and France*, ed. J. Harris (Farnham: Variorum, 1992), 176.

³⁵ Harris, "Copper and Shipping," 180.

³⁶ G. Bass, *A History of Seafaring based on Underwater Archaeology* (London: Thames and Hudson, 1972), 235.

financially viable solution, and Birmingham manufacturers, with the help of Williams, played an integral role in the development of such technology.

Attempts to improve and introduce copper bolt and sheet technology had been made as early as the late-seventeenth century by Charles Parry, a Bristol-based copper works owner.³⁷ Later there were significant, but flawed, attempts made by the Champions of Bristol. In 1740 Nehemiah Champion proposed a brass sheathing, but the limited trial by the Royal Navy was unsuccessful.³⁸ Experimentation continued throughout the eighteenth century by industrialists who saw the potential for the lucrative business of copper technology on ships. The East India Company built an 800-tonne ship in 1790 for £10,000, £673 of which was the cost of copper sheathing plus £133 to attach it to the vessel, outlining how much money was to be made in the business.³⁹ There were two major issues to solve before copper sheathing could be universally introduced: first, copper sheets were fastened with iron nails which dissolved due to the electric current created between copper and iron in sea water. The second problem related to the bolts, which had to be driven through thick timber with enormous force, and no copper had been created that was durable enough for the purpose.⁴⁰ These issues became so problematic that the Royal Navy came close to abandoning the idea of copper sheathing during the late 1770s.⁴¹ There were two ways to tackle these issues: by developing new alloys, or by forging the copper differently to increase its toughness. Members of the Birmingham lobbying group, Matthew Boulton and chemist James Keir,

³⁷ B. Blake-Coleman, *Copper Wire and Electrical Conductors – The Shaping of a Technology* (Reading: Harwood Academic Publishers, 1992), 99.

³⁸ National Maritime Museum Greenwich, ADM/A/2294: *Admiralty to Navy Board Transcripts*.

³⁹ East India Company, *Proceedings Relative to Ships tendered for the Service for the East-India Company 1780-1791* (London, 1791).

⁴⁰ J. Harris, "Copper and Shipping," 181.

⁴¹ G. Coyle, *The Riches Beneath Our Feet: How Mining Shaped Britain* (Oxford: Oxford University Press, 2010), 34.

dedicated much time researching these issues, finally producing Keir's metal (made up of 54 per cent copper, 40.5 per cent zinc and 5.5 per cent iron) which was tougher than previous copper alloys. Keir also worked closely with William Forbes, a Scottish coppersmith and copper contractor for the Navy, in pursuing his designs; trials of Keir's bolts and some rudder braces of the same composition were conducted.⁴² The new alloy was not satisfactory as it was excessively brittle. Keir and Boulton also spent more time arguing about who owned the rights to the metal than continuing to perfect it.⁴³ Keir wrote to Boulton:

I always understood that it was first discovered in our joint experiments on Chinese copper. I never knew that you had made it before, or ever heard of any goods having been made of it.... I admitted that you had an equal right, but I did not know that you had a better. I wish I had known sooner.⁴⁴

The issue highlights two important points: firstly, that copper bolt technology was important for industrialists to master and secondly, that there was continued collaboration and competition within the Birmingham manufacturing networks. Despite the manufacturers' ability to organise in times of crisis, the Birmingham brass founders were still competing with one another. They were by no means a homogenous group: Boulton, for example, often claimed the credit for the work of others.⁴⁵

⁴² M. McCarthy, *Ships' Fastenings: From Sewn Boat to Steamship* (Texas TEX: Texas A&M University Press, 2005), 105.

⁴³ K. Schranz, "The Tipton Chemical Works of Mr. James Keir: Network of Conversants, Chemicals, Canals and Coal Mines," *International Journal for the History of Engineering and Technology*: 84: 2 (July 2014), 248-273.

⁴⁴ Birmingham Assay Office, Boulton Papers: *Letter from James Keir to Matthew Boulton* (No. 1240, 28 February 1781).

⁴⁵ S. Baggot, M. Dick, K. Quickenden, eds., *Matthew Boulton: Enterprising Industrialist of the Enlightenment* (Abingdon; Ashgate Publishing, 2013), 1-18; Berg, *Luxury and Pleasure*, 215.

Whilst Boulton and Keir argued about their incremental improvement to copper alloys, Williams feared that the growth and progress of the Birmingham brass founders could potentially rival his own plans for the copper industry. His aspiration to solve the issue of copper bolts led him to hire two Birmingham brass founders, William Collins and John Westwood. Collins was involved in brass button and buckle exportation, whilst Westwood worked as a die-skinner and medallist.⁴⁶ Within eighteen months of Keir's initial experiments, Collins registered a patent for copper ship bolts that 'will not be subject to the decay that has proved so fatal to those now in use', and Westwood registered a patent for the 'hardening and stiffening of copper.'⁴⁷ News of these developments travelled fast around the country and within a few months of the patents being registered, the successful creation of an effective copper ship bolt was advertised on 7 January 1784 in *Gore's Liverpool Advertiser*: 'Westwood and Collins patent copper ship bolts... they are harder, stiffer and drive better than iron bolts and may be had in any size or quantities.'⁴⁸ The improvement made to this technique, as a result of Williams' tenacity and links to skilled Birmingham technologists, was adopted throughout the British navy after 1784. Sir Gilbert Blane, a naval physician, academic and scientist, praised the breakthrough during his days as a fellow at the Royal Society in London and recalled that 'the whole British navy was coppered, a circumstance so important, that it may be considered as an era in the naval annals of this country.'⁴⁹ The achievements of creating a working and affordable copper bolt by Birmingham brass founders was a

⁴⁶ *Report from the Committee Appointed to Enquire into the State of the Copper Mines and Copper Trade of this Kingdom* (RCCT), (7 May 1799), <https://babel.hathitrust.org/cgi/pt?id=nyp.33433087566752;view=1up;seq>, (accessed 26 August 2016), 3; C. Pye, *A Correct and Complete Representation of All the Provincial Copper Coins, Tokens of Trade and Cards of Address on Copper* (London: Matthew Young, 1801), 2.

⁴⁷ Collins, "Patent 1388: Copper Bolts."; Westwood, "Patent 1398: Hardening and Stiffening Copper."

⁴⁸ *Gore's Liverpool Advertiser* (7 January 1784).

⁴⁹ Royal Collection Trust, RCIN, 1191020; G. Blane, *A Brief Statement of the Progressive Improvement of the Health of the Royal Navy* (London, 1830), 17; J. Wallace, "Blane, Sir Gilbert, first baronet (1749–1834)," *Oxford Dictionary of National Biography*, <http://www.oxforddnb.com/view/article/2621> (accessed 5 June 2017).

significant technological achievement in an industry where inventiveness had not always been a notable feature.⁵⁰

The financial rewards of this creation were significant. To sheathe the entire fleet required large amounts of the new copper: it required 14 tons of copper to fully equip a 74-gun third-rate ship and the lining alone cost £1,500.⁵¹ The copper was available from Cornish mines, as well as the Parys Mountain which Williams had acquired in 1778. He paid for the rights to the copper bolt patents, created by Collins and Westwood, meaning that they were legally the property of Williams' Parys Mining Company. This technology solidified his position as the most important copper magnate within Britain and the richest man in Wales.⁵² Whilst Williams' career continued from strength to strength, the two Birmingham merchants who created the new techniques vanished into obscurity. William Collins was forced to abandon his business due to a lack of prospects and testified against Williams at the Parliamentary Enquiry into the State of the Copper Trade in 1799 (Chapter Four).⁵³ John Westwood wrote to Matthew Boulton begging for work, stating that he had fallen on hard times and was 'disengaged' from employment.⁵⁴ Their work with Williams highlights the cut-throat nature of the industry, and how inventiveness and ingenuity were not enough to be successful; for Westwood and Collins their technological expertise and ingenuity reaped little reward and their technological contribution has previously been unacknowledged by the historical literature. Harris has touched upon the loosely-guarded and chaotic system of patents that

⁵⁰ P. Jones, *Industrial Enlightenment: Science, Technology and Culture in Birmingham and the West Midlands, 1760–1820* (Manchester: Manchester University Press, 2008), 132.

⁵¹ R. Gardiner, *The Line of Battle: The Sailing Warship 1650–1815* (London: Conway Maritime Press, 2004), 375.

⁵² J. Mokyr, *The Enlightened Economy: Britain and the Industrial Revolution, 1700–1850* (London: Yale University Press, 2012), 235.

⁵³ RCCT (7 May 1799), 11.

⁵⁴ Pye, *A Correct and Complete Representation of All the Provincial Copper Coins*, 2.

existed in the mid-1780s, and this provides another example of how industrialists lost control over their own technology.⁵⁵ With Williams gaining the upper hand in the matter of copper bolt and sheathing patents, Birmingham brass founders looked to increase their wealth in other ways.

The 1785 Cornish Metal Company

The relationships between brass founders in Birmingham and copper mine owners in Cornwall were economically productive but not free from controversy; tension built throughout the 1780s as Boulton and other members of the Birmingham Commercial Committee continued to involve themselves in the Cornish copper mining industry. A copper agent in Cornwall, Thomas Wilson, had been impressed by the organisational reforms in the brass industry of Birmingham and requested that the Birmingham Commercial Committee intervene and help some of the struggling mines in Cornwall.⁵⁶ In 1785 Boulton and Garbett instigated an ambitious method of safeguarding the profits of the industry through the establishment of the Cornish Metal Company for regulating output and prices to control the marketing of copper.⁵⁷ This was a clear attempt to replicate the successful organisational methods that had been utilised in Birmingham between 1781 and 1783 with the Birmingham Broad Street Brass House and Commercial Committee (Chapter Two). The new company was a revolt against the power of the smelters: it was created to purchase, arrange for smelting, and sell all the smelted ores of Cornwall so that their own products were cheaper to make.⁵⁸

⁵⁵ J. Harris, *Industrial Espionage*, 115.

⁵⁶ WCAR, MS3782/13/97, item 15: T. Wilson, *Wilson to Boulton* (14 April 1785).

⁵⁷ Wilson, *Wilson to Boulton* (14 April 1785).

⁵⁸ Harris, *The Copper King*, 54-60.

Not all Cornish mine owners were enthused about Birmingham's involvement; some felt that the Birmingham industrialists were encroaching on their territory and increasing their sphere of influence at the expense of the Cornish mine owners. To avoid competition with Thomas Williams in Anglesey an agreement, known as 'The Great Treaty', was signed between the company and the Anglesey industrialist to agree on prices and a division of markets.⁵⁹ The terms, however, were much more favourable to Williams and his Anglesey miners than for the Birmingham-influenced Cornish Metal Company. Even Boulton continued to purchase copper from Anglesey instead of his own companies in Cornwall, admitting that it 'is certainly a reproach to me or the smelters of Cornish ores.'⁶⁰

Whilst the Treaty officially solidified the alliance between Birmingham manufacturers, Cornish miners, and Williams in Anglesey, in reality it was more divisive than unifying. Thomas Williams took umbrage at Boulton's perceived infringement upon his business links in Cornwall.⁶¹ Meanwhile Boulton, in 1785, described Williams as the 'Copper King... the despotic sovereign of the copper trade: a perfect tyrant and not over tenacious of his word and will screw damned hard when he has got anybody in his vice.'⁶² James Watt also expressed a disdain for Williams, calling him the 'devil of lies.'⁶³ A power struggle for influence over Cornish copper emerged. The cheaper and better copper from Anglesey, plus the dominance of Williams' Welsh mines led to a crisis in Cornish copper mining, for which the Birmingham Commercial Committee members were blamed.⁶⁴ By 1787 the Cornish Copper

⁵⁹ Harris, "Williams, Thomas (1737–1802)."

⁶⁰ Boulton, *Boulton to Wilson*, (26 January 1785).

⁶¹ Coyle, *The Riches Beneath Our Feet*, 47.

⁶² Harris, *The Copper King*, 17.

⁶³ KKCA, AD1583/2/66: J. Watt, *Watt to Wilson* (17 May 1787).

⁶⁴ T. Ashton, *Iron and Steel in the Industrial Revolution* (Manchester: Manchester University Press, 1951), 207

Company was practically insolvent, and was taken over by Thomas Williams himself.⁶⁵ The failure of the Birmingham Commercial Committee members to exert their influence over Cornwall, only for Williams to take over and be more successful, suggests that much of the Commercial Committee's success in the early- and mid-1780s had been dependent upon Williams, rather than the other way around. In the same year that their ill-advised Cornish Metals Company was established, other threats to the brass founders' prosperity emerged. Prime Minister Pitt had a bold new vision for trade within the Empire, and Ireland was at the forefront of his ideas.

The 1785 Irish Propositions

The 1785 Irish Propositions of William Pitt, which caused great consternation among the Birmingham brass founders, have been explored in an article by James Livesey, as well as receiving considerable attention in the four volume autobiography of William Pitt by John Ehrman.⁶⁶ Ehrman proposes that trade relationships with India and Ireland were two of the most important issues facing Pitt when he became Prime Minister: he outlines how Pitt proposed to solve the contentious issues, as well as highlighting the resistance Pitt faced from manufacturing groups throughout England.⁶⁷ Livesey gives a detailed overview of the Propositions and the three different approaches and reactions to free trade models that formed in 1783.⁶⁸ The Irish Propositions had significant implications for the Birmingham brass

⁶⁵ Harris, "Williams, Thomas (1737-1802).

⁶⁶ J. Ehrman, *The Younger Pitt: The Years of Acclaim* (London: Constable and Company, 1969), 203-216; Livesey, "Free Trade and Empire," 103-127.

⁶⁷ J. Ehrman, *The Younger Pitt*, 203-216

⁶⁸ Livesey, "Free Trade and Empire," 103-127.

founders-who campaigned against them, fearing that Ireland could outdo many of the local trades in international markets.⁶⁹

Since the mid-seventeenth century Irish merchant groups had been severely restricted in their ability to trade freely. The numerous Navigation Acts of the 1660s reorganised how colonial trade should function to promote English industries, and Irish manufacturers suffered as a result. Additionally, a number of other measures were introduced. For example, the Staple Act of 27th July 1663 demanded that all European commodities heading to the Americas should be trans-shipped through England for inspection and organisation; the 1667 Importation Act (Cattle) excluded Irish meat from English markets; the Navigation Act in May 1671 prohibited imports, including sugar and cotton from English colonies, from being directly imported to Ireland; the 1699 Woollen Act prohibited the export of Irish woollens anywhere and restricted yarn sales to England, and the 1733 Molasses Act prohibited importation of sugar and all its derived products into Ireland.⁷⁰ In the mid-eighteenth century these restrictions were challenged as dissatisfaction in Ireland grew, as well as amongst free traders more broadly. The influential views of seventeenth-century merchants, such as John Cary and Josiah Child, who believed that the stimulation of the Irish economy would directly damage the English economy, were revised and reassessed by the political elite of Britain.⁷¹ Limited import freedoms were granted to the Irish by Prime Minister North in 1779, and his successor

⁶⁹ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁷⁰ J. Livesey, "Free Trade and Empire," 103-127.

⁷¹ K. Morgan, "Cary, John (1649-1719), merchant and writer," *Oxford Dictionary of National Biography* (September 2004), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-4840?rskey=urRiqA&result=2> (accessed 15 February 2021); R. Grassby, "Child, Sir Josiah, first baronet (bap. 1631-1699)," *Oxford Dictionary of National Biography* (January 2008), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-5290?rskey=oA8wIE&result=2> (accessed 15 February 2021).

William Pitt aimed to extend North's limited reforms to cover a much more extensive reorganisation of free trade as part of the 'retooling' of the state economy.⁷²

Livesey proposes that three contrasting ideas surrounding Irish trade emerged under Pitt. Firstly, the imperial free trade approach that was critical of monopolies but sought to organise trade to benefit the imperial metropole. Secondly, Smithian free trade saw open markets as a discipline that assured efficiency but required imperial institutional frameworks, legally secured, to function. Finally, Livesey outlines the neo-Machiavellian approach to free trade that asserted the rights of every political community to organise its trade according to its own interests.⁷³ Pitt was dedicated to a Smithian ideal, as he believed that strengthening Ireland's trade would reinforce Britain, enhance imperial power and avoid what had happened in America (Chapter Two), by aligning local and imperial interests, opposed to direct political control.⁷⁴ He believed that it was in the best interest;

To give Ireland an almost unlimited communication of commercial advantages if we can receive in return some security that her strength and riches will be to our benefit, and that she will contribute from time to time in their increasing propositions to the common exigencies of the empire.⁷⁵

⁷² P. Jupp, "The Landed Elite and Political Authority in Britain 1760-1850," *Journal of British Studies*: 29 (1990), 53-79.

⁷³ J. Livesey, "Free Trade and Empire," 103-127.

⁷⁴ J. Ehrman, *The Younger Pitt*, 203-216

⁷⁵ J. Livesey, "Free Trade and Empire," 103-127.

Pitt's approach was not popular amongst several trading groups in England and Ireland, including in Yorkshire and Lancashire.⁷⁶ In Ireland, many manufacturers believed that the reforms were not extensive enough and they would still be constrained in an English-dominated Empire. As the American rebels had emerged victorious in their War of Independence two years earlier, there were merchants in England who believed that Ireland's ability to trade with America undermined British politics, and that free trade would destabilize English monopolies thereby risking English jobs. Pitt's early drafts of the 1785 Proposals focused on a revision of the Navigation Acts, regulating certain duties to offer a measure of protection, as well as defining Ireland's position in foreign treaties. It was clear however that Pitt planned on going much further:

It is not enough ... we must, in order to make a permanent and tranquil system, find some line according to which the Parliaments of the two countries may exercise the rights of legislation, without clashing... it is certainly on general principles desirable that the system of commerce should be so arranged as to extend aggregate wealth of Great Britain and Ireland to its utmost limit, without partiality or preference to one part of the empire or the other.⁷⁷

Pitt attempted to find an acceptable compromise amongst the various conflicting economic positions, but succeeded in alienating English monopolists, Whigs, and Irish patriots. The

⁷⁶ WCAR, Boulton Papers; Henry Smeatham Letter to Matthew Boulton (25 April 1785).

⁷⁷ William Pitt, *Correspondence between the Right Honourable William Pitt and Charles Duke of Rutland, 1781-1787* (Oxford: Blackwood Publishers, 1936), 43-44.

Birmingham Commercial Committee wanted to maintain its preference, not share the wealth throughout a unified Britain and Ireland.

John Ehrman highlights how a General Chamber of Manufacturers was established in 1785 in opposition to the Irish Propositions.⁷⁸ Missing from his analysis is the role and influence of Birmingham brass founders within the General Chamber. As members of a group which was trying to monopolise a variety of brass products and techniques, the brass founders were against the Propositions, and the Birmingham Commercial Committee was actively involved in the movement against them. Dietz highlights how there was a great pride in the organisation and how many manufacturing groups were not deemed important enough for membership of the Chamber.⁷⁹ Birmingham's acceptance into the organisation suggests that the group was considered to be nationally significant, and it was a Birmingham Commercial Committee member, Josiah Wedgwood, who was the first chairman of the General Chamber of Manufacturers. Wedgwood wrote to Boulton, Watt and other brass founders about how to resolve the matter of the Propositions.⁸⁰ In 1785 Boulton, who was in a senior position within the group, instructed two of the most influential brass founders in Birmingham, Keir and Watt, to produce propaganda directly addressing the Irish Propositions-which resulted in a printed essay on restrictions placed on the copper industry.

⁷⁸ J. Ehrman, *The Younger Pitt*, 208.

⁷⁹ V. Dietz, "Before the Age of Capital," 139.

⁸⁰ E. Meteyard, *The Life of Josiah Wedgwood from his Personal Correspondence and Family Papers* (London: Hurst and Blackett, 1866), 509.

The target audience of the essay is unclear, but it was produced in pamphlet form so was probably designed to be widely distributed and thus raise awareness of the issue, which in turn raises questions about the accuracy of the content. Pamphlets are often propagandistic by nature, but Paul Russel argues that, despite their limitations, they are still useful indicators of social dynamics and the political intentions of different groups.⁸¹ As well as the printed edition there also exists a handwritten version, sent by Keir to Boulton for approval. In the pamphlet Keir and Watt were attempting to garner favour with the public in order to generate political pressure to safeguard their own industry and undermine the movement for free Irish trade. The pamphlet argues in a similar manner to the anti-Irish trade pamphlets produced by John Carey in the 1690s who believed:

Ireland is now destructive to the interest of England I think it will admit of little dispute, for as long as that people enjoy so free and open a trade to foreign parts, and thereby are encouraged to advance in their woollen manufacturers, they must consequently lessen ours.⁸²

The observations in Keir and Watt's printed essay about the brass and copper trades criticised Government policy and the Irish Propositions, whilst arguing why the 1779 PCOPEC should be lifted. The brass founders simultaneously wanted to trade freely, whilst restricting the ability of other groups to do so. One of the principal arguments made by the pair was that if products

⁸¹ P. Russel, *Lay Theology in the Reformation: Popular Pamphleteers* (Cambridge: Cambridge University Press, 2002), 6.

⁸² J. Cary, *A Discourse Concerning the Trade of Ireland and Scotland as they Stand in Competition with the Trade of England* (Bristol, 1696), 2.

made by Birmingham brass founders continued to be restricted whilst the Irish Propositions gave more freedom to Irish traders, Irish industrialists would overtake their production and replace Birmingham as a source of finished brass goods, creating a potentially disastrous situation for the Birmingham manufacturers. They concluded:

This Kingdom in general, & particularly to the petitioners & other manufacturers; as the Irish manufacturers will thereby be enabled to rival us in our own foreign markets, & the merchants of Ireland will be enabled to supply foreign countries with the materials, tools & machines before mentioned.⁸³

Previous histories of Birmingham have not considered the relationship between the 1779 PCOPEC and the 1785 Irish Propositions.⁸⁴ The mine owners in Country Wicklow, in Ireland, could have hypothetically provided large quantities of copper and weapons to enemies of the English. This would have been a concern for the British Government, especially following the nation's constitution of 1782, which restored legislative independence to the Parliament of Ireland, in addition to the anti-English rhetoric of politician Henry Grattan.⁸⁵ Whilst Pitt hoped his Propositions would placate Grattan and his followers, Keir and Watt speculated that Irish nationalist sentiment, combined with trade freedom, would lead to a political and economic

⁸³ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁸⁴ W. Aitken, "Brass and Brass Manufacturers," in *The Resources, Products and Industrial History of Birmingham and the Midland Hardware District*, ed. S. Timmins (London: Robert Hardwicke Publishing, 1866); W. Court, *The Rise of the Midlands Industries, 1600-1838* (Oxford: Oxford University Press, 1938); E. Hopkins, *Birmingham – The First Manufacturing Town in the World*, (Birmingham: Weidenfeld and Nicolson Publishing, 1989).

⁸⁵ A.V. Dicey, "The Irish Constitution – Nature of the Parliament," in *Comparative Constitutionalism*, ed. J. Allison (Oxford: Oxford University Press, 2013), 328.

alliance with France.⁸⁶ It was also argued that Ireland was engaged in the smuggling of weapons of war to enemies of Britain, although no evidence for this practice is provided.⁸⁷ These arguments were theoretical, but fear-mongering became a recurring theme throughout the public rhetoric of the Birmingham brass founders in the second half of the 1780s.

In their pamphlet, Keir and Watt also drew attention to developments in France which gave preference to Swedish, Russian, and Hungarian copper, or purchased the copper from Spain, where considerable quantities were imported from Latin America:

The Russians, Swedes and Hamburgers (sic) who had never before thought of rolling copper procured rolls from England with which they made Copper sheets and furnished the navies of France, Spain & Holland with sheathing as well as private manufactures of those countries that had occasion for sheet copper... England who had before Rolled Copper for all Europe & obtained the preference in every market then lost the benefit of the valuable manufacture, with full thirty cent loss upon the goods of immense stock left from upon hand, without the means of vending them. The hope of peace, with a repeal of that prohibition alone could keep her mines open. ⁸⁸

⁸⁶ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁸⁷ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁸⁸ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

Their analysis illustrated several important themes: firstly, their firm belief that strict exportation rules regarding copper were detrimental to both British manufacturers and British miners. Secondly, that rival nations could potentially flourish in the place of Birmingham manufacturers and were potentially forming anti-British alliances. Thirdly, that rising international tensions were significantly contributing to fluctuating copper prices, rather than a natural lull in the copper industry.⁸⁹ Keir and Watt had created a desperate image of the brass trade to disseminate in the public sphere. It was not an accurate image, however. Chapter One demonstrates that the brass industry in Birmingham was growing steadily. Keir and Watt exaggerated problems by playing on fears of social revolutions and radicalism, as well as highlighting foreign competition.⁹⁰ By the late 1790s pamphlet production became integral to the tactics employed by the pressure group within Birmingham (Chapter Five), suggesting that pamphlets were perceived as a successful means of influencing political and public opinion. The combined national movement against Pitt's proposals, as well as opposition in Ireland, ultimately led to the defeat of the 1785 Propositions - which Ehrman believes was a moment of significant crisis for Pitt during imperial reorganisation after the American War.⁹¹ Whilst the brass founders were by no means the most important factor in the failure of the Propositions, they were certainly active participants in the national conversation, and by co-ordinating with other industrial groups (such as commercial groups in Sheffield and Manchester), they made notable contributions within a wider narrative and were engaging with the political elite more frequently during the 1780s. The brass founders were to play an even greater role in the introduction of the Tool Acts of 1785 and 1786,

⁸⁹ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁹⁰ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

⁹¹ J. Ehrman, *The Younger Pitt*, 203-216; J. Livesey, "Free Trade and Empire," 103-127.

demonstrating their speed and flexibility in co-ordinating industrial action and lobbying on multiple issues at the same time.

The Tool Acts of 1785 and 1786

At a similar time to the debates surrounding Ireland, as well as the Cornish mining conflicts, the brass founders of Birmingham pushed for further restrictions to laws relating to the exportation of tools and skilled artisans, as they tried to stem the exodus of metal workers from the town. Pressure from different industrial centres, including metal workers in Birmingham and Manchester, resulted in the Tool Acts of 1785 and 1786 which have been covered by John Harris in his research on industrial espionage.⁹² David Jeremy also covers the period after the loss of the American colonies, when the Government attempted to stop the surge of skilled workers leaving Britain for better prospects.⁹³ Jeremy highlights how, following a period of crisis in the British Empire, maintaining industrial secrets and skilled workmen was a priority for Pitt and his Government.⁹⁴ This chapter builds on the work of Harris and Jeremy by more explicitly relating the impact of the Tool Acts on Birmingham brass founders specifically, and the importance of the Acts in relation to the 1779 PCOPEC, as well as the Irish Propositions. It is also important to consider the impact that the Tool Acts had on the relationship between mine owners in Cornwall and Birmingham brass founders. These different controversies and their links are outlined throughout this research, building on the

⁹² J. Harris, *Industrial Espionage*, 461-472.

⁹³ Jeremy, "Damming the Flood," 1-34.

⁹⁴ Jeremy, "Damming the Flood," 1-34.

foundation of work that already exists, and expanding on it through the case study of Birmingham brass founders.

As a result of the difficulties of the 1779 PCOPEC, rising tensions with the Cornish mining community and Thomas Williams, as well as the uncertainty surrounding the Irish Propositions, workmen continued to leave Birmingham for prospects abroad – as first described in Chapter Two. Strict rules had been introduced in the Tool Acts of 1719, which stated that no skilled artisan or manufacturer was legally free to leave Britain or Ireland and enter any foreign country outside the Crown’s dominion for the purpose of carrying-out his trade.⁹⁵ These laws were primarily related to the textiles industries of England. Birmingham trades had not specifically been mentioned, and the metal industry restrictions were not as exhaustive.⁹⁶ The rapid expansion of the Birmingham brass industry since 1719 meant that these laws needed updating; the industrial and political landscape of Britain was evolving and would eventually culminate in the 1832 Great Reform Act – but in the fifty years before that there was a slow building of pressure for reform in the industrial towns as they expanded.⁹⁷ The lack of specificity regarding skilled metalworkers, combined with the 1779 PCOPEC and the Irish Propositions, created a perfect storm for the Commercial Committee of Birmingham. The brass founders were confronted with three main problems: export restrictions due to the 1779 PCOPEC, the prospect of the Irish manufacturers overtaking them, and the loss of metalworkers who could emigrate relatively easily from Birmingham as they had never technically been classified as ‘skilled.’ Often these workers took tools and machines with them

⁹⁵ J. Harris, *Industrial Espionage*, 469.

⁹⁶ J. Harris, *Industrial Espionage*, 470.

⁹⁷ E. Evans, *The Great Reform Act of 1832* (Abingdon: Routledge, 1988), 24.

when they left the country, jeopardising the advantage Birmingham had in brass and copper manufacturing.⁹⁸

Harris outlines three main factors that made British tools and machinery superior: cost competitiveness, superior construction, and improved design.⁹⁹ Cost competitiveness was increasingly difficult to maintain because of fluctuating prices during prolonged periods of war (Chapter Two), and Birmingham brass founders needed to ensure that they maintained superior design and construction of their products. Keir and Watt, in their essay on the Irish Propositions, alluded to this, claiming that ‘the cast iron hammers for forging of copper, or of Iron, are made better in England than in any other country.’¹⁰⁰ Samuel Garbett echoed their sentiment in a letter to Matthew Boulton in 1786, asserting that ‘rollers for rolling copper & iron are made very much better in many respects in England than in any other country.’¹⁰¹ The inclusion of both issues in the same letter demonstrates the interconnectedness of these different controversies. It was vital that Birmingham brass founders restricted the flow of individual workers, and the tools they were taking with them, out of England as their competitive edge depended upon it.

The brass founders attempted to tackle the issue by a variety of methods. Firstly by innovation: Garbett claimed that ‘new tools, utensils or engines are frequently invented at Birmingham,’ to try and stay ahead of the competition.¹⁰² Secondly, the Commercial

⁹⁸ J. Harris, *Industrial Espionage*, 475.

⁹⁹ J. Harris, *Industrial Espionage*, 461.

¹⁰⁰ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

¹⁰¹ Garbett, *Letter to Matthew Boulton relating to the Tool Act* (19 June 1786).

¹⁰² S. Garbett, *Letter to Matthew Boulton relating to the Tool Act* (19 June 1786).

Committee publicly offered financial rewards to anyone who informed them of brass founders who intended to leave England.¹⁰³ Thirdly, the bailiffs of Birmingham were paid to go to port towns to search ships, and individual tool bags so that any worker found attempting to leave, or smuggle tools, would be brought back to face prosecution: one example was a Birmingham-based japanner who had been to Amsterdam.¹⁰⁴ Fourthly, there was an active attempt within Birmingham to identify and locate foreign merchants in local pubs who were trying to entice brass founders away-a tactic that was successful as a number of these men were discovered.¹⁰⁵ Fifthly the brass founders demanded that Parliament adjust its definition of skilled artisans, improve its methods of detecting workers who were leaving England, and instil a greater policy of deterrence tailored to metalworkers specifically.¹⁰⁶ The efficacy of the first four strategies is difficult to assess, although clearly there were successful examples of each, but the petitioning of Parliament was certainly successful as the Board of Trade quickly updated Tool Acts in 1785 and 1786. The Government forbade foreign vessels from sailing without their captains submitting a list of passengers to a port office, which included names, ages, occupations, and nationalities, identifying metalworkers by their tool bags, then prosecuting them.¹⁰⁷ This is the first example of the Birmingham brass founders successfully petitioning for legislative change, suggesting that either they were becoming more effective or influential or the Government recognised the importance of their trade.

¹⁰³ Birmingham City Archives (BCA), 358810, *Reports of the Meetings of the Commercial Committee* (25 January 1785).

¹⁰⁴ Aris's Birmingham Gazette (18 August 1782).

¹⁰⁵ G.H. Wright, *Chronicles of the Birmingham Commercial Society (1783-1812)*, (Birmingham, 1913).

¹⁰⁶ BCA, *Reports of the Meetings of the Commercial Committee* (25 January 1785).

¹⁰⁷ J. Harris, *Industrial Espionage*, 461.

The Birmingham Commercial Committee's increased effectiveness at influencing Government policy may be related to the personal and professional links formed by the Commercial Committee during the 1780s; in addition to the industrial links of Williams, Samuel Garbett was in regular contact with Lord Shelburne, whilst Matthew Boulton received advice from his neighbour, the Earl of Dartmouth. William Legge, the second Earl of Dartmouth had been the First Lord of Trade, and Secretary of State for the Colonies during the American War of Independence; he remained in Government until 1782.¹⁰⁸ William Petty, Lord Shelburne, had been Prime Minister during the final months of the American War of Independence and had a fierce dislike of his former political protégé Pitt.¹⁰⁹ Dietz has highlighted how correspondence between Garbett and Shelburne increased exponentially after he was forced to resign from office in 1783 and how Shelburne 'became a valuable sounding board for Garbett's ideas on political and economic matters.'¹¹⁰ The political insights given to the brass founders of Birmingham by former politicians and political rivals of Pitt's administration gave the Commercial Committee vital insights into how the political machine worked – and coincided with their first success with the Tool Acts of 1785 and 1786. Garbett had specifically asked for advice from Shelburne on the issue of 'many administrators in Europe who give attention to our manufacturers... and encourage our artists to settle in their country.'¹¹¹ He also thanked Shelburne for vital information he had gathered for Birmingham, including how to present applications to ambassadors, as well as advice relating to

¹⁰⁸ P. Marshall, "Legge, William, Second Earl of Dartmouth (1731-1801)," *Oxford Dictionary of National Biography* (September 2004), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-16360?rskey=DLAeqd> (accessed, 29 March 2021).

¹⁰⁹ V. Dietz, "Before the Age of Capital," 89.

¹¹⁰ William Clements Library, University of Michigan (WCL), 2nd Earl of Shelburne Papers, ff.95; *Garbett to Shelburne* (28 October 1785).

¹¹¹ WCL, ff. 100; *Garbett to Shelburne* (30 October 1785).

intervening in ministerial affairs.¹¹² Meanwhile Dartmouth continued to use his political contacts in Parliament to sign petitions and apply pressure on Pitt on behalf of Birmingham manufacturers.¹¹³ The political lobbying and scheming of the Birmingham manufacturers often had a detrimental effect on other groups; Harris outlines how the Tool Acts mitigated against the interests of merchant groups in London and within the Cornish mining community.¹¹⁴ Whilst Pitt focused on the wider interests of the trade empire, brass founders were unconcerned. The Birmingham Commercial Committee members were happy to restrict the free movement of their own work force, campaigning against free trade of Irish manufacturers and other trading groups, whilst demanding that they themselves were free to trade as they wanted. Their new political contacts advised them on how to achieve these means.

The behaviour of the Birmingham brass founders after the introduction of the Tool Acts for which they had petitioned, reveals their hypocrisy: they repeatedly broke the new laws when it suited them. Boulton and Watt in particular were notorious for this: for example, they ensured their own steam engine was exempt from the new laws that restricted the export of tools and machinery. They continued to sell their engines to Spain in 1786, which was damaging to the Cornish mining community, creating further tensions between Birmingham brass founders and Cornish mine owners. Watt persisted in selling his steam engines to mining groups based in St. Petersburg as late as 1806.¹¹⁵ Boulton also ensured his minting machinery

¹¹² V. Dietz, "Before the Age of Capital," 99.

¹¹³ National Archives, Papers of the Legge Family, Earls of Dartmouth, number 1120; *Dartmouth to Boulton* (13 January 1785).

¹¹⁴ J. Harris, *Industrial Espionage*, 468.

¹¹⁵ J. Harris, *Industrial Espionage*, 491-495.

was exempt from the Tool Acts in 1799 and William Collins and John Westwood, who had helped Thomas Williams create copper bolt technology, smuggled copper to French merchants.¹¹⁶ Jennifer Tann has concluded that Boulton attempted to portray himself as a patriot but was a 'perfect weathercock... turning wherever his momentary personal interest dictated... a businessman first, and an Englishmen second.'¹¹⁷ When considering the Irish Propositions and Tool Acts in the mid-1780s, this is evidently true of the Birmingham Commercial Committee as a whole. This stance continued to affect their relationship with Cornwall industrialists, whose trade they continued to damage by selling engines to the copper mine owners of their competitors.

Early Exchanges and Arguments (1790)

The ill-feeling in Cornwall towards Birmingham brass founders as a result of the Cornish Metal Company, introduction of the Tool Acts, and the sale of mining equipment, led to instances of rioting by Cornish miners, especially after Boulton interfered in issues of over-supply and over-mining of copper.¹¹⁸ James Watt wrote to John Wilkinson in 1787 of an incident where four hundred miners downed tools and threatened the safety of Boulton over their low wages. Physical injury to Boulton was only averted after he made a donation of twenty guineas to provide alcohol for them.¹¹⁹ Fearing for the safety of his engines, Watt instructed

¹¹⁶ J. Harris, *Industrial Espionage*, 276.

¹¹⁷ J. Tann, Marketing Methods in the International Steam Engine Market: The Case of Boulton and Watt," *The Journal of Economic History*: 38: 2 (June 1978), 363-391.

¹¹⁸ S. Tungate, "Matthew Boulton and the Soho Mint: Copper to Consumer," (University of Birmingham PhD Thesis, 2010), 79

¹¹⁹ KKCA; AD1583/2/66; M. Boulton, *Boulton to Wilson* (11 October 1787).

a manager in one of his mines to 'get some sober man to defend the engine.'¹²⁰ By the late 1780s, despite the Birmingham Commercial Committee's increased political influence, it was evident that Williams was gaining the upper hand in the struggle for dominance of the industry, as Birmingham brass founders became deeply unpopular in Cornwall for their rising influence, failed leadership of the Cornish Mining Company, and low pay for miners.

It is surprising that such a strong animosity emerged so quickly, since Williams and Boulton had started to manufacture their own copper coins together. The public's enthusiastic reception of Williams' and Boulton's prototype coins led to the opening of numerous other private mints, which eventually supplied Great Britain with hundreds of tons of copper pennies, halfpennies, and farthings.¹²¹ They also signed a non-competition deal in 1788 which stipulated that Williams agreed not to seek a Government coinage contract but to supply the copper to Birmingham, which ensured supplies for Boulton's other businesses.¹²² Despite this profitable relationship, the tension between the two industrialists became palpable in the final two years of the 1780s, as both men attempted to boost their respective businesses and Williams took control of the Cornish Mining Company.¹²³ Williams, who had traditionally been associated with Anglesey mines, expanded his ventures to Cornwall and became the single most important individual campaigning on behalf of Cornish mining interests.¹²⁴ He was a Member of Parliament, the richest man in Wales, and had many friends within the Whig party.¹²⁵ Williams' growing domination would prove to be the biggest obstacle to the

¹²⁰ Boulton, *Boulton to Wilson* (11 October 1787).

¹²¹ C. Goodhart, "Prologue," in *Good Money: Birmingham Button Makers, the Royal Mint, and the Beginnings of Modern Coinage 1775-1821*, ed. G. Selgin (Ann Arbor MI: University of Michigan Press, 2008), xi.

¹²² J. Tann, "Matthew Boulton – Innovator," in *Matthew Boulton, Enterprising Industrialist of the Enlightenment*, eds. K. Quickenden, S. Baggott and M. Dick (Abingdon: Routledge, 2013), 48.

¹²³ https://www.gracesguide.co.uk/Cornish_Metal_Co (accessed 11/04/2020).

¹²⁴ Harris, "Williams, Thomas (1737–1802)."

¹²⁵ Harris, "Williams, Thomas (1737-1802)."

influence and prosperity of Birmingham brass founders since the 1779 PCOPEC. Harris concludes that he had gained a virtual monopoly over the copper industry between 1788 and 1792.¹²⁶ After the Irish Propositions had failed, Tool Acts had been introduced, and Cornish unrest had settled, the Commercial Committee focused on a propaganda campaign against William and his monopoly in the early 1790s.

Between the mid-1780s and mid-1790s, Williams manoeuvred his way into controlling the price of copper within Britain; this coincided with a trend of increased copper prices, which in turn led to spiralling costs for the manufacturing products of Birmingham brass founders. Records of the average price of mined copper from Gwennap sold to the East India Company from Cornwall is revealed in Fig. 3.1. The details were sent to the Birmingham Broad Street Brass House with a note apologising for the rapidly-increasing costs of copper as it had nearly doubled in price during the ten-year period after Williams gained control of the Cornish Metals Company in 1787:

¹²⁶ J. Harris, *The Copper King: A Biography of Thomas Williams of Llanidan*, 88-107.

| Year | Average Price of Copper in Cake, per Ton |
|------|--|
| 1787 | 70 d |
| 1788 | 74 d |
| 1789 | 79 d |
| 1790 | 78 d |
| 1791 | 84 d |
| 1792 | 105 d |
| 1793 | 103 d |
| 1794 | 96 d |
| 1795 | 96 d |
| 1796 | 106 d |
| 1797 | 106 d |
| 1798 | 108 d |
| 1799 | 138 d |

Table 3.1. WCAR, MS3782/13/97, item 37: *Average Prices of Copper sold to the East India Trade Company (1787-1799).*

It is unclear who compiled these statistics, but the rhetoric from Birmingham and Cornwall suggests that prices were increasing at an alarming rate: Williams wrote to Boulton in 1790 telling him that he intended to continue raising prices of copper.¹²⁷ Much of the debate in the first two years of the 1790s between Williams, Cornish miners, and Birmingham brass founders centred on the cause of the rise in copper prices. Williams stated that high prices were due to unstable international conditions and war; Cornish miners argued that copper prices needed to be raised to pay miners; Birmingham brass founders countered these claims by highlighting Williams' monopoly and greed.¹²⁸ In response to the growing influence of Williams and the increased price of copper, the Birmingham manufacturers mobilised a co-

¹²⁷ WCAR, MS3782/12/87, item 26; Williams to Boulton (17 February 1790).

¹²⁸ RCCT (7 May 1799), 3-54.

ordinated and aggressive lobbying movement against Cornwall and Williams, in which they utilised all their political contacts.

Since the establishment of the Broad Street Brass House and Birmingham Commercial Committee, large group meetings between brass founders had become an important tool with which to address shared industrial grievances. Exact numbers and attendees were not recorded, but the printed resolutions produced from these meetings shed light on the way in which businesses interacted with one another and how change was organised. The meetings were also covered in the press, suggesting that the brass founders' attempt to raise the profile of the issue had been successful. John Langford, quoting *Aris's Birmingham Gazette*, mentions various meetings between copper and brass manufacturers in the Shakespeare pub between 1788 - 1792, and how the attendees communicated their grievances to William Pitt through letters sent by influential members of the group after resolutions had been outlined.¹²⁹

One such meeting in 1790 acted as a catalyst that sparked the brewing tensions between Birmingham, Williams, and Cornwall into an outright conflict. The gathering occurred in an unnamed hotel in Birmingham on 1 April and was attended by 'manufacturers and others concerned in the consumption of copper and brass.'¹³⁰ The summary of the meeting was printed in local newspapers and sent as pamphlets to local businesses, as the campaign by the pressure group continued to gain momentum and coverage:

¹²⁹ J. Langford, *A Century of Birmingham Life: Or, A Chronicle of Local Events, from 1741-1841* (Birmingham: E. Osborne, 1868), 20.

¹³⁰ WCAR, MS3782/13/97, item 1: *Resolutions of Manufacturers & others, relative to Copper and Brass, at the Hotel* (1 April 1790).

That as manufacturers we have for many years been much distressed by the fluctuation in the price of copper and are now in great difficulties in consequence of the present price. That it would be highly beneficial to the manufacturers of this town to have the price of a raw material of so much consequence to them as copper fixed as low as the state of the copper trade will admit.¹³¹

The objective was evident: the manufacturers of Birmingham wanted to force the Government into fixing the price of copper to avoid the uncertainty of fluctuation. The conclusions and plans made during this meeting, and the publication of the resolutions, led to a decade of intense rivalry between the mine owners of Cornwall and brass manufacturers of Birmingham.

Birmingham brass founders and the Commercial Committee began campaigning for regulations on the price of raw copper. Newspapers, such as *Aris's* and *Swinney's Birmingham and Staffordshire Chronicle*, were utilised to raise the profile of the issue through the publication of official statements.¹³² This provoked a furious reaction from individuals who had invested in the Cornish mines. In direct response to the beginning of this campaign, a public letter from Cornwall was sent to the Midlands through *Aris's* addressing the 'Manufacturers of Birmingham and its Neighbourhood.'¹³³ It was written on behalf of an individual referred to only as Mr P, a Cornish mine owner, who had taken great exception to an article printed by 'an inhabitant of Birmingham.'¹³⁴

¹³¹ *Resolutions of Manufacturers & others, relative to Copper and Brass, at the Hotel* (1 April 1790).

¹³² WCAR, MS3782/1, item 16: *Birmingham Consumers of Copper, what we want from Parliament*.

¹³³ WCAR, MS3782/13/97, item 8: *To the Manufacturers of Birmingham in Answer to An Inhabitant* (1790).

¹³⁴ *To the Manufacturers of Birmingham in Answer to an Inhabitant* (1790).

The identity of Mr. P can only be guessed, but potential candidates include a land owner in Cornwall called Mr John Penrose.¹³⁵ There are also references to a Mr. Pascoe in a letter regarding Cornish mines in 1792, as well as to a Cornish mine expert by the name of Pascoe Grenfell.¹³⁶ Whoever Mr. P was, it is clear from his letter that the mine owners of Cornwall saw Birmingham's intentions as a betrayal of their existing relationship, as well as a direct and slanderous attack on their business etiquette and personal integrity. The letter from the elusive Mr. P is directed towards another unnamed man, but it is insinuated that he is addressing George Simcox, the prominent brass founder who was heavily involved in the establishment of the Commercial Committee (Chapter Two). Whilst the letter attacks no individual specifically, there is no disguising the thinly veiled aggression and indignation directed towards all manufacturers of Birmingham:

Gentleman, one who signs himself "an inhabitant of Birmingham" having printed and published some wild ideas and still wilder falsehoods that will probably create jealousies and dissensions between manufacturers and owners of copper, permit me to state the truth in a few main facts.¹³⁷

The information included in the open letter paints a far different picture from that presented by the Birmingham manufacturers; despite the obvious fury the letter is articulate, providing persuasive arguments and alternative statistics:

¹³⁵ KKCA, AD1583/5/61: J. Vivian, *Vivian to Wilson regarding Hornblower's Engine at the Wheal Wherry, Penzance* (16 November 1792).

¹³⁶ Mr. P, *To the Manufacturers of Birmingham in Answer to an Inhabitant* (1790).

¹³⁷ Mr. P, *To the Manufacturers of Birmingham in Answer to an Inhabitant* (1790).

If you will examine the prices of copper during that state of fluctuation you will need no assentation of mine to prove that the present price is not so high as the average. For upon referring to the last thirty years you will find that the average was about £90 per ton. The price now is £84 per ton...

He afterwards roundly asserts that you will find English Copper sold in foreign markets for £14 per ton less than it is sold for in Birmingham. This bold ridiculous falsehood gentlemen scarce merits notice, otherwise than as it may mislead many who have not opportunity or time for enquiry.¹³⁸

Throughout the letter multiple accusations are made, but the crux of the argument is that the Birmingham manufacturers were lying about the state of the copper trade and high price of Cornish copper. In other words, copper prices were reasonable and that Birmingham manufacturers were simply self-serving and trying to reduce manufacturing costs. This letter was sent directly to the Commercial Committee, but was also published in *Aris*; as such it shows the wider recognition of the Commercial Committee and its importance.¹³⁹ Wider public interest in the debates continued to occur in the press throughout the 1790s. Exaggeration of the truth was a characteristic of Birmingham manufacturers when speaking of their industry; Boulton's estimation that ten thousand people were dependent on the copper trade for income, or Keir and Watt's unsubstantiated claims about Ireland are two

¹³⁸ Mr. P, *To the Manufacturers of Birmingham in Answer to an Inhabitant* (1790).

¹³⁹ Mr. P, *To the Manufacturers of Birmingham in answer to an inhabitant* (1790).

such examples.¹⁴⁰ Many of the facts Birmingham had been presenting to the general public were fiercely contested and challenged.

In 1790 a letter sent by Thomas Wilson, James Watt's representative in Cornwall, appeared in newspapers which had printed Cornish perspectives on the dispute. Wilson wrote: 'Mr Printer Sir, an advertisement respecting steam engines having appeared in your paper of the 24th, which is more composed of abuse and false insinuations than argument, or fair reasoning.'¹⁴¹ This demonstrates an attempt in regional and national media to influence the dispute. From the letters chosen for print, Birmingham industrialists were not being portrayed positively: 'Had I been less accustomed to the abuse, unfair statements and vain boastings... I should have been surprised at their advertisement in your paper of the 24th.'¹⁴² It appears that, at least for a time, the Birmingham manufacturers of brass were being covered by some newspapers in a less favourable light than the Cornish miners. The use of pamphlets and newspapers was a significant tool in the practice of industrial politics in the early 1790s, both to raise the profile of the groups and to maintain interest in the grievances they wanted to address. The Cornish owners of copper mines argued that their product and services were superior to those of many other mines and that their prices were always relative to the market conditions of the time.¹⁴³ The Birmingham manufacturers claimed that the Cornish miners were excessively greedy by taking advantage of the restrictions placed on the copper industry

¹⁴⁰ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785); WCAR, MS3782/13/97, item 39:M. Boulton, *Boulton letter* (1800);

¹⁴¹ KKCA, AD1583/5/44: T. Wilson, *Wilson to Printer Regarding Printing an Answer to Hornblower* (25 September 1792).

¹⁴² KKCA, AD1583/5/45: J. Watt, *Watt to Printer Answering the Advertisement Placed by Hornblower* (26 September 1792).

¹⁴³ Mr. P, *To the Manufacturers of Birmingham in answer to an inhabitant* (1790).

to further their own interests and fortunes. In one such pamphlet George Simcox wrote that the:

Productive mines in Cornwall (which are allowed to be the most expensive mines in Britain) have made more than 65 percent of the money employed therein, & that over and above the dues paid to the lords or proprietors of the mines; the amount of which has been equal to all the aforementioned profits received by the adventurers.¹⁴⁴

The Cornish mine owners fervently denied any wrongdoing and addressed the Birmingham grievances as lies and slander, claiming that it was the Birmingham industrialists who were driven by money. Mr. P had been insulted by the insinuation that the Cornish mines were ‘false friends’ to purchasers of copper.¹⁴⁵ His address to the Birmingham manufacturers, published in 1790, demonstrates that the copper-miners and mine owners felt that their own morality and character were unfairly being called into question – as he also defended Thomas Williams from the Birmingham attacks:

Insidious abuse I leave to the addresser, though he has thought fit to introduce with most unwarrantable insinuation an individual who is best entitled to your esteem for his public spirit and manly conduct in the copper trade... I call upon Birmingham to rescue that gentleman from the malevolent attack.¹⁴⁶

¹⁴⁴ WCAR, MS3782/13/97, item 18: G. Simcox, *The Copper Trade* (1795).

¹⁴⁵ Mr. P, *To the Manufacturers of Birmingham in answer to an inhabitant* (1790).

¹⁴⁶ *To the Manufacturers of Birmingham in answer to an inhabitant* (1790).

Whilst there was clear outrage, there was also a call to rescind the accusations, which could be considered an attempt to defuse the situation. In the early stages of the conflict, it seemed that there was a chance for reconciliation. The Birmingham brass founders however refused to change their tone and the dispute quickly and unceremoniously turned into a public smear campaign, but one in which private insults were also exchanged.

Williams received most of the blame from the Birmingham industrialists for the escalating situation, but miners and mine owners were also criticised. James Watt wrote to Thomas Wilson to criticise members of the Cornish mining community:

Mr Harris's behaviour is consistent with his character and like a fool and a knave - as to Tincroft it is as expected, and we must prepare for the contest. The conduct of your independent miners is inconsistent with common sense and must end in their loss if the majority join with Mr Williams.¹⁴⁷

George Simcox was particularly prolific and vocal, producing arguments upon the subject of the Copper Acts and involving himself in arguments with specific individuals:¹⁴⁸ He even wrote to Matthew Boulton asking for advice on how to tackle a Mr Evatt with whom he had a dispute.¹⁴⁹ The attacks did not go unnoticed by the general public or newspapers. A retrospective review of the copper trade dispute, printed in 1800 by London publisher George

¹⁴⁷ KKCA, AD1583/4/36: J. Watt Letter, *Watt to Wilson Regarding the Prospect of the Independent Miners Joining with Mr Williams*.

¹⁴⁸ WCAR, MS3782/13/97, item 13: G. Simcox, *Mr. Simcox's Arguments Upon the Subject of the Copper Act* (1791).

¹⁴⁹ WCAR, MS3782/13/97, item 24: G. Simcox, *Letter from George Simcox to Matthew Boulton about a Dispute with Mr. Evatt* (1791).

Woodfall, claimed that attempts were repeatedly made by the Birmingham manufacturers throughout the 1790s to 'render the cause of the miners unpopular, by representing that they are possessed of a monopoly, and are making great fortunes.'¹⁵⁰ The negative press attention in this conflict is similar to the coverage of Birmingham petitioners during the American War of Independence (Chapter Two), suggesting that the public image of the Birmingham brass founders had not improved.

In response to the Birmingham accusations of 'knaveish' behaviour, the Cornish mine owners argued that if adventurers were unable to make money then there would be no copper industry at all. The risks to the adventurers were great, and mine collapses and injuries were frequent. The dangers faced by copper miners were highlighted in a series of watercolour paintings, produced between 1785 and 1790, by the eighteenth-century artist Julius Caesar Ibbetson. In these images Ibbetson captured the precarious and hazardous conditions of a Williams-owned mine in Wales. Whilst paintings must be treated with caution as evidence, Ibbetson has been praised by his contemporaries, as well as art historians, for the thoroughness and accuracy of his landscapes.¹⁵¹ Ibbetson was hired as a draughtsman by the first British Embassy in Peking for the accuracy of his paintings of animals and landscapes and commissioned to do several series for the Royal Academy to showcase beautiful landscapes in China, the Cape of Good Hope, and Wales.¹⁵² His series were popular and received critical acclaim by reviewers and the public alike.¹⁵³ Two paintings from the Royal Academy series, figs 3.1 and 3.2, were produced during the height of the conflict between Cornish miners and

¹⁵⁰ WCAR, MS3782/13/97, item 36: G. Woodfall, *Copper-Trade, A Short Review of the Contest* (1800).

¹⁵¹ J. Mitchell, "Julius Caesar Ibbetson (1759–1817)," *Oxford Dictionary of National Biography* (2004), <http://www.oxforddnb.com/view/article/29912> (accessed 19 January 2019).

¹⁵² Mitchell, "Ibbetson, Julius Caesar (1759-1817)."

¹⁵³ Mitchell, "Ibbetson, Julius Caesar (1759-1817)."

the Birmingham brass founders and depict the large caverns of the Parys mines. They create a palpable sense of danger by showing the conditions in the mines, the hardships faced by the miners and the lack of safety equipment, with men dangling precariously above precipices.



Fig 3.1. National Museum Wales, Cardiff, NMWA17501: J. C. Ibbetson, *Open Working At Parys Mine* (1785) © Amgueddfa Cymru - National Museum Wales.



Fig 3.2. National Museum of Wales, Cardiff, NMWA17502: J. C. Ibbetson, *One of the Copper Mines at Parys Mountain* (1790) © Amgueddfa Cymru - National Museum Wales.

In addition to the physical perils that miners faced daily, long-term health conditions were also a problem: Gillian Burke and Peter Richardson have explored the health dangers faced by Cornish miners, especially from lung disease, as a result of mining copper.¹⁵⁴ These complications were well-documented in the eighteenth century and the miners would have known of the dangers they faced. In the sixteenth century, Georgius Agricola outlined in *De Re Metallica* the health conditions of men who mined for metals in the Carpathian Mountains.¹⁵⁵ B. Ramazzini wrote in 1705 about research conducted on metalworkers, that ‘this imprisoned air taken in at the mouth for the use of respiration, is loaded with particles

¹⁵⁴ G. Burke and P. Richardson, “The Profits of Death: A Comparative Study of Miners Phthisis in Cornwall and the Transvaal 1876-1918,” *Journal of Southern African Studies*: 4: 2 (1978), 147-71.

¹⁵⁵ G. Agricola, *De Re Metallica*, *Translated from the First Latin Edition of 1556*, trans. H. Hoover and L. Hoover (New York: Dover Publications, Inc., 1950), 214.

very injurious to the Lungs, brain and Spirits, which joyning (sic) in with the mass of bloods and spirits, produce all the evils the workmen complain of.'¹⁵⁶ As a result of the well-known dangers to adventurers, Cornish miners argued that fixing copper at low prices:

...must utterly destroy the spirit of adventure so essentially necessary to mining...
 who will adventure in a lottery, if there be no capital prizes? Who will adventure
 in a mine, if a good one, which discovered, is to be taxed to support the bad ones
 for the benefit of manufacturers?¹⁵⁷

Whilst publicly this notion was dismissed, in a private correspondence Boulton revealed a begrudging respect for the adventurers' determination to contest Birmingham brass founders: 'as they would not have submitted to be kicked and piss'd on by me.'¹⁵⁸

The Cornish mining community proved to be a stern test of the public image of the brass founders, one which had been established during the American War of Independence (Chapter Two). The mine owners employed both economic arguments, as well as producing a sympathetic front based around the concept of a noble, hardworking profession. The mine owners were in a strong position to negotiate a deal, as they were in control of the key product. George Woodfall highlighted how the Cornish mine owners attempted to portray the Birmingham merchants as indifferent to the plight of the brave Cornish miners, accusing them of being greedy and attempting to monopolise the industry.¹⁵⁹ This counter-argument

¹⁵⁶ B. Ramazzini, *A Treaty of the Diseases of Tradesmen* (London, Ralph Smith, 1705), 10.

¹⁵⁷ Woodfall, *Copper-Trade, A short review of the contest* (28 March 1800).

¹⁵⁸ M. Boulton, *Boulton Letter* (1800).

¹⁵⁹ Woodfall, *Copper-Trade, A short review of the contest* (28 March 1800).

hinged on the idea that it was in fact Birmingham's huge consumption of copper for use in the brass trade that was the primary reason for the rising prices of the metal, especially as the quantity of copper being mined was dropping throughout this period. This fact seemed undeniable, and whilst it was rare for either side to admit any fault of their own in these disputes, the Birmingham brass manufacturers were forced to concede this truth: that 'the town had bought more than their share, or 1/11th of the Cornish ores.'¹⁶⁰ In the early exchanges of the conflict it seemed as though the Cornish community had a strong argument and defence with which to work, and it was much easier to argue that Birmingham manufacturers were attempting to dominate the industry – and by extension, cut their production costs.

Escalation of Conflict (1791-1792)

By 1791 the war of words showed little sign of abating. It became apparent that the Birmingham lobbying group was making little progress in its aim of stabilising copper prices or bullying the opposition. Without Williams' support, Birmingham brass founders attempt to expand their sphere of influence had stalled; the Welsh copper magnate was winning the battle for Cornwall and a compromise looked unlikely. The conflict became so heated that Boulton feared physical sabotage and destruction of his property. Boulton wrote to Wilson in Cornwall giving him strict instructions to be more vigilant of industrial sabotage, spies, and physical damage, indicating that military intervention may be necessary as well:

¹⁶⁰ WCAR, MS3782/13/97, item 15, *Evidence Admitted by Us*.

The only fear we have about the trial is being surrounded by our enemy, and prejudiced men who may... do other important mischiefs without being perceived: therefore arrange (sic) your assistants properly night and day and 1st. Set one guard at the fire door and ash hole from whence he must not go even to piss without being relieved by another friend. 2nd set one to watch the engine and plug and prohibit any and all men from touching the working gear except its appointed director. 3rd after taking the Number of the counter all come down, lock the door, and permit no one to go up on any pretence. 4, let no person into the House except those who are especialy (sic) appointed and the fewer the better as we fear confusion. 5, Let some person constantly watch the Pit head to see that nothing be thrown down.¹⁶¹

It is evident that the situation was deteriorating quickly and after a suspicious fire in 1791 at the Boulton-owned Albion Mill in Blackfriars, London, Boulton privately acknowledged that he was becoming 'fearful of engaging so extensively in the copper trade as I fully intended.'¹⁶²

As a result of rising paranoia and tensions, Birmingham manufacturers once again looked for Parliamentary support. Twenty years had elapsed since industrialists in Birmingham had unsuccessfully petitioned Parliament to lift restrictions on trade with America, but the Birmingham brass manufacturing network was significantly more powerful by the 1790s: its members were more influential, and its businesses more co-operative.¹⁶³ Birmingham brass

¹⁶¹ KKCA, AD1583/5/56; M. Boulton, *Boulton to Wilson regarding the trial of Wheel Butson Engine* (27 October 1792).

¹⁶² KKCA, AD1583/4/51; M. Boulton, *Boulton to Wilson regarding the destruction of the Albion Mill by fire, and other matters* (4 March 1791).

¹⁶³ WCAR MS3782/12/87, item 3: *Swinney's Birmingham and Stafford Chronicle* (2 February 1775).

founders had gained important allies; in addition to Lord Shelburne and the Earl of Dartmouth, there were also the first and second Earls of Liverpool, Charles and Robert Jenkinson. Charles was one of George III's most trusted advisors, and as a previous Secretary to the Treasury was known for his support of commercial and manufacturing interests.¹⁶⁴ He was also a friend of Prime Minister William Pitt and a member on the Board of Trade.¹⁶⁵ Robert, his son, also known as Lord Hawkesbury, and as Lord Liverpool the future Prime Minister, rose quickly through the Tory ranks, and won election to the House of Commons in 1790. Pitt entrusted him with significant power very quickly, especially in matters of foreign policy in Russia and France, and he became an impressive Commons debater.¹⁶⁶ Charles and Robert Jenkinson proved to be important mediators between Birmingham industrialists and William Pitt. The brass founders had formed important links with the policy makers who were overseeing the changes to state and Empire, including the sympathies of Pitt – despite their open objection to many of his proposals in the mid-1780s. It was almost certainly an uneasy alliance formed through a mutual dislike of Williams, and as the final decade of the eighteenth century progressed, both Pitt and Hawkesbury voiced their conviction that Thomas Williams had been guilty of monopolising the copper trade, not Birmingham brass founders.¹⁶⁷ In a 1785 letter, Boulton recorded a meeting with Pitt to discuss 'the subjects of the iron and copper trade, the Irish trade, and many of the late taxes, which the commercial part of this country are unanimous and violent against.'¹⁶⁸ The same letter also instructs the recipient,

¹⁶⁴ D. Leonard, *Nineteenth-Century British Premiers: Pitt to Rosebery* (London: Palgrave Macmillan, 2008), 82.

¹⁶⁵ J. Cannon, "Jenkinson, Charles, first earl of Liverpool (1729–1808)," *Oxford Dictionary of National Biography* (September 2013), <http://www.oxforddnb.com/view/article/14737> (accessed 29 June 2017).

¹⁶⁶ N. Gash, "Jenkinson, Robert Banks, second earl of Liverpool (1770–1828)," *Oxford Dictionary of National Biography* (Jan 2008), <http://www.oxforddnb.com/view/article/14740> (accessed 29 June 2017).

¹⁶⁷ Fisher, "Williams, Thomas (1717-1802)," (accessed 9 August 2016).

¹⁶⁸ KKCA, AD1583/1/47: M. Boulton, *Boulton to Wilson regarding meeting Mr Pitt and various other matters* (10 February 1785).

Thomas Wilson, that he should 'Burn this piece.'¹⁶⁹ Whilst Wilson failed to follow the instruction, it is an indicator of how seriously the Birmingham brass manufacturers took the secrecy of their business conduct. It indicates that the Birmingham brass founders handled at least some networking in secret, and it is this secretive nature of the industry that unfortunately impedes a complete understanding of how Birmingham brass founders networked.

Whilst there may not have been great enthusiasm for the cause of Birmingham brass founders from the press or public, its leaders made contact with individuals who wielded power.¹⁷⁰ The increased support from high-ranking politicians, as well as the ill-feeling towards Williams and the Cornish community within political circles, spurred the Birmingham brass community towards a more aggressive policy. Compared with their earlier request for a cap on the price of copper, their demands became ever more ambitious and antagonistic throughout the 1790s. The aims of their campaign were no longer a simple defence of their own industry, but an all-out attack on Williams and the Cornish mining community.

Their new demands were astute, assertive, and aimed to achieve several new goals. In 1792 the Birmingham Commercial Committee, acting as a unified group, sent a letter to Parliament with their new demands. This is an evolution from the simple petitioning of the 1770s. The demands were specific, directly lobbying Prime Minister Pitt to:

¹⁶⁹ Boulton, *Boulton to Wilson* (10 February 1785).

¹⁷⁰ KKCA, AD1583/5/44: T. Wilson, *Wilson to printer regarding printing an answer to Hornblower* (25 September 1792).

1. Prevent copper from being sold cheaper abroad than at home.
2. Guard against monopolists & allow all persons to be at ticketings who are proprietors of smelting works & who have been punctual in their payments.
3. Permit importation of copper duty free... & prohibit exportation.
4. Oblige all Cornish ores to be sold at public ticketings & make all private contracts or sales illegal and punishable.¹⁷¹

The desire to prevent copper from being sold more cheaply abroad was not a new or surprising demand by Birmingham industrialists; they needed their products to be cheaper than foreign competitors to stop clients importing their goods from abroad. The point regarding monopolies was clearly directed towards Williams. Point three, which refers to a prohibiting exportation, was included so that copper would stay in Britain in order that brass founders could make products out of it; it would be beneficial to the industrialists to reduce the client base available to the Cornish mines, forcing them to deal solely with Birmingham. They requested import duties on copper to be abolished, which would have reduced Birmingham's need for Cornish copper. Without an import tax, it could theoretically have been as cheap to import from abroad as it would otherwise have been to deal with Cornwall, or any other British sources. It was declared in a pamphlet that it was 'expedient that the importation of copper ore, or copper from Ireland, should be permitted duty free.'¹⁷² The aim was to diversify the sources from which Birmingham brass founders could purchase copper, and simultaneously reduce the markets Cornish mine owners could sell to. Where once Watt and Keir had warned about the dangers Ireland might pose, by 1792 they saw an opportunity

¹⁷¹ WCAR, MS3782/1, item 16: *What we want from Parliament*.

¹⁷² *Copper Pamphlet* (24 March 1800).

to utilize the Irish markets.¹⁷³ Boulton claimed to have spoken with Pitt about this in a private meeting.¹⁷⁴ He wrote in 1800 that if the import duty was removed: 'the manufacturers of this country might live in hopes of obtaining copper as cheap as those of other countries where labour is cheaper than in this & taxes less.'¹⁷⁵ It was obvious that the aim was intended to grant the Birmingham merchants an increased level of autonomy over their industry, trying to force other groups to be dependent on their trade, whilst simultaneously freeing themselves from reliance on others.

Point four demanded that Cornish ticketing needed to be public, for fear that their deteriorating relationship with copper suppliers would result in Birmingham manufacturers being excluded from purchasing copper ores. Ticketing days were set a fortnight after samples of ore from different mines were tested for their metal content or assayed. This information was provided on the tickets which wrapped the samples and were examined by the smelter agents. Ticketing allowed the price of copper to be set. The demands from the Birmingham Commercial Committee also highlights the aggressive intent of the Birmingham manufacturers, as well as the extent of the rift between the two groups. With regard to monopolies, it argued:

As several rival manufacturers are already established upon the continent where labour is much cheaper it is important materials of the Birmingham manufacturers should be rendered as low as the mines can reasonably afford & that monopolies should be prevented by every possible means because every

¹⁷³ Keir and Watt, *Exportation of Tools & Raw Materials* (19 June 1785).

¹⁷⁴ Boulton, *Boulton to Wilson regarding meeting Mr Pitt and various other matters* (10 February 1785).

¹⁷⁵ Boulton, *Boulton letter* (1800).

advance of copper or goods, operates as a bounty & encourages foreigners to open new mines & to extend their manufacturers which ultimately will be as injurious to the mining as manufacturing interest.¹⁷⁶

There is a hypocrisy that exists within the demands from the Birmingham brass founders, who campaigned to the Government against industrial monopolies, whilst simultaneously and consistently trying to gain a monopoly of their own: which was the paradoxical crux of the various political and economic controversies of the 1780s and 1790s.

Conclusion

The controversies faced by the Birmingham brass founders between 1783 and 1792 were fivefold: firstly, the continued effect of the 1779 PCOPEC; secondly, the behaviour and monopoly of Thomas William; thirdly, the potential impact of the 1785 Irish Propositions; fourthly, the continued exodus of skilled workers from Birmingham; fifthly, patent disputes. The brass founders worked within the context of changing Government economic policy, which was transforming from a military-fiscal state to laissez-faire policy. The landed elite adapted to prolonged periods of war, and increased responsibilities, by improving the efficiency of Government bureaucracy through Select Committees. Through these new systems the brass founders of Birmingham took a flexible approach to tackle the five major controversies they faced.

¹⁷⁶ Simcox, *Copper Trade Pamphlet* (1795).

The strategies of the Commercial Committee were fourfold: firstly, to produce printed propaganda to exert political pressure and reform trade policies – utilising their political and industrial contacts to aid them; secondly, the Commercial Committee monitored its own workforce and introduced strict punishments for workers who disobeyed rules, giving financial incentives to individuals who informed them of rule breakers; thirdly, brass founders simply ignored laws they saw as detrimental to trade and found legal loopholes; fourthly, to establish new businesses, such as the Cornish Metal Company, outside of Birmingham in an attempt to stabilise their industry and reduce copper prices. Co-operative collective action continued to define the brass founders of Birmingham in this period, but their success was mixed; they failed to have the 1779 PCOPEC repealed, and Williams reached the height of his monopolistic influence, increasing the price of copper and taking control of the Cornish Metals Company-which was an embarrassment for the Commercial Committee. However, Pitt's Irish Propositions failed, the Tool Acts were introduced, and the selling of products abroad continued – including engines to foreign rivals of the Cornish mines.

The controversies of the mid 1780s, as well as the civil war that existed by the early 1790s between Birmingham brass founders and Thomas Williams with his Cornish mining connections, yield fresh insights into the competitive nature of the British brass and copper industries in this period. The central theme of the controversies was monopolies; Birmingham brass founders and Thomas Williams had taken control of the copper trade of Britain between 1781 and 1785, stabilising the industry after a tumultuous decade in the 1770s. The creation of copper bolts had allowed them to extend their economic influence through engagement with the Royal Navy, but both parties wanted to be the dominant force of the partnership

through the control of Cornish copper supplies. Birmingham brass founders had failed yet again to instigate change in foreign policy and were evidently losing the battle for domestic control of copper to Williams. Birmingham's failure to replicate the success of the 1781 Broad Street Brass House and 1783 Commercial Committee, through the creation of the Cornish Metal Company, led to enormous resentment within the Cornish Mining Community. Williams wrestled ownership of the Cornish Metal Company from Boulton and Watt and improved its fortunes, suggesting that Williams was still the more powerful force. In the 1790s, however, powerful political allies began to support the Birmingham brass founders, suggesting that their political influence was growing. The 1780s and 1790s had seen mixed success for the brass founders of Birmingham but they continued to push for reform as they sought to gain dominance of the lucrative industry. The conflict with Williams continued into the 1790s and came to a heated conclusion in 1799 during the Parliamentary Enquiry into the State of the British Copper Trade, which is explored in Chapter Four. It was during this Enquiry that the political sophistication of Birmingham brass founders was demonstrated in front of Parliament.

Chapter Four:

Birmingham Brass Founders and the 1799 Parliamentary Enquiry into the State of the Copper Mines and Trades of the British Kingdom

The power struggle to control the British copper and brass industries intensified throughout the 1780s and 1790s as Birmingham brass founders, Cornish mine owners, and the Welsh lawyer and copper magnate Thomas Williams fought for dominance of the lucrative trade (Chapter Three). After an initially cordial relationship, tensions arose over patents, miners' pay, and copper prices. In the early 1790s, to resist the increasing costs of copper, Birmingham brass founders began a campaign to fix the price, causing outrage in Cornish mining circles, and opposition from Thomas Williams. Whilst the Birmingham Commercial Committee grew in influence throughout the second half of the eighteenth century, it still experienced a variety of challenges. Despite having played an important role in campaigning against Pitt's Irish Propositions in the mid-1780s, as well as successfully instigating change through the 1785 and 1786 Tool Acts, the Committee still failed to convince the Government to lift significant restrictions on trade with America and Europe (Chapter Two). The take-over of the 1785 Cornish Metal Company by the Birmingham brass founders, also failed to solidify their influence in the south-west of England due to the miners' preference for a partnership with Williams (Chapter Three). This chapter argues that in 1799 the decades of trial and error in political and industrial organisation culminated in an impressive display of political unity and sophistication by the brass founders. This proved to be an important moment in the history of Birmingham brass and political influence, in which the brass founders freed themselves from damaging restrictions to the exportation of their copper and brass products.

In 1799, the growing schism between Birmingham, Cornwall, and Anglesey industrialists came to a head. Public and private networking by the Birmingham brass founders gained them influential supporters, including policymakers Lord Liverpool and William Pitt – as well as the insightful advice of Lord Shelburne and the Earl of Dartmouth (Chapter Three). In contrast, Williams' relationship with the Government deteriorated, and in March 1799 MPs began to draft legislation to tackle the fluctuating prices of copper, which Birmingham brass founders had attributed to Williams' alleged monopoly of the trade. It is important to acknowledge that Williams' monopoly of the copper industry had in fact been broken by the mid-1790s, despite the claims of Birmingham brass founders. Between 1788 and 1792 Williams had raised prices of manufactured copper whilst keeping ore prices fairly low, making a monopoly profit for himself.¹ However, as Harris has pointed out, depleting levels of copper from Anglesey, as well as increased mining costs in Cornwall, undermined his position as arbiter of the copper trade.² This is visible in his interaction with the Cornish miners, to whom he could no longer offer satisfactory contracts, as a result of which Williams lost the support of many. In March 1792 he despondently wrote, after another failed attempt to satisfy their contractual demands: 'I have been plagued ever since I left Wales by the artful manoeuvres and ambitions of the recalcitrant Cornish miners.'³ He described them as the 'greatest scoundrels on earth.'⁴ From the early months of 1792 he had lost his stranglehold on the copper trade of Britain. His diminishing influence as a result of the reduced levels of output from Anglesey, and loss of support from Cornish miners, meant that he spent much of the 1790s unsuccessfully campaigning to regain his monopoly. The Birmingham brass founders were able to exploit his

¹ R. Harris, *The Copper King: A Biography of Thomas Williams of Llanidan* (Liverpool: Liverpool University Press, 1964), 108.

² Harris, *The Copper King*, 91.

³ Bangor University Archives, Mona Mine Records (Plas Newydd Papers), MSS 3053; *Williams on Cornish Miners*.

⁴ Ibid.

campaign and finally combat the damaging 1779 Privy Council Order Prohibiting the Exportation of Copper (PCOPEC).

Williams, furious at his own loss of influence, angrily laid responsibility for the unpredictable prices of copper on the Birmingham brass founders: suggesting that their interference, especially from Boulton, in the Cornish mining industry had backfired.⁵ He also implicated the Government, labelling the restrictive trade policies they had created as short-sighted and detrimental to the copper industry, a sentiment he would repeatedly reiterate.⁶ Williams convinced Parliament to secure the appointment of a Select Committee to conduct an investigation into the copper trade, hoping that he could gain investment into his own ventures, whilst simultaneously disrupting the growing power of Birmingham brass founders.⁷ Officially it was recorded that the point of the investigation was to 'enquire into the state of the Copper mines and Copper trade of this Kingdom, and to report the same as it shall appear to them to the House.'⁸ It achieved this by:

Examining such persons as were capable of giving them Information on the different parts of this subject, and to call for such papers as appeared to them requisite for elucidating the same; and have, with the Leave of the House, reported the Minutes of these their Proceedings.⁹

⁵ Harris, *The Copper King*, 92.

⁶ *Report from the Committee Appointed to Enquire into the State of the Copper Mines and Copper Trade of this Kingdom* (RCCT), (7 May 1799): <https://babel.hathitrust.org/cgi/pt?id=nyp.33433087566752;view=1up;seq=12> (last accessed 19/09/2020), 3-54.

⁷ D. Fisher, "Williams, Thomas (1717-1802), of Llanidan, Anglesey and Temple House, Berks.," *History of Parliament*: <http://www.historyofparliamentonline.org/volume/1790-1820/member/williams-thomas-1737-1802> (accessed 27 August 2016).

⁸ RCCT, 54.

⁹ RCCT, 3.

Williams and an alliance of Cornish mine owners hoped to use the Enquiry to placate miners and re-establish themselves as the dominant force of the trade. Birmingham brass founders fought for significant change, to include a cap on copper prices and an abolition of the import tax on copper. It was evident that the power balance was shifting and the political pressure group in Birmingham was gaining momentum and influence among the political elite. The Enquiry would determine whether reform of the industry was necessary and ultimately how the copper and brass trade of Britain would be organised in the future.

Williams' insistence upon an enquiry is testament to how influential the Birmingham brass founders had become. The establishment of an official enquiry was Williams' way of using his strengths, via Parliament, to try to halt this influence. This chapter reveals that Williams underestimated his opponents, who produced sophisticated legal arguments, and had an impressive network of contacts to garner support. It also explores the extent to which Birmingham brass founders were able to successfully organise and demonstrate their political skill in front of the 1799 Parliamentary Enquiry into the State of the Copper Mines and Trade of Britain. It does this through the analysis of the extensive transcript of the interviews undertaken by the Enquiry, as well as through the private letters between members of the Birmingham pressure group. The analysis in this chapter revises current interpretations by John Harris and produces significantly different conclusions on the Enquiry than currently exist. This research sheds light on an important event in the development of the brass lobbying group and addresses a significant gap in the historical literature of Birmingham, namely political representation, and the changing rhetoric of an important manufacturing group, in the late-eighteenth century.

Analysis of the 1799 Parliamentary Enquiry

According to Harris, the 1799 Parliamentary Enquiry follows a ‘difficult and obscure period in the history of the industry.’¹⁰ Primary material relating to Williams and the Birmingham brass founders in the mid-1790s is scant, even compared to the disparate evidence surrounding the art and mystery of brass and copper manufacturing in the rest of the mid- to late-eighteenth century. The secondary literature on the 1799 Parliamentary Enquiry therefore is also limited. This chapter re-evaluates both secondary and primary material. The event is mentioned in passing in J.C. Symons’ chapter on copper in Roger Burt’s 1969 book on Cornish mining, as well as in Barrie Blake-Coleman’s study of copper wire and electrical conducting technology.¹¹ More recently Sue Tungate’s PhD thesis about Matthew Boulton, and his use of copper, refers to the Enquiry.¹² The most detailed analysis is a chapter in John Harris’ biography of Thomas Williams, which focuses upon the Enquiry of 1799.¹³ This thesis adopts a different perspective from Harris who concludes that the political role of the Birmingham manufacturers was ‘not marshalled with any skill.’¹⁴ Whilst the book itself is an invaluable guide to the life of Thomas Williams, the Enquiry chapter contains inconsistencies, and inevitably pays greater attention to Williams, leaving analysis of the Birmingham representatives as underdeveloped, and at times inaccurate. This research proposes a new understanding of the Enquiry, which contrasts that offered by *The Copper King*. Harris asserts that ‘there was not the slightest reason to

¹⁰ Harris, *The Copper King*, 91.

¹¹ J. Symons, “The Mining of Copper: 1760-1820,” in *Cornish Mining – Essays on the Organisation of Cornish Mines and the Cornish Mining Economy*, ed. R. Burt (Newton Abbot: David and Charles Publishers, 1969), 37, 50 and 53; B. Coleman, *Copper Wire and Electrical Conductors – The Shaping of a Technology* (Reading: Harwood Academic Publishers, 1992), 112-113.

¹² S. Tungate, “Matthew Boulton and the Soho Mint: Copper to Consumer,” (University of Birmingham PhD thesis, 2011), 96.

¹³ Harris, *The Copper King*, 115-139.

¹⁴ Harris, *The Copper King*, 115.

believe that Mr. Williams had been at all instrumental in raising the price of copper,' directly contradicting evidence throughout the rest of his work.¹⁵ Whilst Williams may not have been controlling copper prices by 1799, he certainly had in the late 1780s and Harris acknowledges this.¹⁶ Harris also criticises the Birmingham brass founders for advancing unsubstantiated hearsay and for being unable to produce sufficient evidence for their claims, whereas Williams' reluctance to give precise figures regarding the standard of ores and cost of manufactured copper is brushed over.¹⁷ Whilst Harris is almost certainly accurate in questioning the sincerity and accuracy of many of the claims of the Birmingham merchants, this chapter seeks to go beyond these insights to analyse those very examples of deceit for signs of political skill and acumen. As this chapter argues, the leitmotifs within the evidence given by the Birmingham representatives suggest preparation and skill. This chapter (and Chapter Five) argues that whilst Williams unsuccessfully tried to regain his monopoly over the copper trade, the Birmingham brass founders successfully provoked reforms to the industry they had been attempting to achieve since 1779. This directly contradicts Harris' conclusion that the brass founders had marshalled themselves with no skill, when in fact they astutely hijacked Williams' attempt to regain his monopoly, for their own benefit.

In examining the Enquiry as a platform on which Birmingham's industrialists demonstrated their growing political confidence, this chapter speaks to broader themes in the historical literature on politics, society, and industry in the late-eighteenth and early-nineteenth centuries. Sven Beckert argues that to understand the politics, economics, culture, and ideas of British towns and cities, 'we need to come to terms with this group of people (the middle

¹⁵ Harris, *The Copper King*, 128.

¹⁶ Harris, *The Copper King*, 108.

¹⁷ Harris, *The Copper King*, 117 and 125.

class).'¹⁸ In response, this chapter again focuses on the Birmingham industrialists to better understand how their grasp of political manoeuvring improved; additionally it considers the nature of the links between these brass founders and elected MPs, and the ways in which they used these links to influence legislation and Government policies. Robert Allen discusses the prominent role of enlightened inventors during the Industrial Revolution and argues for the importance of understanding their social and cultural context.¹⁹ In response, this chapter argues that the political lobbying group formed by Birmingham's brass founders has been underrepresented in the history of the town: the 1799 Enquiry is a significant date in the rise of their national influence.

The handwritten minutes and printed transcript of the interviews conducted by the Parliamentary Enquiry provide the primary source evidence for this chapter. The strength of the Enquiry as a source lies in the variety of perspectives from people questioned on all sides of the copper conflict. The answers and statistics included in the Enquiry transcript provide an insight into the British copper trade at the end of the eighteenth century. In total, nineteen of the leading men in the industry were questioned over the course of seventeen days in April and May 1799: seven represented Birmingham manufacturing interests, seven represented the Cornish mines (including Williams) and five were introduced as independent and neutral professionals including an Irish mine owner, a German market specialist, and experts in the foreign copper trade. Birmingham's representatives included Matthew Boulton, a diverse mix of brass manufacturers, importers, exporters, and a magistrate. The importance of the interviewees gives value to the source, but it is reliant on the accuracy of minute-taking, and

¹⁸ S. Beckert, "Studying the Middle Class in the Modern City," *Journal of Urban History*: 31: 3 (2005), 394.

¹⁹ R. Allen, *The British Industrial Revolution in Global Perspective* (Cambridge: Cambridge University Press, 2009), 238-271.

printing. Arnold Hunt has explored the limitations of court trials, proceedings and enquiries of eighteenth-century London as a historical source, warning that clerks who take the transcripts may 'make a witness speak what he never truly meant, by dressing of it up in his own term, phrases and expressions.'²⁰ Hunt describes outright fictionalisation in such proceedings as rare, but the 1799 Parliamentary Enquiry was not subject to the independent checks on accuracy compared to some of the trials seen at the Old Bailey.²¹ Comparing the handwritten copies of the 1799 Enquiry to the printed version has provided no evidence that there are any differences between the two, but it needs to be noted that the Enquiry was recorded through the interpretation of a minute-taker and therefore may have some minor discrepancies in terms of accuracy.

The organisation and conduct of the Enquiry were overseen by Robert Jenkinson, Lord Hawkesbury. His involvement underlines the importance of the Enquiry but was a setback for Williams as Hawkesbury had traditionally sympathised with the Birmingham merchants (Chapter Three). Hawkesbury was on the Board of Trade and had been promoted to Master of the Royal Mint; Boulton had worked closely and productively with him in this capacity.²² The political links forged by the brass founders of Birmingham were far more effective than in the 1770s (Chapter Two). As this chapter demonstrates, a notable anti-Williams sentiment was evident throughout the Enquiry's questioning, as well as in debates within Parliament. The interviewers of the Enquiry were men with political agendas, as were the interviewees,

²⁰ A. Hunt, "Recovering Speech Acts," in *Popular Culture in Early Modern England*, eds. A. Hadfield, M. Dimmock and A. Shinn, (Abingdon: Routledge, 2014), 24.

²¹ Hunt, "Recovering Speech Acts," 25.

²² G. Dyer and P. Gaspar, "Reform, The New Technology and Tower Hill, 1700-1966," in *A New History of the Royal Mint*, ed. C. Challis (Cambridge: Cambridge University Press, 1992), 445; N. Gash, "Jenkinson, Robert Banks, second earl of Liverpool (1770-1828)," *Oxford Dictionary of National Biography* (Jan 2008), <http://www.oxforddnb.com/view/article/14740> (accessed 2 Aug 2017).

therefore the accuracy of their views must be treated with caution. Williams, Boulton, and others involved showed that they were capable of perpetuating myths and fallacies (Chapters Two and Three). The network of support Birmingham had accumulated through intense lobbying in the 1780s and 1790s was a vital element in the successes the brass founders achieved as a result of the 1799 Enquiry. Alongside the Enquiry an equally influential and significant pamphlet war took place outside of Parliament (Chapter Five). The primary concern of the Parliamentary Enquiry was to establish the existing state of the copper trade. Birmingham brass founders emphasised the suffering of the British industry, as they had done repeatedly during the 1780s, whilst Williams disagreed with their version of events. Despite the different testimonies, there were some areas of agreement by all parties involved. Unsurprisingly the importance of the copper industry to local regions, nationally, and internationally was stressed by both sides. Both sides also acknowledged that problems facing the industry needed to be addressed. Aside from those similarities, vastly different accounts of the copper trade were given; the two sides disagreed on what the problems were, and how they should be tackled. The following accounts therefore are not presented in chronological order of interviews, but are arranged to examine their claims.

The State of the Copper Trade: Birmingham Brass Representatives

To understand the state of the copper trade in 1799, and by extent the misinformation presented by Birmingham representatives, it is important to first examine the changing industrial context that existed in South Wales during the 1790s, which had a profound impact on the rest of the British copper trade – and specifically the autonomy and wealth of the Birmingham brass founders. Whilst there is a dearth of material relating to Williams and brass

founders in the mid-1790s, there are several important developments that can be confirmed. These factors may explain the increased animosity between Williams and Birmingham brass founders, as well as dispel some of the myths seen in the Enquiry testimony. From the middle of the eighteenth century there had been a flow of investment into the Swansea copper smelting industries due to increased demand for the product, especially from the East India Company. According to Chris Evans and Louise Miskell: 'the first real stimulus to the years of ascendancy for Swansea Copper was the East India Company's commencement of an export trade in manufactured copper in 1751.'²³ By the 1780s between one sixth and one quarter of Britain's national output of copper was purchased by the East India Company, which inevitably changed the power dynamic within British copper. This played an important role in the declining influence of Thomas Williams whose supply of copper from the Parys mountain was much reduced.²⁴ By the 1790s the outbreak of the French Revolutionary War also led to an increased demand for copper products, once again increasing the profitability of Swansea smelted copper.²⁵

The rise of Swansea presented Birmingham brass founders with new opportunities. Chapter Three examines ways in which Birmingham brass founders became increasingly sophisticated in their political lobbying during the 1780s, however, this was not their only means of enacting industrial change. The 1790s was characterized by Birmingham brass founders engaging in backwards integration through investment in copper smelting in the Swansea district, to

²³ C. Evans and L. Miskell, *A Global History: Swansea Copper* (Baltimore, MD: John Hopkins University Press, 2020), 55.

²⁴ H. Bowen, *The Business of Empire: The East India Trade Company and Imperial Britain, 1756-1833* (Cambridge: Cambridge University Press, 2006), 266.

²⁵ E. Newell, "'The Irremediable Evil': British Copper Smelters' Collusion and the Cornish Mining Industry, 1725-1865," in K. Bruland and P. O'Brien, eds., *From Family Firms to Corporate Capitalism: Essays in Business and Industrial History in Honour of Peter Mathias* (Oxford: Oxford University Press, 1998), 182.

improve their access to Cornish ores and reduce their reliance on Williams and his Anglesey copper; which became increasingly expensive, and the supply less reliable. Like the Birmingham Commercial Committee in the early 1780s (Chapter Two), the Swansea smelters had developed a reputation for protecting themselves from volatile trading conditions through collective action.²⁶ There was a natural alliance and opportunity for both parties during the 1790s: Birmingham brass founders established the Ynys Works in 1793, and in 1797 established the Crown Copper works in Neath, as well as the Rose Copper Company in the lower Swansea Valley.²⁷ In this way Birmingham brass founders began to share in the wealth and success of the Swansea smelters whilst extending their influence and power. The new supply reduced their reliance on Williams, who had been crucial to their success in the 1780s, but the price of copper from Cornwall remained an issue. Whilst the Birmingham brass founders consistently portrayed themselves as in the middle of an industry lull, the truth was that they continued to expand their influence and power – despite their protestations.

Despite the clear expansion of Birmingham brass enterprises, one of the chief concerns emphasised by the brass founders during the 1799 Enquiry was the struggle to maintain their businesses due to the fluctuating price of copper. This rhetoric was clearly at odds with the increased number of brass founders being registered in trade directories, and new businesses that appeared in Swansea. George Simcox, a prominent brass founder from Birmingham (Chapters Two and Three), was an important witness for the town during the Enquiry.²⁸ Simcox owned a brass house on Livery Street and ran several large coin and button

²⁶ C. Evans and L. Miskell, *A Global History: Swansea Copper*, 66.

²⁷ R. Roberts, "Enterprise and Capital for Non-Ferrous Metal Smelting in Glamorgan, 1694-1924," *Morgannwg. Transactions of the Glamorgan Local History Society* 23 (1979): 59.

²⁸ Wolfson Centre Archival Research (WCAR), MS3782/13/97, item 1: *Summary of the Meetings of Manufacturers and others concerned in the Consumption of Copper and Brass*. (1 April 1790).

manufactories, including the lucrative guinea-production company of Henry Kettle.²⁹ He introduced himself as a representative of the town, saying that he had been:

Deputed, by the merchants and manufacturers of Birmingham, to represent to his Majesty's Ministers the great distress the trade of the town and neighbourhood has laboured under for many years past, owing to the great fluctuation in the price of copper; the extreme embarrassments they at present feel from the alarming and unexampled advance which has lately taken place in the price of that article.³⁰

Desperation is an idea that is regularly emphasised by the Birmingham representatives. Upon being asked 'What is the present state of the Birmingham manufacturers in copper?'³¹ manufacturer and exporter of brass products William Smith of *Smith, Son and Smith* responded, 'I believe never worse.'³² The manufacturers of Birmingham were not simply portraying a lull in trade, but a disaster that threatened their existence. Matthew Boulton stated that 'I am afraid that many of them must either abandon their trades or abandon more than their profits', as well as claiming that 'I have for forty years past carried on a very considerable button manufactory, but I have lately abandoned it, because the profits on the orders were much reduced.'³³ Similarly, an ex-Birmingham-based manufacturer, William Collins, gave an account of his brass button and buckles exporting business which was characterised by a 'rise, increase, extent, decline and fall of my trade in these articles.'³⁴ He

²⁹ R. Hawkins, "Minor Products of British Nineteenth-Century Diesinking," *The British Numismatic Journal*: 30: 1 (1962), 184.

³⁰ RCCT, 4.

³¹ RCCT, 26.

³² RCCT, 26.

³³ RCCT, 21.

³⁴ RCCT, 33.

claimed that he was forced to abandon the practice after fourteen to fifteen years in Birmingham due to a lack of prospects. Collins was well-placed to speak about the trials and tribulations of copper technology and brass manufacturing; he was one of the two industrialists who had helped Thomas Williams improve copper bolt technology for naval purposes (Chapter Three). It is evident he had little love for Williams. The lobbying group portrayed the Birmingham industry as on the verge of failure, despite the expanding number of brass founders within the town (Chapter Two).

Painting such a negative image of the state of Birmingham and the town's metal industries would have been particularly powerful during 1799 when there were concerns regarding international political upheavals and radicalism. Mark Philp and Joanna Innes have explored different governments' responses to the challenging of social order throughout the Atlantic World in the second half of the eighteenth century. Innes draws attention to the fact that many of the revolutions were driven by practical imperatives, such as a loss of employment and resentment towards government economic policy, rather than simply ideological motives.³⁵ The British Government, and members of the Birmingham group, had genuine fears of social unrest in Birmingham, which had experienced the Priestley riots in 1791. James Watt wrote that the riots 'divided Birmingham into two parties who hate one another mortally.'³⁶ Whilst there may have been exaggeration present in the testimony of the Birmingham representatives, there was almost certainly an element of genuine fear driving some of them, which would have reflected the mood of an anxious Parliament as well. The revolutionary activity throughout the Atlantic World provides an important context to the

³⁵ J. Innes, "Reimagining the Social Order," in *Reimagining Democracy in the Mediterranean, 1780-1860*, ed. J. Innes and M. Philp, (Oxford: Oxford University Press, 2018), 80, 141 and 155.

³⁶ R. Rose, "The Priestly Riots of 1791," *Past and Present*: 18: 1 (November 1960), 68.

proceedings: fear of an uprising of the lower orders was alluded to. This pessimistic picture was almost certainly an exaggeration: William Aitken's history of the Birmingham brass trade portrays this time as a thriving era for merchants of the town.³⁷ The local trade directories (Chapter One) show that brass founders grew in numbers throughout the 1790s, but it is possible that the profits and opportunities that had been exponentially growing throughout the eighteenth century had begun to decelerate because of increased competition and war. The primary problem for the brass founders was highlighted by Simcox:

The difficulties arising from such great fluctuations are, that the manufacturer has no data to form his calculations upon. It is frequently twelve months before orders are received from his patterns, which being sent out at fixed prices, the merchant expects he should execute on the same terms at which his patterns went out. If copper advances as it has done the last year, and if he does this in the most leading articles of our manufactures, he must not only sink the whole of his profit, but a part of his capital. If he refuses, his business is at a stand; the merchant is offended, and he risks the loss of his future orders. If, on the other hand, the merchant ventures to send them to his correspondent at an advanced price, it is seldom admitted; and if he omits the order, his customer is not only disappointed of the sale of these goods but is often thereby prevented from disposing of others for want of a general assortment, so that the whole course of the trade is thrown in confusion, and the workmen deprived of employment.³⁸

³⁷ W. Aitken, "Brass and Brass Manufacturers," in *The Resources, Products and Industrial History of Birmingham and the Midland Hardware District*, ed. S. Timmins (London: Robert Hardwicke Publishing, 1866), 226-331.

³⁸ RCCT, 4.

Unpredictable copper prices were a reasonable complaint with a basis in truth. The Cornish mining community and its way of conducting commercial operations was undeniably affecting Birmingham brass businesses; the price of copper had become difficult to predict (Chapter Three). The Midlands industrialists claimed that the problem went beyond their own personal prosperity, however, and claimed most workers living in Birmingham and District were adversely affected by the uncertain prices of raw copper. They conveyed the message that unrest might result if this situation continued.

The second major claim highlighted by the Birmingham representatives was the importance of the industry to the stability of the wider Birmingham and District area, and for its metalworkers who were lacking support or political representation and had been leaving Birmingham for job opportunities in continental Europe (Chapters Two and Three). As Birmingham did not exist as a distinct constituency until the 1832 Reform Act, and few felt represented by the Staffordshire or Warwickshire MPs, the industrial elite of the town took the opportunity to assume the role of national political representatives for the town and its hinterlands.³⁹ Angus Hawkins highlights metalworking as an influential factor in shaping voting habits in the region in the nineteenth century, and this Enquiry was a defining moment for the representation of metal manufacturing in a political context.⁴⁰ When speaking about the nearby Wolverhampton area, which was extensively involved in brass lock manufacturing, Joseph Lane, a manufacturer from the area, claimed that:

³⁹ A. Hawkins, *Victorian Political Culture* (Oxford: Oxford University Press, 2015), 185.

⁴⁰ Hawkins, *Victorian Political Culture*, 186.

The town of Wolverhampton is said to contain about 20,000 inhabitants; I should think that nine parts out of ten of these inhabitants are manufacturers, and more than one half of the manufacturers are employed in the manufactories where brass is necessary.⁴¹

The loss of profits for businesses which used brass and copper forced manufacturers to reduce their reliance upon it, which meant thousands of workmen lost employment. Playing upon the fear of widespread discontent and unemployment within the lower classes, in a time of radical movements and social upheaval, was a shrewd tactic by the Birmingham pressure group that demonstrated an awareness of wider political movements: the brass founders were making a claim that they were a political representation of the disenfranchised workers of Birmingham. The extent of this problem is almost certainly exaggerated and there is no evidence to verify the numbers Lane presented. The idea that ninety percent of the Wolverhampton population were manufacturers, nine thousand of whom were solely employed within the brass trade, is implausible as there were many industries and trades that did not use brass or copper in Wolverhampton, such as iron-nail making.⁴²

The exaggeration of problems experienced by brass founders and the workers of the Midlands was also extended to wider social problems. The manufacturers made a concerted attempt to portray the success of the brass industry as a key factor in maintaining social order within Birmingham and District. As Innes and Philp have highlighted, the success of democracy in Europe was seen as a delicate balance during the 1790s and the British Government would

⁴¹ RCCT, 76.

⁴² R. Sweet, *The Writing of Urban Histories in Eighteenth-Century England* (Oxford: Clarendon Books, 1997), 7.

have been keen to avoid social unrest in its key industrial centres.⁴³ Magistrate William Villiers elaborated upon the wider social problems experienced in the Midlands region, claiming that they were an effect of the copper price issues. Villiers was the Commissioner of the Peace for the counties of Worcestershire and Warwickshire and was known to the War Office for his work supressing unrest and riots in the Black Country, as well as his response to the Priestley riots.⁴⁴ Villiers drew attention to how the poor rates of the town of Birmingham had increased considerably since 1792, as the amount of money spent on the poor increased five-fold in less than a decade (Table 4.1):

| Dates | Amounts |
|--------------|-------------------|
| From 1792-93 | £14,067. 7s. 2d. |
| From 1793-94 | £20,640. 17s. 3d. |
| From 1794-95 | £19,658. 16s. 4d. |
| From 1795-96 | £23,133. 4s. 9d. |
| From 1796-99 | £74,862. 12s. 0d. |

Table 4.1. RCCT (7 May 1799): Edited Table of Money Spent on Poor Rates in Birmingham (1792-1799), 79.

There was a significant increase in the poor rates, especially between 1796 and 1799. The reasons for this trend are not obvious. Villiers was asked why he believed rising poor rates occurred and stated that he thought it was because of the great decrease of the trade of the town, of which he estimated over more than half the articles made were of copper and brass.⁴⁵ He also noted how there had been a decrease in houses built since 1792 and an

⁴³ Innes and Philp, eds., *Reimagining Democracy in the Mediterranean*, 2.

⁴⁴ J. Bohstedt, *The Politics of Provisions: Food Riots, Moral Economy, and Market Transition in England, c. 1550-1850* (Abingdon: Routledge, 2010), 196.

⁴⁵ RCCT, 79.

increase in empty houses, which he also attributed to the decline in brass manufacturing, as well as the wars in which Britain was involved; thousands had been recruited to fight in the French Revolutionary Wars and the Anglo-Mysore wars.⁴⁶ Villiers' claimed that levels of social unrest and poverty were linked to the failure, or success, of the Birmingham brass industry, building on the idea that radicalism could occur if reforms were not introduced to the copper trade. To what extent poor rates and abandoned houses in Birmingham could be attributed to the stagnation of the copper industry is debatable; the correlation between poor rates and copper prices was tenuous at best, but the argument depicting a socially unsettled Birmingham continued to be constructed.

The Birmingham representatives claimed that the copper conflict had affected the internal dynamics of Birmingham and District in three main ways and each interviewee focused on one of these elements. The testimonies of Collins, Simcox, and Smith created an image of desperate brass founders struggling to maintain their businesses because of fluctuating copper prices. Joseph Lane extended these troubles to the workers of Birmingham who were losing employment as a result, and Villiers suggested that these two issues had directly led to widespread unemployment and spiralling crime and poor rates in Birmingham. Matthew Boulton and Thomas Hadley added a fourth element to the Birmingham representatives' picture of the British copper trade, by creating an international context to the troubles.

As Villiers briefly alluded to in his questioning, wars and rival foreign brass founders were a contributory factor to the cost of copper and seen as a factor in the instability of the industry.

⁴⁶ RCCT, 79.

Previous studies of Birmingham have underrepresented the link between Birmingham's prosperity and international trade links (Chapter Two); similar histories which highlight the relationship of Bristol and Liverpool with the global economy however, show how their industries were affected by foreign trade and wars.⁴⁷ Birmingham's industrial trade struggles during the Atlantic revolutions and global wars have been overlooked by Eric Hopkins, but their importance was made evident to the Enquiry by the industrialists.⁴⁸ All involved in the industry recognised that copper mining and manufacturing centres were being established throughout the world to rival those in Britain. Boulton claimed that:

Until very lately, Birmingham has had the bulk of the trade of Europe in those articles, but lately I am told that they make many of these articles, particularly buttons, brass foundry, and others, cheaper than we do in this country.⁴⁹

The fear of cheaper products made abroad played upon the notion that foreign producers of copper, and copper products, would overtake Birmingham in international markets, and further exacerbate unemployment and social unrest in the town. When asked how much of his trade he had lost to mainland Europe, merchant Sam Smith estimated that he had lost 'almost one half to the continent.'⁵⁰ During the French Revolutionary Wars after 1793, this loss of trade would have been of great concern to Parliament. An expert in the foreign copper

⁴⁷ W. Minchinton, *The Trade of Bristol in the Eighteenth Century* (Bristol: Bristol Record Society, 1957); K. Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century* (Cambridge: Cambridge University Press, 1993); D. Richardson, S. Schwarz, and A. Tibbles, eds., *Liverpool and Transatlantic Slavery* (Liverpool: Liverpool University Press, 2007).

⁴⁸ E. Hopkins, *Birmingham: The First Manufacturing Town in the World, 1760-1840* (Birmingham: Weidenfeld and Nicolson Publishing, 1989), 12.

⁴⁹ RCCT, 24.

⁵⁰ RCCT, 27.

markets, Pascoe Grenfell corroborated these claims by highlighting that copper was being obtained from:

Sweden, Norway, from the mines in the Hartz (sic) mountains, in the north of Germany, from the Neighbourhood of Mansfeldt in Prussia, Hungary, Barbary, at Cadiz, from the Southern American mines, and at Smyrna, from the Asiatic mines in Diabekir (sic).⁵¹

Whilst prices and quality of products could not yet compete with Britain, the extent of the new businesses and the transfer of knowledge involved in copper and brass manufacturing would have been a concern to the Government; the Birmingham brass founders played upon these fears throughout their testimony. Thomas Hadley, an exporter of brass goods from Birmingham, highlighted the 'establishment of manufacturers abroad, the war, the prohibitions, and the high price,' as a significant barrier for manufacturers in the Midlands.⁵² He spoke of how this trend had, and could potentially continue to have, detrimental consequences for Birmingham as foreign markets continued to grow financially more lucrative: 'I have no doubt that capitals may be found sufficient to injure materially the trade of Birmingham.'⁵³ The threat of brass competition from foreign markets had been influencing Government trade policies since the 1760s. The issues that the Birmingham brass founders highlighted, in combination with the looming threat of increased foreign competition, created a bleak image of the brass and copper trades within the Midlands. Whether this was a reality is debatable, but the political awareness and organisation of the group is evident as each

⁵¹ RCCT, 41.

⁵² RCCT, 45.

⁵³ RCCT, 45.

representative focused on an aspect of the copper conflict to create a cohesive picture. The fears of thousands of unemployed and unhappy residents of Birmingham, in the revolutionary climate of Europe, would have been of the utmost concern to Parliament. This was however, in stark contrast to the picture portrayed by Thomas Williams and the Cornish copper mine owners.

The State of the Copper Trade: Thomas Williams and Cornish Representatives

Whilst the evidence of the Birmingham industrialists suggested that the fluctuating price of copper was having a detrimental effect on Birmingham and District, Thomas Williams countered this claim by comparing Birmingham to other towns and cities in Britain. He argued that other manufacturing centres across Britain were managing the fluctuations with relative ease:

I have never heard, save from some of the people of Birmingham, that the price of copper was so high as to injure their trades; all others with whom I have conversed, or have had anything to do with on the subject, argued only that we copper sellers might afford cheaper.⁵⁴

Williams tried to discredit the claims of the Birmingham manufacturers, attempting to prove that they were exaggerated, unsubstantiated, and spurious. He argued that 'they acknowledged the advantages they had derived from reduced prices... and could not deny

⁵⁴ RCCT, 58.

that they could very well afford to pay.’⁵⁵ His arguments have inconsistencies: at times he described the Birmingham brass founders as unsuccessful, but also claimed that they could easily afford to pay for copper. Despite his argument, Parliamentary questions acknowledged that Sheffield manufacturers had also raised concerns, suggesting that these issues were not simply confined to the Midlands.⁵⁶ Regardless of rebuttals in their questioning, Williams and the Cornish representatives stood firm in their belief that the conduct of the Birmingham brass founders was the major problem within the copper trade of Britain, not the price of the mined products. Drawing attention to other successful towns was one tactic, but Williams and his colleagues made a number of counter-claims about the state of the copper trade, heavily criticising Birmingham industrialists, saying that ‘the trade of Birmingham was greatly exaggerated... in the number of men employed, and its relative connection with copper.’⁵⁷ Not only did Williams claim that Birmingham brass founders exaggerated their trade, he also raised their mismanagement of business ventures, noting that Cornish miners and mine owners had been more successful despite difficult circumstances. John Vivian highlighted the considerable financial losses of the Boulton and Watt companies which had been established in the Cornwall region, to the detriment of themselves and local businesses.⁵⁸ Many of the Cornish representatives claimed that if any group had been a victim of copper prices, it had been the miners and adventurers of copper. Williams claimed that:

Messrs Simcox and co. these persons, flushed with the advantages they had enjoyed, and vainly supposing they could effect a complete revolution in the

⁵⁵ RCCT, 50.

⁵⁶ RCCT, 58.

⁵⁷ RCCT, 51.

⁵⁸ RCCT, 39.

trade, became competitors with the old copper smelting companies in the purchase of the Cornish ores.⁵⁹

He accused the Birmingham manufacturers of trying to influence the mining and smelting of copper by reducing its cost through the establishment of the works in Swansea, as well as the Cornish Metal Company in 1785 (Chapter Three), despite the relatively cheap price in the late 1780s.⁶⁰ He argued that Birmingham manufacturers had grown greedy at the expense of the mine owners and adventurers who suffered because of the low prices, blaming many failed old mines on Boulton and Watt's mismanagement of the company.⁶¹ By drawing attention to other towns in Britain, whilst juxtaposing them with the failures of the companies run by the Birmingham industrialists, Williams produced a very different version of the copper trade of Britain. He suggested that the group was simply trying to reduce manufacturing costs and, by extension, to increase their own profit margins.

During his testimony Thomas Williams did not generally concede ground in his arguments, but he did admit that the Government's prohibition of the exportation of sheet copper had led to foreign countries establishing their own mines:

The consequence was, the French erected copper manufactories of their own, and England is wholly deprived of that valuable branch of manufacture and trade...

⁵⁹ RCCT, 50.

⁶⁰ RCCT, 51.

⁶¹ RCCT, 52.

the Spanish government followed the French example; and we were also deprived of the trade to Spain and Italy as well as France.⁶²

Whilst many of the claims made by Birmingham industrialists may have been exaggerated, there does appear to be agreement by both sides about foreign competition affecting the copper and brass trades, a problem about which the Birmingham-based political group had been campaigning since the 1770s (Chapter Two). Parliament's sceptical and probing questions of Williams, as well as the copper magnate's own admission regarding foreign competition, suggest that Birmingham's unified and clearly rehearsed political organisation was at least partially successful. This was not, as Harris suggested, a group lacking in skill or persuasive rhetoric, it was quite the opposite. Slowly Parliament moved away from asking questions about the state of the copper and brass trade, to questions about two other topics: how did these problems arise and how could they be resolved?

Origins of Discontent: Birmingham Brass Representatives

The Midlands-based political lobbying group outlined three main reasons to explain the difficulties of the copper trade: the behaviour of Thomas Williams and the Cornish mine owners, increased competition internationally, and trade restrictions. These themes had a common feature that was elaborated upon throughout the Enquiry: a lack of control of their situation. Deflection and blame were a consistent theme throughout their testimony. George Simcox accused Williams and his associates of conspiring to raise prices and being deliberately

⁶² RCCT, 54.

difficult when dealing with Birmingham brass founders. He spoke of how in 1785 ‘new proposals on the part of Mr Williams, and the Gentleman connected with him, were then submitted, to induce the Cornish miners to enter into a fresh contract for the sale of their ores, in which they offered a higher standard than before.’⁶³ Simcox suggests that this was the reason that the Birmingham Mining and Copper Company had been established in 1785: ‘in order to secure their independence in case any attempts were made to prevent the sale of ores.’⁶⁴ He then drew attention to several examples of Williams and John Vivian preventing sales, making broken promises, and breaking lawful contracts. Simcox claimed that he had met Vivian in Truro, and the agent had unsuccessfully attempted to persuade him to agree to unreasonable terms. As a result of this meeting:

The Birmingham Brass Company, who then supplied a very considerable part of the brass used in the manufactories of the town, were dependant (sic) on Mr. Williams for a supply of copper, being under contract with him for 250 tons at £84 per ton, to be delivered and paid for. He immediately stopped their supply, and even detained a large quantity of it on the road, where I believe, it remained for near twelve months. The town was thereby reduced to great distress.⁶⁵

William Pitt had suspected that Williams had been attempting to monopolize the industry for many years.⁶⁶ The Birmingham lobbying group played upon this idea, regularly portraying him as greedy, uncooperative, and unreasonable. Whilst his stranglehold on the industry had

⁶³ RCCT, 6.

⁶⁴ RCCT, 7.

⁶⁵ RCCT, 9.

⁶⁶ Fisher, “Williams, Thomas (1717-1802.”

passed, the Birmingham brass founders clearly remained angry at Williams for his previous behaviour and conduct; Simcox referred to numerous meetings in Cornwall with Williams where the MP became abusive and threatened physical violence, although these accusations were denied.⁶⁷ Once more Birmingham brass founders failed to produce evidence but continued to build a negative image. Throughout his criticism of Williams, Cornish agents, various third parties and smelting companies, Simcox was careful never to criticise the miners, an approach which had proved to be unpopular in the national press (Chapter Three).

Simcox claimed that the Birmingham brass founders were looking after the miners' interests, concluding that Birmingham copper purchasers had tried to prevent new and unfair contracts from being forced upon the workers and that:

Many of the miners they understood were very averse to it; as the annexed extract of resolutions of a meeting of gentleman concerned in the copper mines, held at Redruth, January 24th 1792, at which Sir Michael Nowell presided, will show.⁶⁸

Simcox claimed that 'the merchants and manufacturers can have no interest in wishing copper to be sold lower than is necessary to enable them to maintain their trade; an excessively low price being no advantage to them in general.'⁶⁹ Whilst this was not necessarily true, as cheaper copper would reduce manufacturing costs and increase profit margins, the constructed dynamic between the two parties created the narrative of a reasonable and

⁶⁷ RCCT, 10 and 42.

⁶⁸ RCCT, 8.

⁶⁹ RCCT, 6.

practically-minded Birmingham manufacturing force struggling to deal with a larger, more powerful, and unreasonable corporate Cornwall mining industry. Despite the obvious attempt to encroach on Williams' territory in the south of England, as well as their new investments in Swansea, Birmingham brass founders presented themselves as naïve, honest, and lacking control of the situation.⁷⁰

Whilst the Birmingham merchants focused a significant amount of time and effort blaming Williams for rising costs and the unpredictable nature of the copper trade, despite his diminished power, they also criticized foreign competitors. Sam Smith drew attention to the relatively low cost of labour in Germany as a considerable advantage to that market.⁷¹ Thomas Hadley claimed that foreign markets were specifically aiming to replace Birmingham as a source of many articles, by reproducing the goods made in the Midlands and prohibiting importation of said goods:

I am well convinced much pains have been taken in France to make competition in the articles manufactured in Birmingham; my knowledge arises from having been in France and Italy, and seen the manufactories in 1789, and from my correspondence with Germany and Russia to this time.⁷²

He also revealed that 'in the Emperor's dominions we had formerly a great demand for our goods, they now are either prohibited, or such duties have been laid upon them as have

⁷⁰ W. Bowden, *Industrial Society in England Towards the End of the Eighteenth Century* (Abingdon: Routledge, 1965), 145.

⁷¹ RCCT, 20.

⁷² RCCT, 43.

prevented their exportation.’⁷³ In Vienna the prohibition of the sale of all Birmingham-crafted goods took place, leading to the wholesale loss of that market.⁷⁴ Workmen from Birmingham were also moving abroad because prospects were better (Chapters Two and Three). Simcox believed that this phenomenon had led to home trade slowly deteriorating to the point of becoming stationary.⁷⁵ As Chapter Three demonstrates there were examples of these processes occurring: the threat of a foreign enemy was not an exaggeration, but a real problem.

As John Harris has outlined, industrial espionage was of concern to the British Government throughout the second half of the eighteenth century.⁷⁶ Two anecdotal stories provided by Thomas Hadley of Birmingham were obvious attempts to play upon those fears. He spoke of merchants from Birmingham moving abroad and diffusing their previously exclusive knowledge of copper and brass manufacturing into foreign markets. In the first case Hadley revealed that ‘two of the four manufactories at Paris were conducted by English artisans who had resided in Birmingham and carried on their trades there; I myself had an offer on the part of Mons. De Calonne... to induce me to settle there.’⁷⁷ In the second example, in the city of Vienna, which had banned Birmingham products, he spoke of two manufactories that were being run by ex-Birmingham residents:

⁷³ RCCT, 44.

⁷⁴ RCCT, 44.

⁷⁵ RCCT, 46.

⁷⁶ J. Harris, *Industrial Espionage and Technology Transfer; Britain and France in the Eighteenth Century* (Abingdon: Routledge, 1998), 1-7.

⁷⁷ RCCT, 44.

One conducted by a Mr Hickman, who went from Birmingham; another by a Mr Winwood and his Sons, who also went from Birmingham. I cannot speak to the number of hands employed, or the capital, but I know Mr Winwood had £2000 advanced him before he went, on his going from hence. They are both natives of Birmingham; they have the same tools employed there as at Birmingham.⁷⁸

The Government had tried to prevent the transfer of knowledge and men by restrictive trade policies (Chapter Two and Three). Some of the knowledge and technological advances in copper and brass working that had been made in Birmingham were innovative and significant in their scope and influence and had the potential to give advantages in the marketplace, as well as in military matters (Chapter Three). This was particularly powerful, persuasive, and relevant given the backdrop of war and revolution during the 1790s. The naval advantages that copper and brass had conferred on Britain were vital. In the same year as the Enquiry, the Secretary of State for War, Henry Dundas, highlighted that: 'By our commerce and our fleet, we have been enabled to perform those prodigies of exertion which have placed us in the proud state of pre-eminence we now hold.'⁷⁹ There was a fear however that Britain's dominance was under threat; despite important victories against the Dutch and French at sea, the Spithead and Nore mutinies by sailors of the Royal Navy in 1797 were extremely concerning for the Government, who feared that radicals had infiltrated the Navy and paranoia rose about industrial espionage.⁸⁰ Niklas Frykman highlights the increased links

⁷⁸ RCCT, 44.

⁷⁹ Quote in J. Davey, "Atlantic Empire, European War and the Naval Expeditions to South America, 1806-1807," in *The Royal Navy and the British Atlantic World, c. 1750-1820*, eds. J. McAleer and C. Petley (London: Palgrave Macmillan, 2016), 148.

⁸⁰ N. Frykman, "Connections Between Mutinies in European Navies," *International Review of Social History*: 58: 21 (December 2013), 87-107.

between the Atlantic revolutions and the different navies of Europe and argued that the British Government was extremely concerned about losing naval advantages because of this trend.⁸¹ Birmingham had played an important role in stimulating the economy and even Williams, who had been so critical of those manufacturers in Birmingham, was forced to admit that the significant advances in copper technology came about because of the Birmingham workforce. He spoke of the financial problems his clients had suffered as a result of their ships using iron bolts under the water level, which led to rust and corrosion at pivotal joints in the sheathing of the vessel. This in turn led to costly and regular maintenance work being carried out on all maritime ships:

But after the great pains and labour with two ingenious artists of Birmingham, we found out the method of making copper bolts, far superior to the very best iron ones ever made. The navy board, after giving them the fullest trials, approved, and adopted them, and they have ever since been universally used, to the incalculable advantage of the British navy.⁸²

The potential of such valuable techniques, ideas and individuals leaching into foreign markets had been a concern for the British Government for decades, and manufacturing secrecy in the trade was under threat as the workforce left for continental Europe (Chapter Three); Williams himself had profited from enormously lucrative contracts with the East India Company as a result of exclusive knowledge regarding copper bolt technology in the late

⁸¹ Frykman, "Connections Between Mutinies in European Navies," 87-107.

⁸² RCCT, 52.

1780s.⁸³ During the maritime wars with the Dutch Republic and rising tension with other nations, industrial espionage was troubling. Birmingham merchants expertly highlighted the foreign threat as one of the sources of fluctuating copper prices, with the intention that the Government might be provoked into providing incentives to workmen and merchants to stay in England.

Between Hadley, Simcox and Smith an image was created of French and Italian conspiracies against Birmingham, where those nations attempted to force the Midlands manufacturers out of the market, using their own genius, workers, and ideas. This once more fell into the narrative that Birmingham manufacturers were the victims of other parties' malice, firstly within Britain from Williams and Cornish mine owners and secondly from outside Britain by foreign rivals. It was a sophisticated strategy and rhetoric that was being used by the Birmingham industrialists, to garner sympathy and support.

Origins of Discontent: Thomas Williams and Cornish Representatives

Williams and the Cornish representatives were forced to defend themselves against accusations of greed and conspiratorial protectionist plotting, and to explain the origins of rising prices of copper from their mines, as well as to disprove the notion that they were the cause of the problems within the industry. John Vivian, the mine owner whom Simcox had previously criticised, highlighted the rapidly increasing costs of mining copper and maintaining the mines. He claimed that 'the price of materials and labour since 1790, is

⁸³ WCAR, MS 3782/12/87, item 38: J. Watt, *Letter to Wilson Regarding Williams East India Company Contract* (12 February 1789).

advanced more than 50 percent and in many instances double the quantity of materials for increased depth.⁸⁴ He provided a detailed picture of the state of the mines, most of which by this point were unprofitable, and claimed that all the losses together amounted to £350,000.⁸⁵ The old mines in particular had become increasingly expensive to run due to the cost of maintenance; the deeper the companies penetrated the ground, the more expensive the mines were to work. William Carne, another mine owner, expanded on the drastically rising costs of extracting water from deeper levels:

In 1791 the Hurland mine, for which I am an agent, wrought with two steam engines, and consumed but 75 weigh of coals monthly; we have been under the necessity of erecting two more engines, and we now consume 160 weigh of coals per month, to draw the water. At that time, we gave but 20 guineas a fathom to sink our engine shaft; we now give 60 guineas to do the same work.⁸⁶

These costs could be attributed to Boulton and Watt; Jennifer Tann asserts that:

With the capital cost of a Watt engine of 45-inch cylinder diameter, typical of the size employed in operating pumps in the deep mines, in excess of £1,500..., these engine expenses left... probably little alternative for the adventurers other than resorting to some credit arrangement to finance the engines.⁸⁷

⁸⁴ RCCT, 17.

⁸⁵ RCCT, 12.

⁸⁶ RCCT, 18.

⁸⁷ J. Tann, ed., *The Selected Papers of Boulton and Watt: The Engine Partnership, 1775-1825* (London: The MIT Press, 1981), 16.

In retrospect it would have been easy to place blame on Boulton and Watt for much of this expense, but Carne and others failed to do so, even though Boulton was forced to concede that increased mining maintenance was inevitable, because the cost ‘increases in proportion to the depth from which the water is drawn.’⁸⁸ Many of the Cornish representatives failed to do what their Birmingham counterparts did so well: accuse and blame. As the costs of mining went up it was argued that so must the price of the mined product. Despite this argument, some of the Cornish representatives damaged their own defence. Whereas Birmingham manufacturers provided a united front in their arguments, and rarely admitted fault even when businesses had clearly failed, not all the Cornish representatives were as reluctant to accept blame. John Williams, an agent for many of the mines, admitted that some of the mines had been worked ineffectively, especially ‘in not prosecuting the levels, and sinking the shafts.’⁸⁹ He also revealed that in many of the mines, in order to cut costs, not enough miners were employed, which made mining inefficient.⁹⁰ This was refuted by Williams, who blamed mismanagement and financial troubles on a lack of support from the British Government. Compared to the united front provided by the Birmingham representatives, the arguments between individuals representing Cornwall were fragmented and contradictory. The tensions and contradictions between Cornish mining industry figures, and Thomas Williams, that had arisen in the early 1790s, continued to hurt their case. The willingness of some of the Cornish representatives to accept fault, whilst honest, was a major weakness in their case. Their Birmingham counterparts refused to do the same and, whilst morally ambiguous, their defence was stronger for it.

⁸⁸ RCCT, 35.

⁸⁹ RCCT, 17.

⁹⁰ RCCT, 18.

Another chink in the Cornish armour was their figurehead, Thomas Williams. He was unarguably adept and more persuasive than many of his colleagues, and his legal training was evident throughout, but he failed to hide his fury, indignation, and frustration at the proceedings, even though the Enquiry had been instigated at his behest. The *London Evening Post* reported that Williams lost his temper during his questioning and also clashed with Pitt over the Enquiry during Parliamentary sessions; the continued coverage in London newspapers suggests that there was a level of national interest in the case.⁹¹ Throughout his interrogation Williams frequently highlighted the role of Parliament in the rising prices of copper, thus openly criticising MPs. Raising this issue was counterproductive. In the 1770s when Birmingham manufacturers had lobbied against Parliamentary trade restrictions with America (Chapter Two), their petitioning and criticisms were ineffective. Many Midlands-based manufacturers agreed with Williams that Parliament was to blame, including Samuel Garbett who had blamed Parliament's restrictive trade policy for the state of the copper trade.⁹² However, the public and private arguments differed greatly, and this highlights the sophistication and adaptability of the Birmingham group's strategy; they had moved away from openly criticising Parliament. Williams was not as restrained in his presentation. After a patronising summary of how foreign mines worked, he criticised the British Government, comparing its failures to the huge investments by foreign governments. He challenged Parliament by stating that:

All the foreign mines of which I have now spoken, are encouraged, and supported
by their respective governments. They have all great privileges and immunities,

⁹¹ WCAR, MS3782/12/87, item 5: *London Evening Post* (9 May 1799).

⁹² WCAR, MS 3782/12/87, item 22: S. Garbett, *Observations on the Copper Trade of England & the Dangers of Exporting the Tools & Machines Used Therein* (1786).

and none of them I believe pay any duties whatever, on the different materials made use of in working them.⁹³

Williams continued to lead an extraordinary attack on Governmental policy to the MPs in the room:

Had our government given them support, or in any way aided the spirit and enterprising industry of the people, England might this day have been the greatest most flourishing mineral country in all Europe, perhaps in all the world, I mean, considering our copper, tin, lead, calimere, sulphur, iron and coal mines... instead of such support we have nothing from our government but restrictions, prohibitions, and taxes without end.⁹⁴

He used examples including Canada where miners were given resources for free, and cited how timber and fuel in the Electorate of Hanover were exempt from extra duties.⁹⁵ A continuous theme in his argument for the origins of rising copper prices revolved around the lack of support the mines had received from the Government, and he derisively claimed that Great Britain's policy for copper was openly and extensively ridiculed by other countries: 'I was informed by Monsieur de Camus, the French government, during the American War, laughed at the English government for their attempt to prevent the French Navy from being copper sheathed.'⁹⁶ Williams pointed out that the French subsequently bought sheet copper

⁹³ RCCT, 53.

⁹⁴ RCCT, 54.

⁹⁵ RCCT, 54.

⁹⁶ RCCT, 71.

from Sweden instead, which only strengthened Britain's rivals. He maintained that Parliament had failed to protect British interests and vehemently argued that if he and his representatives were not forced to spend money on upkeep and import taxes, which should be cut by Parliament, copper prices could be reduced. His aggression played into the hands of the Birmingham brass founders who had portrayed Williams, in anecdotes by Simcox, as a villainous caricature and themselves as victims who had struggled to deal with his greed and wrath.⁹⁷

Due to decades of closely working together, an organised hierarchy within the network, and regular correspondence with one another (Chapters Two and Three), the Birmingham representatives had created an effective political group, which provided a cohesive account to explain the causes of the troubles within the copper and brass industries of Great Britain, focusing on the poor behaviour of British mine owners, industrial espionage from foreign competition, fear-mongering about working-class radicalism and revolutionary wars. Compared to Thomas Williams who criticised the Government, as well as the contradictory accounts from Cornish mine owners (some of whom accepted blame), the Birmingham brass founders successfully created a bleak image of Birmingham trade and a lack of autonomy in which to change their circumstances. Their strategy had shifted compared to previous decades when their calls for reform had been more aggressive and inflammatory, criticising the Government and Cornish miners (Chapters Two and Three). The political organisation and unity of the Birmingham group influenced Parliament (Chapter Five), convincing MPs that the state of the copper trade was problematic and that reforms needed to be introduced.

⁹⁷ RCCT, 9.

Towards the end of May 1799 Parliament began to ask questions about how the situation could be improved.

Potential Solutions

The brass founders from Birmingham had a principal objective of freeing themselves from dependence upon copper raised from Cornwall, including requests for reforms to the ticketing system in place when selling copper, as well as introducing a cap on the price of the raw material. Their primary aim was to end the import tax on copper, so that the metal could be purchased from foreign markets at a cheaper price than from Cornwall. Upon being asked by the Enquiry from where copper could be procured, Boulton highlighted 'Russia, Siberia, Hungary, Spain, Barbary, Trieste, the Diabehir mines in Persia, and South America', and he stated that 'opening the ports would probably have a tendency in lowering the price.'⁹⁸ The list of potential sources of copper highlights how extensive the copper-mining industry had become, and how much competition Britain faced. Simcox explicitly singled out Sweden as a viable source of copper, claiming that 'I believe it could have been put on a ship board at Stockholm, after paying duty outwards, shipping charges, and merchant's commission, at about £81 per ton.'⁹⁹ He compared this to the £100 per ton which had been the market price in recent years in Birmingham.¹⁰⁰ The Birmingham representatives were well-prepared by providing extensive evidence and research to support their argument and they had a long-term plan in place.

⁹⁸ RCCT, 25.

⁹⁹ RCCT, 77.

¹⁰⁰ RCCT, 77.

Whilst Birmingham manufacturers represented themselves well, Parliament still required non-partisan parties to corroborate their claims, and several experts were questioned to explore the validity of the alternatives being presented. One of these individuals was a copper mine owner from Ireland, Turner Camac, who had no known links to the Cornish or Birmingham representatives – although as demonstrated in chapter three Birmingham brass founders had vigorously campaigned against the free trade of groups in Ireland. Since Pitt's Irish propositions however, Ireland had failed in rebellion against the British Government in 1798, which only added to the Government's concern about revolution within Britain. The previous year, as a result of the Irish Rebellion, the British Parliament had crippled Irish trade.¹⁰¹ It now needed to start rebuilding the relationship. The brass founders offered Parliament an opportunity to alleviate two grievances at once. Parliament asked Camac: 'Would working the mines have any effect in quieting the people in Ireland?'¹⁰² His response unequivocally supported the Birmingham cause:

Prior to the rebellion, and labouring under the operation of the import duty into England, the Wicklow mines employed one thousand people, and if the duty was remitted would give useful employment to many more, and by thus affording useful employment to many more, would tend very much to keep the people of that country in a state of quiet subjection to the laws, and claim their gratitude for such a concession, which would certainly be attended with the most beneficial consequences.¹⁰³

¹⁰¹ P. Harwood, *History of the Irish Rebellion of 1798* (London: Chapman and Elcoate, 1844), 14.

¹⁰² RCCT, 87.

¹⁰³ RCCT, 88.

From the Government's point of view, siding with the Birmingham brass founders could help subdue the restless and resentful populace of Ireland, especially in areas such as County Wicklow where rebel forces had been suppressed by the British.¹⁰⁴ The Birmingham representatives were aware of British politics and wanted to exploit the national situation for their own gain. Where previously the Birmingham brass founders had vigorously campaigned against the free trade of the Irish during Pitt's Irish Propositions (Chapter Three), they now saw an opportunity to take advantage of the Irish situation – again demonstrating the brass founders' political acumen and industrial flexibility as international politics rapidly changed. However, these potential new laws could also have negative consequences in Cornwall. Pascoe Grenfell, an expert in foreign copper markets, concluded that 'the importation of it free of duty into this country would certainly affect the price of copper in England, and be injurious to the mines in consequence.'¹⁰⁵ The Government had to consider which contingent, Birmingham or Cornwall, had presented itself as more valuable to the country when considering such reform.

Unsurprisingly, Williams and his Cornish contingent were unequivocally opposed to any changes suggested by Birmingham's representatives. Williams stated that 'I think any check would be hazardous in the extreme, and any such limitations as I have heard proposed, might endanger the severest blow that the navy or commerce of this country ever felt by any acts of legislature.'¹⁰⁶ It is possible that Williams was using hyperbole, as his Birmingham counterparts had, to strengthen his own cause. However, his sentiment highlights how

¹⁰⁴ P. O'Shaughnessy, ed., *Rebellion in Wicklow: General Joseph Holt's Personal Account of 1798* (Dublin, Four Courts Press, 1998).

¹⁰⁵ RCCT, 42.

¹⁰⁶ RCCT, 57.

important brass and copper production had become to the British Navy, and in turn how influential those who controlled the industry were to Britain's global influence. Whereas there had been some discord in the Cornish narrative regarding how mines had been run, there was unified support for Williams' view regarding reform. Andrew Vivian, a Cornish engineer and relative of John Vivian, spoke of these potential new reforms to the industry as a serious deterrent to investing in mining in Cornwall, saying that 'it would certainly prevent some persons going on that are now in search of copper mines, and stop new mines which were about to be set to work, and probably some of the deep mines.'¹⁰⁷

In rejecting the suggested plans of the Birmingham merchants, Cornwall's representatives were forced to produce their own ideas for reducing copper prices. The Cornish counter-suggestions proposed investing heavily into the Welsh and Cornish mining industry and searching for new mines. Williams highlighted that the mines:

Are in general deep and expensive to work, and the longer they work the deeper they must go, and the working of them must be consequently expensive, that they cannot continue unless the price of copper is sufficiently high to answer those expenses.¹⁰⁸

Andrew Vivian suggested that new mines would reduce the price of copper: 'the general opinion in Cornwall is, that such mines may be found, if proper encouragement be given to search for them', but only 'by not restraining the export or allowing the import of copper,

¹⁰⁷ RCCT, 60.

¹⁰⁸ RCCT, 64.

except under the present terms.’¹⁰⁹ Changing the import laws was something that troubled the Cornish mine owners; they continued the theme of highlighting foreign governments’ investment in their own mining industries, and how successful that practice had been.

Whilst Cornish representatives heavily criticised the Birmingham manufacturers’ conduct, they also must have realised that the Midlands-based industrialists were some of their most lucrative customers. As highlighted later in the proceedings, the Rose Copper Company and the Birmingham Company between them bought over a quarter of all copper raised.¹¹⁰ If those purchasers were lost to foreign markets, the Cornish copper industry would face disaster. Their proposals, however, were met with scepticism by the Parliamentary Enquiry which asked: ‘Do you not think that the high price of copper has been the cause of so many adventurers within the last six months?’, as well as adding ‘Do you not think, if many of these adventurers should prove successful, that the increase of the produce would have the effect of lowering the standard?’, as well as ‘Do you not think that a great number of these adventurers, and the increase of them, will have too rapid an effect in exhausting the Cornish mines?’¹¹¹ Birmingham brass founders did not face such searching questions. MPs believed that prices had been increased to make adventurers richer, and that the reforms proposed by mine owners would decrease standards of British copper as well as its availability. As an ex-adventurer himself, Vivian had to concede that their plan would almost certainly lead to a drop in the standard of ore, and Williams in a similar vein had to admit that he had ‘never heard of a mine that was inexhaustible.’¹¹² Once again the Cornish representatives had to

¹⁰⁹ RCCT, 65.

¹¹⁰ RCCT, 69.

¹¹¹ RCCT, 65.

¹¹² RCCT, 64.

admit fault and flaws within their argument, something the Birmingham industrialists never did, or were never pressured to do. In the later days of questioning, the line of Enquiry becomes increasingly hostile and combative towards the Cornish representatives compared with that addressed towards those from Birmingham. By the end of proceedings, the Birmingham brass founders had achieved their aim of winning favour with the Enquiry; the groundwork had been laid as a result of the networking and lobbying conducted in the previous decades (Chapters Two and Three).

Conclusion

After Parliament had investigated the state of the trade, the possible origins of the problems and the solutions proposed by both sides, there was much to consider. The potential reforms offered the British Government several options, none of which would satisfy both parties. Import and export legislation was vital to the country's trade, and changes would have significant consequences. In a time of mercantilist policy, this was a major decision.

The ability of the Birmingham political lobbying group to create a more cohesive argument than their Cornwall counterparts was impressive. There were five main elements to the Birmingham campaign that demonstrate the political skill of the group. The first element was the clearly defined roles of individuals and what they spoke of during their testimony. Simcox focused on criticism of Williams, Hadley on industrial espionage, Villiers on poor rates in Birmingham: each had a specific role which complemented the testimony of the others. The second theme was an exaggeration of the troubles experienced within the Midlands. Thirdly, the lobbying group deflected blame upon Williams, mine owners and foreign competition for

those exaggerated problems and portrayed themselves as naïve victims of internal and external industrial enemies. The fourth theme of their testimony involved a strategic shift in rhetoric by moving away from criticism of miners and the Government, something which had previously proved to be ineffective and counterproductive. Finally, their extensive research and statistics about foreign markets and Irish politics had produced a potential long-term plan: by exploiting the Irish rebellion and Swedish metal markets, a scheme in which copper could be purchased from foreign sources tax-free allowed the lobbying group to diversify their supply.

Harris' conclusion that the Birmingham representatives demonstrated no plan or skill in their campaign obscures the complex strategy embarked upon by the Birmingham industrialists.¹¹³ The research in this chapter produces new perspectives and provides a more comprehensive analysis that reveals the sophisticated techniques demonstrated throughout the Enquiry by the Birmingham industrial group. Robert Jenkinson concluded that:

The price of copper in the different European markets, together with the strong inducements they have to exercise that power, will be deemed sufficient reasons to determine the legislature to afford such protection to the trade of Birmingham as shall be best adapted to secure its continuance, and promote its future prosperity.¹¹⁴

¹¹³ J. Harris, *The Copper King*, 115.

¹¹⁴ WCAR, MS 3782/12/87, item 25: R. Jenkinson, Observations on the Evidence reported by the committee appointed to enquire into the state of the copper mines and copper trade of this Kingdom (1799).

As Williams tried to secure investment into copper mining in Wales and Cornwall in order to regain his monopoly, the Birmingham brass founders persuaded the Government to introduce change to the copper trade of Great Britain for their own benefit; Williams' gamble had backfired, and the Birmingham brass founders' political rhetoric and sophistication granted them important reforms. The 1799 Enquiry resulted in the opposite of what Williams had wanted to achieve: less trade restrictions for Birmingham brass founders. The nature of this change would take time to be introduced however, as the Cornish mining community continued to resist. Chapter Five explores the propaganda war that took place outside of Westminster during, and in the years following the Enquiry. This pamphlet war has not received attention in the historical literature of Birmingham, yet it adds credence to the view that the Birmingham industrialists had created a well-oiled political machine, a far cry from the opinion expressed by Harris.

Chapter Five:

The Birmingham Lobbying Group and the Political Use of Pamphlets (1799-1801)

With the completion of the 1799 Enquiry, Parliament adjourned to assess the evidence; official reform, however, was not produced until June 1801.¹ In the interim two years the Birmingham-based lobbying group continued to meet, formed committees, and produced pamphlets designed to sway political opinion. This chapter explores the increasingly sophisticated approach to political engagement and organisation demonstrated by Birmingham brass founders, identifying how the pressure group used pamphlets as a political tool to instigate industrial reform.

A pamphlet war can refer to any protracted argument or discussion through printed medium, especially between the time the printing press became common and when state intervention, such as copyright laws, made public discourse more difficult.² The historical literature of the subject has generally focused on the pamphlet wars of the sixteenth and seventeenth century, and in particular during the Reformation, Counter Reformation and the English Civil War.³ Eighteenth-century British pamphlet wars have received less attention, but some important case studies exist, such as the work on medical pamphlet wars by Anita Guerrini, or Irish political pamphleteering by Charles Benson and Siobhan Fitzpatrick.⁴ Guerrini's

¹ Library of Birmingham, Wolfson Centre Archival Research (WCAR), MS3782/13/97, item 43: *Act of Parliament for regulating the Copper trade* (30 June 1801).

² J. Raymond, *Pamphlets and Pamphleteering in Early Modern Britain* (Cambridge, Cambridge University Press, 2003), 4.

³ J. Holstun, ed., *Pamphlet Wars: Prose in the English Revolution* (London: Frank Cass & Co. Ltd, 1992).

⁴ A. Guerrini, "Pamphlet Wars," in *Literature and Medicine During the Eighteenth Century*, eds. R. Porter and M. Roberts (Abingdon: Routledge, 1993), 226-244. C. Benson and S. Fitzpatrick, "Pamphlets," in *The Oxford History*

research into medical pamphleteering reflects a period of rapid social change and industrial organisation: ‘the development of a market economy, the growth of an affluent middle class, and the flowering of urban culture all strongly influenced the organisation of medical practice and medical practitioners.’⁵ Benson’s and Fitzpatrick’s chapter highlights the continued importance of print culture and pamphlets in raising awareness of religious and political issues such as Catholic Emancipation and national education.⁶ The research in this chapter engages with several of these themes, including industrial organisation, print culture, and the influence of the educated middling class, providing evidence for the political role of the Birmingham brass founders, as the organisation of the industry continued to develop in the changing British state system. Eighteenth-century print culture continues to be a diverse field of study and there is still much scope for new discoveries about the nature of pamphlet wars.⁷ This chapter focuses on the continued political role of the Birmingham lobbying group, but also sheds light on the changing use of print culture and pamphlet wars at the turn of the nineteenth century, by showing the intricacies involved, the influence and effectiveness of pamphlets, as well as the vibrancy and importance of late eighteenth-century political cultures.

Historical analysis of the copper trade pamphlet war of 1799-1801 is scant; no comprehensive analysis exists. The research presented in this chapter is the first overview of the conflict. The

of the Irish Book, Volume IV: The Irish Book in English, ed. J. Murphy (Oxford: Oxford University Press, 2011), 139-144.

⁵ Guerrini, “Pamphlet Wars,” 226.

⁶ Benson and Fitzpatrick, “Pamphlets,” 139-144.

⁷ H. Kerr, D. Lemmings, and R. Phiddian, eds., *Passions, Sympathy and Print Culture: Public Opinions and Emotional Authenticity in Eighteenth-Century Britain* (Basingstoke: Macmillan Publishers Limited, 2016); R. Ward, *Print Culture, Crime and Justice in Eighteenth-Century* (London: Bloomsbury Academic Publishing, 2016); I. Cawood and L. Peters, eds., *Print, Politics and the Provincial Press in Modern Britain* (Oxford: Peter Lang Publishers, 2019).

most substantial conclusions regarding the pamphlet war are provided by John Harris in his biography of Thomas Williams.⁸ Unlike the 1799 Enquiry, to which Harris dedicated a chapter of his work (Chapter Four), there are only passing mentions of the pamphlet war. This is probably due to the lack of involvement from Williams himself, who became much quieter in the conflict after a series of public spats with William Pitt in Parliament which were covered in the *London Gazette*.⁹ Harris suggests that the evidence provided by Birmingham manufacturers in their pamphlets was limited, out-of-date and lacking in skill, but large amounts of information were being produced quickly and, whilst facts were often manipulated, even their opponents from Cornwall noted that their use of statistics was ‘ingenious.’¹⁰ This chapter offers an analysis of the pamphlets war to demonstrate how far the Birmingham group had developed their methods, rhetoric, and tactics.

Print culture had become an important tool for both sides of the copper conflict (Chapters Two, Three and Four). Cornish representatives initially produced pamphlets to try and turn the tide of political opinion; these were followed by a wave of Birmingham pamphlets to counter them. The pamphlets produced by both sides in the two years following the Enquiry were full of ‘facts’- mainly comprised of financial statistics, surveys and trade analysis, but they also contradicted one another. Dozens of pamphlets, from both sides of the argument, are located within The Library of Birmingham – but it is possible that many may be missing, so a complete overview of the conflict is almost certainly not possible. The contradictory statistics provided are also inconsistently referenced and sourced, meaning that the ‘facts’

⁸ J. Harris, *The Copper King: A Biography of Thomas Williams of Llanidan* (Liverpool: Liverpool University Press, 1964), 115.

⁹ *London Gazette*, 20 June 1799; Harris, *The Copper King*, 115-138.

¹⁰ WCAR, MS3782/13/97, item 34: G. Woodfall, *A Short Reply to the paper printed by A. Strahan* (21 March 1799);

cannot be accepted at face value. Even when information is unsubstantiated, pamphlets can reveal what industrialists thought relevant and compelling in swaying political opinion.¹¹ Private letters are also utilised throughout this chapter to provide additional insight into the purposes and intentions of the pamphlets.

According to Heather Kerr, David Lemmings and Robert Phiddian, it is 'worth recognising that the civil wars of eighteenth-century Britain were overwhelmingly *pamphlet* wars, in marked contrast to the seventeenth-century experience'; conflict had moved into the realm of print culture.¹² What is experienced in the fight for copper and brass supremacy in Britain can be considered one of these 'civil wars'. A recurrent theme is apparent in the narratives of both sides; their side was acting from a necessity to keep their respective industry from collapsing. They also stressed the importance of these industries for their respective local areas, along with the livelihoods of the local people, suggesting that it was not only the industries that were at stake but also the fabric of the communities. In this way 'certainly, it is possible to see cultural developments in the print culture of this period that provide channels for the elaboration of sympathetic and oppositional perspectives.'¹³ The pamphlets produced by both sides, but more particularly the Birmingham group, could understand and articulate arguments that would prove sympathetic and compelling. As such, the pamphlets are also reflective of the social, cultural, political, and industrial developments in the regions - and thus this chapter provides insights into the history of Birmingham and Cornwall.

¹¹ P. Russel, *Lay Theology in the Reformation: Popular Pamphleteers* (Cambridge: Cambridge University Press, 2002), 6.

¹² Kerr, Lemmings and Phiddian, "Emotional Light on Eighteenth-Century Print Culture," 4.

¹³ Kerr, Lemmings and Phiddian, "Emotional Light on Eighteenth-Century Print Culture," 5.

The first quarter of this chapter overlaps with the chronology of Chapter Four. During the 1799 Enquiry, Thomas Williams and the Cornish mine owners produced pamphlets that were distributed to MPs as they entered and left Parliament. The main themes of these Cornish pamphlets are outlined at the beginning of this chapter. The research then moves on to explore how the Birmingham brass founders utilised their political contacts to combat the propaganda that was being printed against them, and to identify key individuals such as MP Andrew Strahan, the King's official printer, who were a part of a much more impressive network compared to their controversial associates of the 1770s (Chapter Two). This research then focuses on the two-year period following Chapter Four and the 1799 Parliamentary Enquiry. The content, regularity, and quality of the pamphlets produced by the Birmingham lobbying group are outlined and analysed to demonstrate the clear development and sophistication of the Birmingham brass founders as a political lobbying force, along with their ability to react effectively to new challenges. Finally, this chapter utilises the 1801 Act of Parliament Regulating the Copper Trade of Britain to highlight the legal amendments that had been introduced to support the brass founders of Birmingham. The sustained two-year pamphlet campaign by the Birmingham lobbying group, as well as the introduction of the reforms for which it had campaigned, demonstrates a well-oiled political machine with the influence to initiate the change it was unable to effect in the 1770s when Parliament was first petitioned (Chapter Two). This chapter provides evidence that the brass founders of Birmingham had gained influence nationally and had become a sophisticated political entity. It is argued that the Birmingham group utilised pamphlets and political contacts effectively to safeguard their industry.

Early Cornish Reviews

This section occupies the same chronological time period as Chapter Four. The earliest pamphlets, posters and propaganda were not produced by the Birmingham brass founders – but by those in Cornwall, as early as March 1799 before the Enquiry had begun.¹⁴ As seen in Chapter Four, the Cornish representatives presented a fragmented and inconsistent version of events in their response to Hawkesbury's questions; outside of Parliament however they utilised printed reviews of the conflict to clarify their position. The pamphlets, handed to MPs individually, made it clear that the Cornish mine owners were unhappy with the proceedings of the Enquiry and its obvious bias towards Birmingham industrialists: revealing an indication of the success of the political lobbying undertaken by the Midlands group. Cornwall's representatives had influential publishing contacts, including Henry Sampson Woodfall. Lance Bertelsen asserts that Woodfall was the most famous newspaperman in London.¹⁵ His publications were important to the Cornish campaign, although not entirely reliable in the information they presented. Woodfall admitted that, with regard to the reliability of his sources: 'I am not sure that I have always chosen well, as I am eager to entertain... likewise sometimes I received with too much willingness, accounts which time had afterwards confuted.'¹⁶ Woodfall's publications included *The Public Advertiser* newspaper which he had inherited from his father and transformed from a simple advertisement platform into weekly coverage of political events, often criticising the political establishment of Britain.¹⁷ He had

¹⁴ WCAR, MS3782/13/97, item 34: G. Woodfall, *A Short Reply to the paper printed by A. Strahan* (21 March 1799).

¹⁵ L. Bertelsen, "The Education of Henry Sampson Woodfall, Newspaperman" in *Mentoring in Eighteenth-Century British Literature and Culture*, ed. A. Lee (Abingdon: Routledge, 2011), 163.

¹⁶ Bertelsen, "The Education of Henry Sampson Woodfall," 163.

¹⁷ H. Barker, "Woodfall, Henry Sampson (1739-1805), printer and newspaper editor," *Oxford Dictionary of National Biography* (3 January 2008), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-29913>. (Accessed 27 July 27, 2020).

controversially printed a series of letters by an author with the pseudonym Junius in this newspaper, inspired by Junius Brutus, the Roman patriot who led the overthrow of the Roman monarchy. Within the Junius series were listed the ways in which the British Government and the Monarchy had infringed upon the freedoms of Englishmen.¹⁸ Woodfall and his newspaper had created a number of enemies within Parliament, including Horace Walpole, for alleged libel; whilst the pamphlets may have attempted to encourage MPs to side with the Cornish representatives, their choice of printer was unlikely to win any friends within political circles.

The reputation for libel and factual inaccuracies must be considered when analysing the pamphlets produced by the Cornish representatives and printed in London. The pamphlets published by Woodfall, in response to newspaper articles supporting Birmingham, were distributed at the door of the House of Commons. One of these was circulated on 24 March 1799, reacting to claims made only three days earlier, highlighting the speed with which these pieces were being written, printed and distributed. In this pamphlet, the short reply claims that Birmingham lobbyists twisted facts to fool Parliament:

The author attempts to show that the Cornish mines have, collectively, made great profit on their capitals; and his mode of proving it, is truly ingenious... The Cornish accounts call capital, that sum of money which has been advanced on a concern, dividing it under two heads: first, the engines, materials, & c. in a mine, which they call "Capital on a Mine": Secondly, the difference between the sum expended, and the value of those materials, which they call "Loss Unrecovered"...

¹⁸ Barker, "Woodfall, Henry Sampson (1739-1805."

The author of this paper has discovered, that the Parliament will also judge the difference of the expense of working mines in the year 1790, and in the year 1799; and from a plain undisguised statement of the accounts, instead of a laboured detail of calculations, founded on fallacy, to puzzle and perplex.¹⁹

The three-page document highlights why Cornish mine owners believed the demands of the Birmingham brass founders were fictitious and unconvincing; source evidence was provided in the form of footnotes at the bottom of each page to provide legitimacy for the claims being made. It was not simply a war of words, but of numbers and figures; evidence-based arguments created by University-educated men. The Cornish pamphlets, produced throughout the Enquiry, aimed to expose the testimony of the Birmingham brass founders as misleading; they had a limited circulation however, seemingly only handed out to individual MPs as they entered and left Parliament. The pamphlets expanded upon some of the testimony identified in Chapter Four, such as the mistreatment of miners by Boulton and Watt, but they were not significantly more detailed and were therefore unlikely to change the minds or opinions of people.

Quotations from Boulton's evidence were printed and discredited; a pamphlet from 21 March 1799 highlighted how Boulton claimed, 'that the export of brass and plated ware (the peculiar manufactures of Birmingham) to France, Spain and Italy, has been lost by the war.'²⁰ However, they countered this point by stressing how Boulton had failed to include in his testimony the increased trade 'to Germany, and other friendly or neutral parts of the

¹⁹ Woodfall, *A Short Reply to the Paper Printed by A. Strahan*.

²⁰ Woodfall, *A Short Reply to the Paper Printed by A. Strahan*.

continent.’²¹ Boulton and Watt were continually singled out for criticism, for lies and hypocrisies. The Cornish miners drew attention to how they had paid Watt ‘£40,000 for the use of his Engines; is it to be credited, that he should stand forward in deputation, to lessen the prosperity of those by whose means he has obtained that fortune.’²² The disputes over the Boulton and Watt engines used in Cornwall were a source of tension between the representatives of the two regions, and visible both in the responses during the Enquiry and in the later pamphlets.

The Cornish pamphlets continued to be produced after the Enquiry had ended, but snippets also began to appear in local newspapers, such as the *London Gazette*.²³ The move from individual pamphlets handed out at Parliament, to paid advertisements in newspapers, suggests that the Cornish were trying to expand their influence and reach new audiences after the end of the Enquiry in May. The various arguments seen in pamphlets and papers were not solely focused on dissecting the falsehoods that existed within the testimony of the Birmingham brass founders. A second major theme explored the issue of exceptionalism. The Cornish pamphlets claimed that the Birmingham brass founders were being held to a different standard from other towns and trades. On 11 June 1799, the smelters and miners asked in one pamphlet, printed in the *London Gazette* and produced by Woodfall: ‘why should the complaints of a few individuals from one town be preferred to the tacit satisfaction of all the rest of the Kingdom, who are equally concerned in the same trade?’²⁴ The Government’s bias towards the Birmingham brass founders throughout the Enquiry is also continually referred

²¹ Woodfall, *A Short Reply to the Paper Printed by A. Strahan*.

²² WCAR, MS3782/13/97, item 21: G. Woodfall, *A Short Review of the Arguments used by the Advocates for a Parliamentary Regulation on the Export and Import of Copper* (11 June 1799).

²³ *London Gazette*, 20 June 1799.

²⁴ Woodfall, *A Short Review*.

to after it had concluded. This claim is given credence when studying the private letters of Lord Hawkesbury, who oversaw the 1799 Enquiry. Four months after the Enquiry had finished, Hawkesbury wrote to the Secretary for War, Henry Dundas, a close friend of both Hawkesbury and Prime Minister Pitt.²⁵ Hawkesbury acknowledged that it was actually the sheer number of Birmingham-based manufacturers, demand by the East India Company, and his own policies that had driven up the price of copper (manufactured and raw):

It has more than doubled – the causes of this increase in price are, first; that our manufactories in which copper is employed, have been greatly increased – secondly; that not only all the King’s ships, but all great mercantile ships, which before that time were sheathed with wood, are now wholly sheathed with copper; and even foreign nations are so sensible of the advantage derived from sheathing their ships with copper, that the application to this country for a supply of copper sheathing is greater than you can conceive – but the third, and greatest cause of the increase in the price of copper is the exportation of that article to the East Indies; for the Directors wish to export 1500 tons annually which is equal to one fourth of the whole quantity of copper produced by the mines of the Kingdom.²⁶

²⁵ M. Fry, “Dundas, Henry, First Viscount Melville (1742-1811), politician,” *Oxford Dictionary of National Biography*, (2004), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-8250> (accessed 7 June 2019).

²⁶ National Library of Australia; *Lord Liverpool to Henry Dundas* (20 October 1799), <https://nla.gov.au/nla.obj-761977845/findingaid#nla-obj-761983434> (accessed 23 May 2019).

This letter is evidence of the support given by influential political contacts to the manufacturers in Birmingham, despite their role in raising the price of copper. The politicisation of Birmingham brass was reaping rewards and was the chief instrument in the safeguarding of the industry. The contents of the letter reveal that the man charged with investigating the state of the copper trade of Great Britain, was already aware of why prices were fluctuating. Hawkesbury was convinced that copper sheathing, a technique made possible by Birmingham-based industrialists, the number of copper and brass manufacturers in Birmingham, as well as the sheer amount of goods being sent to Asia were the real source of the fluctuating and increased prices in the copper trade of Great Britain, not the behaviour of Williams and the Cornish miners.²⁷ The suggestion in the Cornish-produced pamphlet, that Birmingham manufacturers were being given preferential treatment, would appear to be accurate, although Hawkesbury never publicly acknowledged this view.

After claiming to expose falsehoods in testimony, and outlining Parliamentary favouritism, the third major Cornish tactic involved comparing the Birmingham brass trade to other trades in various British towns, such as Bristol and Glasgow, which had not been pushing for reform despite the 'state of decay and distress, OCCASSIONED BY THE WAR.'²⁸ In addition to war, the fluctuating price was repeatedly blamed on supply and demand: 'the price fluctuates only according to the demand, with the increased expense of the mines, as in all similar cases it will do.'²⁹

²⁷ Great Britain Patent Office Records, W. Collins, *Patent 1388: Copper Bolts*, granted 22 October 1783; Great Britain Patent Office Records, J. Westwood, *Patent 1398: Hardening and Stiffening Copper*, granted 14 November 1783.

²⁸ Woodfall, *A Short Review*.

²⁹ Woodfall, *A Short Review*.

Shall all the branches of trade connected with the supply of that metal be suffered to prosper without restriction? ... copper alone shall be put under regulations incompatible with the governing principle of commerce, viz. that merchandize should be left to find its own value? – shall coals, timber, cordage, freight, labour, increase in value and abridge the gain of the miners by whose spirit and opulence so many thousands are sustained?³⁰

By comparing the Birmingham brass traders with other merchant groups, as well as different trades throughout Britain, the demands of the Birmingham group are proposed to be unreasonable. As well as comparing different trades, the behaviour and practices of other industrial centres are compared to those of the Birmingham lobbying group, the members of which are portrayed as operating and behaving differently when compared to the manufacturers of brass wares in other centres of commerce, including the capital: 'although the consumers in London and its dependencies are far beyond those of Birmingham, they only lament as all consumers must do, the high price of their materials; but they can, and do, indemnify themselves without the interference of legislature.'³¹ The Cornish group argued that London manufacturers had simply sought to indemnify themselves against the high prices rather than pursuing legislative reform. In contrast, the pamphlets suggest that Birmingham brass founders appeared to be more politically proactive in pushing for amendments.

³⁰ Woodfall, *A Short Review*.

³¹ Woodfall, *A Short Review*.

A fourth tactic seen in the Cornish pamphlets was the expansion of testimony given by Cornish mine owners during the Enquiry, specifically concerning their own allegation that it was the Cornish mining community that was suffering, not the Birmingham brass manufacturing network. Detailed accounts of Cornish mines were produced a month after the end of the Enquiry (Fig 5.1) which supposedly proved that:

The mines producing more than half of all the copper raised in Cornwall, have in those four months, been wrought to a heavy loss... if the measures taken to lower the price of copper should succeed, some, at least, of those mines must be discontinued.³²

It is shown in the table that six of the nine mines used as examples were losing large sums of money; the Penandrea mine alone had lost £3,070 in four months by June 1799, the equivalent of £353,298.08 in 2019 according to the bank of England inflation calculator.³³ Total losses in the same four-month period of the six mines highlighted, amounted to £7853, or £903,729.59 in 2019.³⁴

³² Woodfall, *A Short Review*.

³³ Woodfall, *A Short Review*.

³⁴ Woodfall, *A Short Review*.

A Statement of the Accounts of the following CORNISH COPPER MINES, for four Months, to the End of June, 1799.

| MINES. | Tons of Ore sold | Tons of Copper contained in the Ores | Sums of Money received for the Ores | Adventurer's Part | Proportion of Dues. | Lord's Part. | Smelting Charges, so-called, per Ton. | Standard at which the Ores were sold | Mine Cost | Profit | Loss | Capital employed in the Mine |
|------------------------|------------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------------|--------------|---------------------------------------|--------------------------------------|-----------|---------|----------|------------------------------|
| NORTH DOWNS | 2128 | 198 | 18,668 | 17,631 } Tin 1,263 } | 1-18 | 1,037 | 5,320 | 121 | 19,200 | | 306 | 82,718 |
| UNITED MINES | 1296 | 120 | 11,496 | 11,113 | 1-30 | 383 | 3,240 | 122 | 12,364 | | 1,251 | 19,391 |
| HERLAND | 1034 | 115 | 11,317 | 10,689 | 1-18 | 628 | 2,585 | 121 | 12,164 | | 1,475 | 18,798 |
| CRANMER AND OATFIELD | 970 | 85 | 7,751 | 7,105 | 1-12 | 645 | 2,425 | 120 | 7,691 | | 586 | 14,300 |
| WHEEL JEWELL | 545 | 53 | 5,221 | 4,699 | 1-10 | 522 | 1,362 | 124 | 4,722 | | 23 | 7,000 |
| WHEEL TREASURY . . . | 460 | 40 | 3,734 | 3,319 | 1-9 | 415 | 1,150 | 120 | 4,461 | | 1,142 | 5,836 |
| PEDNANDREA | 271 | 21 | 1,891 | 1,891 } Tin 1,186 } | Dues included in the Mint Cost | | 677 | 122 | 6,148 | | 3,070 | 5,000 |
| * CONSOLIDATED MINES . | 1595 | 159 | 15,930 | 15,267 | 1-24 | 663 | 3,987 | 125 | 12,700 | 2,566 | . . . | 19,500 |
| TREASVEAN | 653 | 48 | 3,910 | 3,610 | 1-13 | 300 | 1,632 | 115 | 3,528 | 82 | . . . | 4,800 |
| WHEEL GORLAND | 200 | 26 | 2,644 | 2,468 | 1-15 | 176 | 500 | 121 | 2,355 | 113 | . . . | 6,646 |
| | 9152 | 865 | £. 82,562 | £. 80,241 | | £. 4,769 | £. 28,878 | £. 121 | £. 85,333 | £. 2761 | £. 7,853 | £. 183,989 |

* This mine is under an engagement to pay 1000l. per month, for twelve months, to Messrs. Baines and Wain, no part of which sum is included in the above amount of cost (17900l.)
(e) Prior to the discovery of the Anglesea mines, manufactured copper was rarely or never sold under 12d. per lb. (see Report, page 41.) The relative value of money in the year 1720, was to the money of the present day as 100l. to 118l. 7s. 6d. 12d. of that period was, therefore, equal to 30d. of the present time.
In 1745, 100l. was equal to 195l.

Fig 5.1. WCAR, MS3782/13/97, item 21: G. Woodfall, *A Short Review of the Arguments used by the Advocates for a Parliamentary Regulation on the Export and Import of Copper* (11 June 1799). A Statement of the Accounts of the Following Cornish Mines, for four months, to the End of June 1799.

The price of copper was also compared to similar centres of copper mining in Germany and Sweden, and it was concluded that, 'nor can that price be said to be "exorbitant", which does not exceed the price which the same commodity bears in other markets of the world.'³⁵In other words, why should Birmingham be treated differently to other centres in the same situation when it is clear that it is the miners who suffer the greatest losses? It is unclear why these statistics were not produced during the Enquiry itself, or indeed how accurate they really were. This may simply be a case of the Cornish contingent seeking to reverse the perceived damage of their own testimony during the Enquiry, and attempting to influence other people into supporting them. The sporadic use of individual pamphlets during the Enquiry, followed by a wider and more sustained pamphlet campaign following the Enquiry, could be an indication of how the Cornish group perceived the need for damage control.

³⁵ Woodfall, *A Short Review*.

Summaries of meetings of Cornish mine owners, and the resolutions they created, also began to be transcribed into pamphlet form. In August 1799, the clerk of one meeting was 'directed to publish these resolutions in the Sun, Star, and the Sherborne newspapers.'³⁶ There was a co-ordinated attempt to spread word to the public in the Southwest of the biases and inconsistencies that existed within the Enquiry. The initiation of a public propaganda campaign by the Cornish mining community within the Southwest in July and August 1799, combined with the production of pamphlets for Parliament by their London-based publisher, demonstrates a well-orchestrated movement. The Cornish campaign was not solely focused in London and Cornwall; summaries of meetings that took place in Cornwall were produced and distributed within Birmingham through T.A. Pearson's Printing Office, High Street.³⁷ One particular meeting on 24 July 1799, two months after the Enquiry, was attended by forty eight influential Cornish businessmen who appealed directly to the *Residents of Birmingham* to encourage local brass founders to stop the campaign.³⁸ The widespread nature of the Cornish pamphleteering suggests that the Birmingham lobbying group had gained the upper hand in the conflict.

During the months following the Enquiry, the Cornish pamphleteers utilised a fifth tactic, thanking MPs who had publicly supported their cause in Parliament, including 'the right hon. Lord De Dunstanville and Lord Basset, to Sir William Lemon, Bart and Francis Gregor, Esq. members for the country; to Philip Rashleigh, Esq. member for Fowey, and to Thomas Williams, Esq. member for Great Marlow.'³⁹ Publicly thanking in print MPs who had supported

³⁶ WCAR, MS3782/13/97, item 26: M. Edgumbe and J. Vivian, *Cornwall, A Special Meeting of the Open Committee of the Lieutenancy and Magistracy of the County of Cornwall* (3 August 1799).

³⁷ Edgumbe and Vivian, *Cornwall: A Special Meeting*.

³⁸ WCAR, MS3782/13/97, item 27: *Residents of Birmingham* (June 24, 1799).

³⁹ Edgumbe and Vivian, *Cornwall: A Special Meeting*.

their cause was something the Midlands manufacturers had done in the 1770s with Edmund Burke (Chapter Two). The individuals thanked in the Cornish pamphlets were not necessarily the most effective political supporters, when compared to the powerful alliances that had been forged by the Birmingham brass founders. Whilst Basset was respected by many MPs for suppressing riots in Cornwall in 1795, he was also an anti-reformist, a controversial pamphleteer with inconsistent loyalties within Parliament, and a long term critic of Prime Minister Pitt.⁴⁰ Rashleigh was a mineralogist, but was often bed-ridden and unable to attend Parliament.⁴¹ Though Cornwall had acted first and produced the earliest pamphlets of the war, they were able to exert much less political influence than the Birmingham brass founders.

Several themes arise from the content of the Cornish pamphlets in London, the Southwest, and Birmingham. Firstly, that Birmingham brass founders had solidified a productive relationship with the political elite of Britain, who defended their interests despite Hawkesbury knowing about their significant role in rising copper prices. Secondly, that Birmingham brass founders were being portrayed as behaving differently compared to industrial groups elsewhere in Britain. Thirdly, that Birmingham representatives had supposedly provided misleading evidence during their Enquiry testimony and omitted important details to exaggerate their problems. The co-ordinated pamphleteering movement organised by the Cornish was aimed at swaying politicians and the general public in order to

⁴⁰ R. Thorne, "Basset, Francis, Baron de Dunstanville and first Baron Basset (1757–1835), politician and landowner," *Oxford Dictionary of National Biography* (4 October 2012), <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-1637> (accessed 25 June 2019).

⁴¹ R. Cleevely, "Rashleigh, Philip (1729-1811), Mineralogist and Antiquary," *Oxford Dictionary of National Biography*, <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-23147>.

provoke outrage at the behaviour of the Birmingham brass founders, who then retaliated to this co-ordinated pamphlet movement with one of their own. It is argued here that the countermovement was more effective, demonstrating a political sophistication that had been gained from decades of trial and error.

Birmingham Response: Mobilizing Political Contacts

By the start of 1800, no decision regarding reforms to the copper trade of Britain had been made, despite the apparently strong position of the Birmingham brass founders. On 14 March 1800, the self-proclaimed Birmingham Copper Committee met in the Stork Tavern, Birmingham, to discuss their ongoing strategy for the conflict with the Cornish mining community. From this meeting the following resolutions were produced:

- I. Request the High Bailiff to permit the deputation to affix his name thereto on behalf of the town.
- II. That the committee and the deputation are particularly requested to continue their exertions for obtaining such parliamentary regulations in the copper trade.
- III. That thanks of the merchants and manufacturers of this town and neighbourhood are due to the deputation and particularly to Matthew Boulton and George Simcox esquires for their great and unweaned (sic) exertions in this business.⁴²

⁴² WCAR, MS3782/13/97, item 30: T. Cooper, *Resolutions of a General Town Meeting held at the Stork Tavern to discuss the Copper Trade* (14 March 1800).

The document confirms that there was a continued and exerted effort within Birmingham to organise political resistance against groups which threatened the Birmingham brass and copper manufacturing community. It also shows that there was interaction between brass founders and the bailiffs of Birmingham, one of the most influential positions in the town.⁴³ The bailiffs oversaw judicial procedures and local law enforcement, and their links to the lobbying group continued to blur the lines between the political, industrial and social roles of the brass founders within the town (Chapter Two). Boulton's own assessment of the meeting refers to his and George Simcox's efforts to use their 'friends in parliament for the purpose of obtaining some restraints and regulations in the copper trade.'⁴⁴ Amongst his friends he listed Lord Hawkesbury and William Pitt. He claimed that the three of them had been meeting in secret for months, discussing how to convince all MPs of their mutual interests and goals in order to promote Birmingham and to nullify any influence held by Williams.⁴⁵ Boulton revealed that Hawkesbury was actively encouraging their political lobbying group. He had 'desired us to lose no time in coming to Town for the like purpose, we obeyed... we therefore apply ourselves to the preparing and arranging our ongoing case.'⁴⁶ Whilst Boulton was prone to exaggeration, and as such these claims must be treated with caution, the public and private support of the Birmingham group by Hawkesbury and Pitt suggests that there was an element of truth to his statements. The link between the Birmingham group and the lead investigator of the Enquiry, demonstrates how influential the political connections of Birmingham brass founders had become. The personal letters of Boulton reveal the importance of these political contacts during this time. They also reveal the significance Prime Minister Pitt ascribed to

⁴³ W. Hutton, *An History of Birmingham* (Birmingham: Pearson and Rollason Publishing, 1783), 148.

⁴⁴ WCAR, MS3782/13/97, item 29: M. Boulton, *Letter to Garbett Regarding the Towns Meeting on Copper Trade* (1800).

⁴⁵ Boulton, *Towns Meeting on Copper Trade* (1800).

⁴⁶ Boulton, *Towns Meeting on Copper Trade* (1800).

Birmingham in respect of national manufacturing and the Navy. Following a meeting of the Commercial Committee in March 1800, Boulton wrote a summary and sent it to Samuel Garbett, who was unable to attend in person:

We received an appointment from Mr. Pitt and in conformity thereto we waited upon him accompanied by Lord Hawkesbury... He said he was confirmed in the opinion he had formed last year and was convinced that the state of our own manufacturers and our navy rendered it indispensably necessary to check the growing evil.⁴⁷

Overstating the importance of Birmingham's brass and copper trades was in Boulton's best interest, so this assessment must be treated with a degree of caution, although the letter was between two trusted friends and colleagues. The degree of hyperbole demonstrated is debatable, but the brass founders of Birmingham are shown to be working with Pitt and Hawkesbury in some capacity. Hawkesbury helped to conceptualise propaganda and Birmingham brass founders 'would print the case in order to deliver it to the MPs.'⁴⁸

Birmingham Pamphlets

It was in March 1800 that the Birmingham pamphlets began to be produced, a full year after the early Cornish ones. Whilst Cornwall used the unpopular, and unreliable, Woodfall as their London-based printer, the Birmingham brass founders utilised Andrew Strahan, MP for

⁴⁷ Boulton, *Towns Meeting on Copper Trade* (1800).

⁴⁸ Boulton, *Towns Meeting on Copper Trade* (1800).

Newport (Isle of Wight), who was also the King's official printer: he proved to be a shrewd choice as he was held in high esteem in political, literary, and typographical circles.⁴⁹ Strahan campaigned on behalf of the brass founders and printed a number of texts that were distributed at the doors of the House of Commons. In March and April of that year, at least four different pamphlets and booklets were produced in response to the accusations that had been laid against them. The pamphlets produced by Strahan included a list of demands indicating the changes which should be made to combat 'the evils arising' in the copper trade.⁵⁰ These included direct attacks on Cornish ticketing practices, arguing that there should be restrictions and limitations to the cost 'when the standard price of copper at the ticketings in Cornwall shall exceed one hundred pounds per ton for a time to be limited.'⁵¹ The contacts of the Birmingham brass founders were well-positioned to produce political propaganda and to lobby for change. Birmingham was replicating the Cornish pamphleteering campaign; politics and print were intricately linked.

As with those from Cornwall, the Birmingham pamphlets were distributed to MPs as they left or entered chambers; they were also nailed to the doors of Parliament as posters. The pamphlets from Birmingham and Cornwall are markedly different in their length and composition. The pamphlets of the Cornish mining representatives were well-organised, but rarely longer than three pages in length. They highlighted specific points from the Enquiry and supplied footnotes and references, with individual quotations, page numbers and dates included to verify their validity. Birmingham-produced booklets were between six and

⁴⁹ C. Timperley, *A Dictionary of Printers and Printing: With the Progress of Literature, Ancient and Modern, Bibliographical Illustrations* (London: H. Johnson, 1839), 918.

⁵⁰ WCAR, MS3782/13/97, item 35: A. Strahan, *Copper* (24 March 1800).

⁵¹ Strahan, *Copper*.

fourteen pages. Direct quotations were taken from Cornish pamphlets and analysed at length.⁵² It is difficult to confirm or refute many of the claims made by both parties, who were mutually adept at using statistics to make their point. Both sides used statistics as a weapon, but also employed emotion to directly appeal to the public in order to garner sympathy for their cause. W. G. Parrott has made calls for humanities scholars to study social aspects of emotion as represented in print culture in a historical context.⁵³ This chapter therefore adds to the historiography of pamphlet wars in an important new way.

The documents produced by the Birmingham brass founders highlighted how the Cornish representatives had been conducting their campaign; ‘When this subject was before the House of Commons last session, a paper, from which the following statement is extracted, was put into the hands of Members on the day the business was to be discussed.’⁵⁴ These practices and the content of the statements were depicted as underhand tactics incensing those within the Birmingham manufacturing community;

How any man could presume to offer such a statement to the honourable House of Commons remains for the author, whoever he was, to explain: certainly a more extraordinary attempt to mislead the judgement of Parliament is not to be found.⁵⁵

⁵² Strahan, *Copper*.

⁵³ W. Parrott, “Psychological Perspectives on Emotion in Groups,” in Kerr, Lemmings and Phiddian, eds., *Passions, Sympathy and Print Culture*, 20.

⁵⁴ WCAR, MS3782/13/97, item 33: A. Strahan, *Copper Trade* (21 March 1800), 1.

⁵⁵ Strahan, *Copper Trade*, 2.

They also suggested that Cornish mine owners, in addition to their public pamphlets, produced fraudulent documents to incriminate the Birmingham manufacturing community, as can be seen in an incredulous letter in the *Morning Chronicle* on 19 June 1799:

When a man intends to injure his neighbour, or deceive his country, he oftentimes puts on a mask – such as the case with the author of a letter, dated Birmingham, June 8, signed ‘A Birmingham Manufacturer’. No manufacturer residing in Birmingham ever wrote that... its signature and date are alike designed to deceive and mislead.⁵⁶

The sophisticated political acumen exhibited by the Birmingham brass founders during the Enquiry was demonstrated through five strategic elements (Chapter Four); several of these elements can also be seen in the pamphlets. One of these tactics was exaggeration and producing spurious information. A level of hypocrisy in criticising others for doing the same is apparent, but the arguments are persuasive when many of the Cornish facts are re-examined. A Birmingham-produced pamphlet claimed that intentionally complex and ambiguous phrases were being used by the Cornish mining community to confuse and mislead readers: ‘The term “CAPITAL in the mine,” used in the report, means *the value of the Stock*. “LOSS UNRECOVERED,” means *money advanced, not yet recovered by the Adventurers*. To make the account more intelligible the latter terms are here used.’⁵⁷ The two opposing groups produce different definitions of ‘Capital’ and therefore are able to produce different results in terms of profit margins of the mines. Cornish pamphlets, by their own definitions outline capital as:

⁵⁶ WCAR, MS3782/13/97, item 25: *The Morning Chronicle* (19 June 1799).

⁵⁷ Strahan, *Copper Trade*, 3.

...that sum of money which has been advanced on a concern, dividing it under two heads: first, the engines, materials on a mine, which they call 'capitals on a mine'. Secondly, the difference between the sum expended, and the value of those materials, which they call "loss unrecovered."⁵⁸

Using this definition of capital, the Cornish mining community claimed in their pamphlets that between 1 August 1798 and 31 January 1799, £350,358 was needed to run their operations.⁵⁹ After all expenses and profits were taken into account, i.e. copper sold, six months cost of working the mines, smelting charges upon 26,800 tons of ore, and Lord dues, only £9,915 remained.⁶⁰ It is then concluded that as a result of these limited profits, adventurers would probably never be paid in full.⁶¹ It was claimed by the Birmingham manufacturers however that the Cornish definitions were erroneous, deceitful and created skewed financial statistics to ensure that they appeared to be less prosperous than they truly were. The statistics were examined in much more detail by the Birmingham manufacturers in their own pamphlets and suggested that the Cornish figure of £350,358 produced to define their capital was inaccurately calculated. Birmingham manufacturers claimed that £169,302 of that figure was listed as 'being capital at hazard', but that it is the 'actual value of ore already raised, and machinery upon the mines; the greater part of which sum is the residue of profits in hand not yet divided.'⁶² The pamphlets also suggested that Cornwall had not included its more profitable mines within its own financial summaries, producing a narrower and less profitable

⁵⁸ WCAR, MS3782/13/97, item 34: G. Woodfall, *A Short Reply to the Paper printed by A. Strahan at the Door of the House of Commons* (1800).

⁵⁹ Woodfall, *A Short Reply to the Paper*.

⁶⁰ Woodfall, *A Short Replay to the Paper*.

⁶¹ Woodfall, *A Short Replay to the Paper*.

⁶² Strahan, *Copper Trade*, 2.

image. A Birmingham pamphlet published on 1 March 1800 included a table that accounts for seventeen-twentieths of the whole quantity raised in Cornwall, producing much different results:

| | Quantity of Copper raised. | | | Money unrefunded to the Adventurers *. | | | Profit. | | | Loss. | | | Value of Stock on the Mines. | | |
|---------------------------|----------------------------|------|------|--|----|----|---------|----|----|-------|----|----|------------------------------|----|----|
| | Tons | cwt. | qrs. | l. | s. | d. | l. | s. | d. | l. | s. | d. | l. | s. | d. |
| United Mines | 249 | 16 | 1 | 0 | 0 | 0 | 26 | 2 | 9 | 0 | 0 | 0 | 19,391 | 0 | 0 |
| Consolidated Mines | 202 | 16 | 1 | 0 | 0 | 0 | 949 | 2 | 6 | 0 | 0 | 0 | 19,500 | 0 | 0 |
| Herland | 184 | 1 | 3 | 18,798 | 4 | 8 | 0 | 0 | 0 | 523 | 4 | 3 | 11,536 | 0 | 0 |
| Wheal Treasury | 65 | 2 | 2 | 2,926 | 4 | 8 | 0 | 0 | 0 | 2,926 | 4 | 8 | 5,836 | 0 | 0 |
| Trefavean | 61 | 4 | 3 | 363 | 14 | 2 | 0 | 0 | 0 | 363 | 14 | 2 | 4,800 | 0 | 0 |
| Wheal Jewell East | 105 | 15 | 3 | 0 | 0 | 0 | 253 | 3 | 2 | 0 | 0 | 0 | 7,000 | 0 | 0 |
| Drollas Downs | 7 | 11 | 1 | 1,627 | 4 | 10 | 0 | 0 | 0 | 427 | 4 | 10 | 1,200 | 0 | 0 |
| Cooks Kitchen | 184 | 0 | 1 | 0 | 0 | 0 | 1,133 | 15 | 4 | 0 | 0 | 0 | 10,926 | 0 | 0 |
| Prince George | 46 | 16 | 2 | 0 | 0 | 0 | 659 | 4 | 2 | 0 | 0 | 0 | 1,500 | 0 | 0 |
| Wheal Unity and Poldice | 351 | 8 | 3 | 0 | 0 | 0 | 11,105 | 8 | 2 | 0 | 0 | 0 | 24,000 | 0 | 0 |
| Tin Croft | 220 | 2 | 3 | 0 | 0 | 0 | 7,319 | 10 | 9 | 0 | 0 | 0 | 11,473 | 0 | 0 |
| Wheal Fortune | 188 | 4 | 2 | 0 | 0 | 0 | 8,400 | 0 | 0 | 0 | 0 | 0 | 6,017 | 0 | 0 |
| Stray Park and Wheal Gons | 108 | 11 | 3 | 0 | 0 | 0 | 3,599 | 12 | 11 | 0 | 0 | 0 | 7,523 | 0 | 0 |
| Wheal Gorland | 65 | 1 | 1 | 6,646 | 4 | 8 | 3,535 | 10 | 10 | 0 | 0 | 0 | 3,400 | 0 | 0 |
| Wheal Muttrell | 5 | 6 | 3 | 2,337 | 12 | 6 | 250 | 1 | 9 | 0 | 0 | 0 | 100 | 0 | 0 |
| Crenver and Oatfield | 144 | 6 | 2 | 0 | 0 | 0 | 2,855 | 19 | 9 | 0 | 0 | 0 | 14,300 | 0 | 0 |
| | 2,190 | 7 | 2 | 32,699 | 5 | 6 | 40,087 | 12 | 1 | 4,240 | 7 | 11 | 148,502 | 0 | 0 |

Fig 5.2. WCAR, MS3782/13/97, item 33: A. Strahan, *Copper Trade* (21 March 1800). Profits

Arising from Mines in Cornwall, 2.

Once more using tactics exhibited during the Enquiry, these financial statistics were handed to MPs as they entered Parliament. They included a wider range of mines and a simplification of the definition of capital to 'the difference between the sum expended, and the value of effects now to be shewn,' which created a different image of the Cornish mining situation:

The whole money the adventurers appear to be in advance is £32,699.5.6; and they have the effects on the Mines of the value of £148,502, which, after paying

off the whole money unrefunded would leave a balance of undivided profits to the amount of £115,803 in favour of the adventurers.⁶³

The difference in money raised for miners, as detailed in the two opposing sets of pamphlets, is £105,888. According to the Bank of England's Inflation calculator that is the equivalent of £8,712,621.51 in 2019.⁶⁴ The vast difference between the two figures, complex use of financial statistics, definitions as well as language, created a confusing picture. Birmingham brass founders were accused of 'laboured details of calculations, founded on fallacy, to puzzle and perplex.'⁶⁵ The statistics presented to MPs, as well as to the public, are difficult to assess. Birmingham's counter-statistics also appear to be from 1790, as opposed to 1800; they were outdated, possibly intentionally to appear less favourable to Cornwall.⁶⁶ The statistical evidence provided in the pamphlets of Birmingham brass founders was accompanied by the use of emotive language designed to provoke outrage at the supposed lies of Cornwall;

These sophistries in the pretended *impartial* statement being thus destroyed, there can be no doubt but the artificers of them will speedily manufacture new ones: but, after the attempt to substitute shadows for substantial matter, which has already been thus glaringly detected, can it be necessary to caution the wisdom of Parliament against being imposed upon by future fallacies and misrepresentations coming from the same quarter.⁶⁷

⁶³ Strahan, *Copper Trade*, 4.

⁶⁴ <https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator> (accessed 3 July 2019).

⁶⁵ Woodfall, *A Short Reply*.

⁶⁶ Woodfall, *A Short Reply*.

⁶⁷ Strahan, *Copper Trade*, 6.

Detailed statistical analysis and emotive language were only two aspects of the Birmingham pamphlet campaign. Leitmotifs from the Enquiry itself continued, including foreign trade and Cornish greed; ‘whether therefore the expenses of Government, in its naval and other departments, ought to be so extravagantly increased, the manufacturers and commerce of the country so cruelly oppressed, and exposed to such imminent peril, to support such profits as these, PARLIAMENT WILL JUDGE.’⁶⁸ The language employed suggested that manufacturing communities and the safety of the country were being put at risk by the greed and lies of the Cornish community, lies based on doctored statistics. This augmented the radical social and political context that had been repeatedly discussed and alluded to throughout the Enquiry and explored in Chapter Four, namely playing on the fears of Parliament that Birmingham was susceptible to a revolution from below against the establishment.

3 April 1800 Booklet

Birmingham’s booklets were produced quickly, but also grew in length. Rather than the simple three-page Cornish pamphlets, on 3 April 1800 fourteen-page paper-back booklets, with marble-dyed covers, were distributed in Parliament (Fig 5.3):

⁶⁸ Strahan, *Copper Trade*, 5.

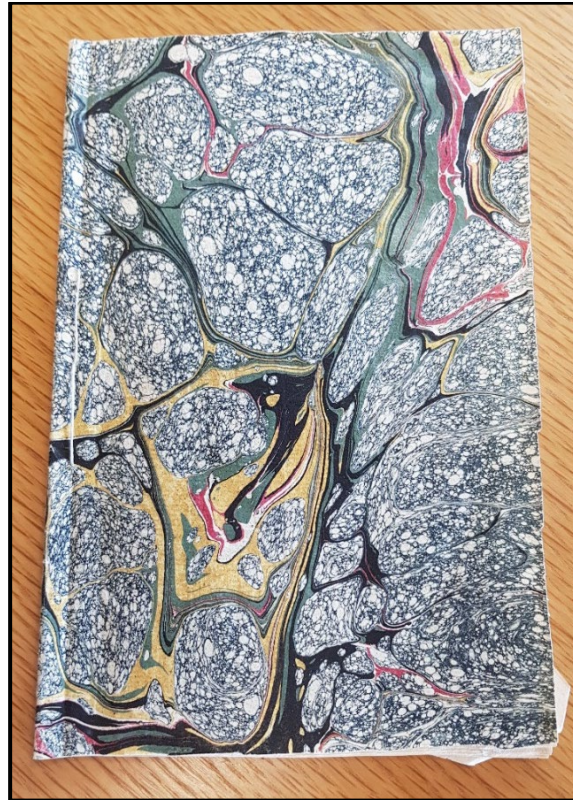


Fig 5.3. WCAR, MS3782/13/97, item 38: A. Strahan, *Answers to Certain Resolutions of the Lieutenancy and Magistracy of the County of Cornwall, Concerning the Copper Trade with Remarks on Mr. Vivian's Reply to The Birmingham Manufacturers' Case* (3 April 1800).

Marble-Dyed Booklet.

These larger booklets were an indication that the Birmingham lobbying group was spending money to make the pamphlets more visually striking and signified an escalation of the Pamphlet War. The stylistic choice is notable because the marbling technique used for book and booklet covers was more strongly associated with French and German publishers in the late-eighteenth century, and did not become popular in Britain until the mid-nineteenth century; they were not cheap to produce and required a skilled worker to finish the cover

effectively.⁶⁹ Although not a widespread technique in Britain, an associate of Boulton, famed printer and type designer John Baskerville, did use marbling and it would have been familiar to the brass founders locally.⁷⁰ The marbled booklets were distributed in Parliament to answer many of the resolutions that were being published by the Cornish Open Committees, as well as by the Lieutenancy and Magistracy of Cornwall which had paid to have its opinions printed in national newspapers, and additionally had sent disparaging letters to the 'mayor, or other chief magistrate, of every commercial town in Great Britain.'⁷¹

In the introduction to the 3 April booklet the Birmingham political pressure group claimed that:

Till (sic) this moment, when Parliament is about to decide upon the contest, (we) abstained from making any comment on the resolutions, lest it should be justly imputed to them, that they were making a party, and raising a popular clamour, to influence the decision of parliament.⁷²

This booklet outlined, examined, and dismantled thirteen of the statements, or resolutions as they are termed, published by the Cornish Open Committees, some more convincingly than

⁶⁹ R. Wolfe, *Marbled Paper: Its History, Techniques, and Patterns* (Philadelphia PA: University of Pennsylvania Press, 1990), 35.

⁷⁰ A. Martin, "The Baskerville Bindings," in *John Baskerville: Art and Industry of the Enlightenment*, eds. C. Archer-Parre and M. Dick (Liverpool, Liverpool University Press) 174.

⁷¹ WCAR, MS3782/13/97, item 38: A. Strahan, *Answers to Certain Resolutions of the Lieutenancy and Magistracy of the County of Cornwall, Concerning the Copper Trade with Remarks on Mr. Vivian's Reply to The Birmingham Manufacturers' Case* (London, April 3 1800), iii.

⁷² Strahan, *Answers to Certain Resolutions*, 1.

others. The tactic of examining every point reveals a systematic approach to industrial and political discourse. The group was trying to build an image of its members as educated and its comments as evidence-based; meticulous, scientific, and reliable. The Cornish accusations relied heavily on the idea that the Midlands' representatives had failed to produce adequate proof for many different points they had made. Firstly, 'that the Birmingham manufacturers had suffered,' or that they were in 'danger of being undersold in foreign markets on account of the high price paid by them for that raw material.'⁷³ That in fact, there was evidence that 'returns from the Customs House... to France, Spain, and Italy... and other friendly or neutral parts of the Continent, has increased.'⁷⁴ One of the central claims made by the Cornish representatives was that:

There has been no attempt to prove that there is any want of copper for the supply of the royal navy, the merchant ships, or the manufacturers; but on the contrary it has been acknowledged by every person interested, that the home market has been amply supplied, and that there is every reason to suppose it will continue to do so, at such a price as will afford a reasonable profit to the miners and copper makers.⁷⁵

The claims that manufacturers in Birmingham suffered as a result of Cornish copper prices, that trade had decreased with the continent, and that the Government had not received many of its promised products are all difficult to prove. It is also clear that since the

⁷³ Strahan, *Answers to Certain Resolutions*, 1-2.

⁷⁴ Strahan, *Answers to Certain Resolutions*, 2.

⁷⁵ Strahan, *Answers to Certain Resolutions*, 3.

improvements in copper sheathing and copper bolt technology, developed by Birmingham technologists, the need for copper products had increased exponentially throughout the global market, as admitted by Hawkesbury himself in his private letters to Henry Dundas.⁷⁶ This meant that Birmingham brass founders had an enormous scope for profit, especially those who were supplying the Government, such as Boulton. The Government had also increased its demand for those products and required copper to remain cheap to lower its expenses. The crux of the issue seems to be that the Government was in need of large amounts of copper products to equip their navy and mercantile ships, especially to keep control of areas within Asia and particularly the Indian subcontinent.⁷⁷ If copper prices were kept low, Birmingham could create cheaper brass and copper products for the Government, navy, and the East India Company – creating a mutually beneficial, self-sustaining, and economically productive partnership throughout times of war. This context, alongside the increasingly sophisticated political engagement by the Birmingham industrialists, was important in the outcome of the Enquiry.

In response to the assertion that no evidence had been produced to support the claims of the Birmingham brass founders, the booklet draws attention to the Enquiry; ‘proof was given that the Birmingham manufacturers did suffer by the loss of a great part of their products, and by the increasing and continually accumulating embarrassment of their trade... Boulton’s Evidence, page 21.’⁷⁸ Boulton’s claims during the Enquiry were in all likelihood exaggerated,

⁷⁶ Collins, *Patent 1388 Copper Bolts*; J. Westwood, *Patent 1398 Hardening and Stiffening Copper*; Jenkinson, *Lord Liverpool to Henry Dundas*.

⁷⁷ Jenkinson, *Lord Liverpool to Henry Dundas*.

⁷⁸ Strahan, *Answers to Certain Resolutions*, 1.

and further evidence is not supplied in the booklet, dismissing it as unnecessary.⁷⁹ In addition to drawing attention to the evidence they provided during the Enquiry, brass founders continued to accuse the Cornish miners of lies and falsehoods within their own pamphlets:

This first resolution is founded on a mis-quotation... the ample supply is admitted; but the complaint is that with an ample supply the price has been immoderately and extravagantly advanced, and is still rapidly increasing, without the least prospect of a reasonable profit to the manufacturers of copper goods.⁸⁰

Whilst not all the resolutions are dealt with effectively, the approach taken by the manufacturers is impressive. The standard of the booklet was high, with footnotes, tables, and intricate decoration. The production mirrored many of the arguments and lobbying techniques utilised by the Birmingham manufacturers throughout the 1790s – stylish, polished, and professional, but not always supported by convincing substance.

The second half of the booklet produced anecdotal stories that attacked Mr. Vivian and Thomas Williams for withholding shipments of copper that had been legally purchased, building on much of the character assassination evident during the 1799 Enquiry.⁸¹ The accusations of monopolies continued:

⁷⁹ Strahan, *Answers to Certain Resolutions*, 2.

⁸⁰ Strahan *Answers to Certain Resolution*, 1-3.

⁸¹ Strahan, *Answers to Certain Resolutions*, 11.

In the year 1787, the whole stock of Cornish copper was consigned to him for sale; about that time Anglesea (sic) produced near 3000 tons per annum: so that the sales, of nearly the whole produce of copper raised in Great Britain, were at that time in his hands, and remained so, except a very small proportion, till the year 1790.⁸²

The attacks on Williams were an extension of the tactics demonstrated during the Enquiry. The Birmingham brass founders claimed that Williams monopolised the copper trade of Great Britain, despite this not being the case since 1792 (Chapter Four) and used inconsistencies within the Cornish responses to undermine faith in his character and testimony: Birmingham-produced pamphlets identified a claim by Vivian that ‘less than one third of the trade has been in Mr. Williams’ hands’ – yet ‘Williams himself in his evidence to the Committee, declares that he has conducted for some years past, FULL ONE HALF of the copper trade of this country.’⁸³ Using Williams’ own testimony against him demonstrates the flaws that exist within the Cornish argument, as well as providing evidence that the Birmingham brass founders were researching the transcripts of the Enquiry to strengthen their own political arguments within their pamphlets; they were a well-organised contingent.

The Birmingham group also attacked the expenditure of the Cornish mine owners: ‘Mr Vivian then states, that some purchases of corn for the labourers, to keep them from starving.’⁸⁴ However, in a private letter to the Government, anonymous ‘friends’ from Birmingham draw

⁸² Strahan, *Answers to Certain Resolutions*, 11.

⁸³ Strahan, *Answers to Certain Resolutions*, 12.

⁸⁴ Strahan, *Answers to Certain Resolutions*, 12.

attention to financial irregularities and evidence of excessive and frivolous spending, which are at direct odds with Vivian's claims. One such letter from a man only referred to as RM draws attention to the expenditure by the copper miners in the parish of Gwennap, Cornwall: 'At a moderate computation, there is now more than 200 pounds worth of Brandy, and other spirituous liquor, drank every week in these several ale houses.'⁸⁵ The publications of organised arguments within pamphlets, as well as the sending of private letters to politicians, was an attempt to create an image of lavish and disingenuous Cornish mine owners who were at fault for the rising price of copper, despite the fact that Lord Liverpool had privately acknowledged otherwise.⁸⁶ Their propaganda aimed to sow seeds of doubt in the narrative of the Cornish representatives. The fact that Birmingham's sheer numbers of brass manufacturers, in combination with the Government's trade policy, was evidently the origin of the price rise, makes their argument seem even more audacious and hypocritical. Whilst John Harris was correct that Williams was not to blame for the fluctuation in copper prices, his conclusion that the group from Birmingham was without skill is incorrect.⁸⁷ Birmingham brass founders had used pamphlets as a political tool to continue to deflect public blame away from themselves, and despite many arguments existing to contradict their portrayal of Cornish mine owners, they succeeded in gaining political allies.

In the conclusion of the 3 April 1800 booklet, the Birmingham brass founders triumphantly asserted:

⁸⁵ WCAR, MS3782/13/97, item 40: *Lord dues & various other facts relative to the Mines in Gwennap* (1800).

⁸⁶ Jenkinson, *Lord Liverpool to Henry Dundas*.

⁸⁷ Harris, *The Copper King*, 115.

That EVERY ONE of the RESOLUTIONS which the open committee passed is founded in misrepresentation and fallacy: but they do not chuse (sic) to borrow the expressions which the framer of the resolutions thought it right to apply his Majesty's order in council, and they forbear to assert that the resolutions in question are founded in GROSS AND NOTORIOUS fallacy, which indeed they are not; for the FICTIONS are certainly ingenious, specious, and subtle, but not solid.⁸⁸

The assertion was designed to mask their own half-truths, lies and deceptions. The pamphlets of the Birmingham brass founders built on the testimony of the 1799 Enquiry by exaggerating their own hardships, deflecting blame, utilising political contacts for support, playing on fears of foreign competition, and manipulating economic statistics for effect. They had taken many of the methods used by the Cornish pamphleteers and organised a similar movement to wield as a political tool.

Outcomes

After the evidence given during the 1799 Enquiry, and the arguments that raged in the pamphlets during the subsequent two years, MPs had to assess whether to support Birmingham through reform of the British copper trade, or invest in the mining businesses of Williams and the Cornish industrialists and miners. As had been suspected by both sides for some time, the eventual decision was that extensive reform was needed. On 24 June 1801 George III signed the Parliamentary Act 'altering the laws now in force, relating to the

⁸⁸ Strahan, *Answers to Certain Resolutions*, 6.

importation and exportation of Copper; for repealing certain duties and drawbacks on such importation and exportation; and for substituting new duties and drawbacks in lieu thereof.’⁸⁹

John Harris in his chapter on the Enquiry, the primary analysis of the affair, concluded that ‘the results of the enquiry and agitation were not great... it was of little significance.’⁹⁰ This thesis argues that this was not the case, and in fact that it gave increased powers and freedoms to the Birmingham brass founders: within the Act, seven substantial amendments were introduced to change the laws for copper exportation, importation, and manufacturing. Whilst Thomas Williams’ fortunes continued to decline and his influence fade, Birmingham began to dominate an increased number of brass and copper products and industries throughout Britain in the early- nineteenth century.⁹¹ The Act declared that ‘the provisions contained in several acts now in force, relating to exportation and importation of copper, from and into the United Kingdom of Great Britain and Ireland, have been found inconvenient.’⁹² This statement in itself highlights the effectiveness of the Birmingham industrial lobbyists, who had successfully convinced the Government that the copper trade had a number of flaws that needed addressing and that their industry was sufficiently significant to be bolstered at the expense of other industries. Of those areas that had been found inconvenient, Parliament directly addressed concerns against which the Birmingham merchants had been campaigning. Of the seven main reforms to the system, the changes that were most agreeable to the Birmingham manufacturers were contained within the opening three clauses:

⁸⁹ *Act of Parliament for regulating the Copper Trade*.

⁹⁰ Harris, *The Copper King*, 130.

⁹¹ W. Aitken, “Brass and Brass Manufacturers,” in *The Resources, Products and Industrial History of Birmingham and the Midland Hardware District*, ed. S. Timmins (London: Robert Hardwicke Publishing, 1866)

⁹² *Act of Parliament for Regulating the Copper Trade*, 229.

- I. That, from and after the signing of peace, it shall and may be lawful for any person or persons to export copper from any port or place within the United Kingdom of Great Britain and Ireland to any port or place beyond seas, without hindrance or obstruction from any person or persons under any authority whatsoever.
- II. That it shall be lawful to prohibit the exportation of all copper capable of being converted into a naval store.
- III. That the duties now payable on the importation of copper unwrought, videlicet (sic), copper bricks, rose copper, copper coin, and all cast copper... shall from now and after the first day of December one thousand eight hundred and one, cease and be no longer payable.⁹³

Point one was more of a reassurance than immediately helpful, but it would have been encouraging for the Midlands-based merchants to know that, once Great Britain's European wars were over, their trade could continue as normal – although several of the wars would continue to for many years. While point two on the surface could be misconstrued as a negative, it was in fact a vital clarification for the brass founders of Birmingham. Prohibition laws such as the 1779 Privy Council Order Prohibiting the Exportation of Copper (PCOPEC), that had so negatively affected their commerce, were too vague and meant that many articles that had no military usage were still banned from being exported. With the clarification that only copper capable of being converted into naval articles was prohibited from exportation, many foreign marketplaces once more opened up, especially with regard to button and

⁹³ *Act of Parliament for Regulating the Copper Trade.*

buckle manufacturing, a practice upon which the Birmingham marketplace had historically been built. Samuel Garbett, James Watt, and James Keir had all written scathing attacks on the 1779 PCOPEC and this was a significant victory for the brass founders that allowed them to re-enter several important markets – especially in Europe.⁹⁴ Point three is the most significant for the brass founders of Birmingham; allowing the importation of copper from foreign sources without import duties would allow them to purchase from cheaper and more reliable sources than Williams, and rivals in Cornwall. John Harris, despite his insistence that there were no significant changes as a result of the Enquiry, also highlights that ‘free import from Ireland was to be allowed’ – something brass founders had specifically demanded.⁹⁵ These reforms allowed the brass founders of Birmingham new freedoms and increased autonomy over their trade; they could once more export products that had previously been banned, open up new markets, and free themselves from an complete dependence on Welsh and Cornish copper, switching to South American, Swedish, Irish and German markets.⁹⁶

The Birmingham brass community continued to thrive and expand as a result of these changes, as can be seen from the hundreds of brass founders listed in the 1835 *Directory of Birmingham*.⁹⁷ The new links forged with Irish mining were used as a bargaining tool to subdue revolutionary vigour in Ireland, and manufacturing connections between Birmingham and Dublin were significant throughout the nineteenth century:

⁹⁴ WCAR, MS3782/12/87, item 25: J. Keir and J. Watt, *Exportation of Tools & Raw Materials* (19 June 1785); WCAR, MS 3782/12/87, item 22: S. Garbett, *Observations on the Copper Trade of England & the Dangers of Exporting the Tools & Machines Used Therein* (1786).

⁹⁵ Harris, *The Copper King*, 131.

⁹⁶ R. Hawkins, “Minor Products of British Nineteenth-Century Diesinking,” *The British Numismatic Journal*: 30: 1 (1962), 177.

⁹⁷ *The Directory of Birmingham; Including an Alphabetical List of the Inhabitants of the Town* (Birmingham: Wrightson and Webb Printers, 1835).

The nineteenth century marked the maximum intensity in production of medals: of current historical topics including as usual coronations and other royal occasions, of societies and clubs, schools, railways, exhibitions, &c. The principal diesinking centre was Birmingham and the only other one of consequence in the UK was London. Dublin played a large part, assisted by Birmingham and perhaps other centres, in the striking of Irish tradesmen's tokens.⁹⁸

Whilst a variety of changes were made to the industry, it is important to note that the Birmingham brass founders did not achieve everything they requested; for example, no changes were made to the system of public ticketing or private sales of copper. However, Cornish mine owners and Williams received no additional investment or support, which had been Williams' sole aim and the reason he had demanded an enquiry in the first place. Of the many representatives questioned, the brass founders undeniably achieved the most satisfactory outcome from proceedings. The Birmingham industrialists had hijacked Williams' attempt to regain control and achieved important reforms for themselves and their industry, highlighting their political sophistication, flexibility, changing rhetoric, and important contacts within the government.

Conclusion

This chapter (in conjunction with Chapter Four) provides a new perspective on the Enquiry and the impact of the pamphlet wars and is in stark contrast with the analysis of Harris,

⁹⁸ Hawkins, "Minor Products of British Nineteenth-Century Diesinking," 177.

previously the main source of information that exists within the historiography. The Birmingham group was not lacking in skill and its members demonstrated sophisticated political techniques throughout. The Birmingham victory also compounded Williams' already declining power and influence. After the Enquiry, other groups that he was associated with began to demand reform as well: 'In 1801 Lord Uxbridge wanted an extensive revision of the methods of organisation in both mines, and in the same year gave notice of withdrawal from the smelting concerns belonging to the Mona Mine.'⁹⁹ Whilst not the most important factor in Williams' decline post-1792, the Birmingham brass founders played a role; their investment in Swansea smelting, sustained propaganda campaign, and political contacts all contributed to Williams' grievances, and he was forced to sell his share in the Parys mine.¹⁰⁰

The 1799 Parliament Enquiry, followed by the 1799-1801 pamphlet war, marked an important change in the political sophistication and influence of the Birmingham brass founders. The decades of trial and error in industrial lobbying had finally resulted in significant reform to the trade; the role of the political connections, political organisation, and political pamphleteering of the Birmingham brass founders in instigating change, is undeniable. Their organisation of well-structured arguments and manipulation of facts was powerfully persuasive in garnering more support, which they were able to use as a platform to consolidate their already strong position within the national and international trading markets. The most important factor of their success is arguably the political contacts the lobbying group had formed; in particular, the support of Hawkesbury and Pitt despite their role in raising copper prices. Without political allies the outcome of the Enquiry may have been different. The brass founders'

⁹⁹ Harris, *The Copper King*, 136.

¹⁰⁰ Harris, *The Copper King*, 136.

lobbying group fills some of the gaps in the historical literature regarding political cultures in late-eighteenth century Birmingham. The reforms achieved by its members were a testament to their lobbying power, political understanding, and influence. In the eyes of the Parliamentary Investigation, they had not only proved beyond reasonable doubt that the restrictions placed upon their trade were unproductive and unfair, but also that their businesses were important enough to the country for the Government to intervene and offer protection to, despite the fact the Birmingham brass trade was as healthy and prosperous as it had ever been (Chapter Two). The social and political context of the late 1790s is also important to consider; the victory was not solely due to the political acumen of the Birmingham group, but was also due to the importance of the trade for a government at war, a theme consistently raised, and emphasised, by the Birmingham group in their pamphlets. The political pamphleteering may not have been honest, but it was certainly effective; it was conducted with skill, combined with the use of emotive language, and was an important element in the industrial and political change of the copper trade of Great Britain.

Conclusion

This thesis explored the origins of the Birmingham brass industry, and in particular, how its growth was facilitated by a group of industrialists who utilised increasingly sophisticated approaches to political organisation and engagement. The Midlands industrialists sought to safeguard their trade by acquiring more power within the British brass industry and encouraging protectionist policies which benefited Birmingham businesses. This thesis argues that effective political engagement was key to their success which enabled them, for the most part, to achieve this aim. The number of brass houses in Birmingham increased throughout the second half of the eighteenth century (Chapter One) and between 1783 and 1801 the Commercial Committee utilised political contacts to achieve important reforms within the brass and copper trades of Britain. As a result, it became one of the most influential brass and copper-based manufacturing groups. The increased autonomy and power of the Birmingham brass trade was achieved through strategic and organisational changes, which allowed the members to successfully influence Government trading policy. When the Government responded to political and social unrest in the American colonies by imposing trading restrictions, the brass founders began with simple, but ineffective, petitioning during the 1770s. When petitioning failed to instigate change, Birmingham industrialists formed a co-operative group which pooled the resources of its members during the 1780s. Throughout this period the group formed relationships with influential MPs and businessmen who could provide political and industrial support. By the 1790s the industrial pressure group had amassed several vital political contacts, such as William Pitt, Lord Liverpool, Lord Dartmouth, and Lord Shelbourne, who were in a strong position to support them, and who instigated reforms of import and export laws to protect Birmingham brass interests. By the time of the

1799 Parliamentary Enquiry, the brass founders had become a sophisticated lobbying group which produced extensive and expensive political propaganda to support their cause. The brass founders claimed to be in financial trouble in these decades and also argued that they politically represented Birmingham as a whole; these 'facts' remain debatable. The group employed political methods to ensure the prosperity of their own industry, including falsifications and exaggerations which played on the fears of the elite who were concerned about unrest and a revolution from below, foreign competition, and industrial espionage.

This thesis is framed by four sets of questions; firstly, how and why did brass foundry work become so significant to the regional economy of Birmingham and District? Secondly, how was the brass trade organised as it expanded, and by whom? Thirdly, how did Birmingham-based brass founders respond to the threats of national and international competition? Fourthly, what was the nature of the links between the brass founders and elected MPs, and how did they use these links to influence legislation and Government policies? The answers to these questions uncover an important but neglected history of Birmingham that sheds light on three main aspects of the town: the history of the town's metal industries, the eighteenth-century international trading context which impacted upon the town's industries, and political pressure.

Question 1: Origins of Brass Foundry Work

As outlined in the introduction, many historians have emphasised the importance of Birmingham's metalworking industries in the evolution of Birmingham and District, but Maxine Berg stressed the need for more in-depth studies into the variety of different

industries that used metal, and how they came to be important for Birmingham.¹ This research has continued the recent trend of researching specific local metal trades.² This thesis is the first history to explain the introduction, expansion, and significance of the Birmingham brass trade, outlining how and why brass foundry work became so significant to the local economy. The natural resources available to workers of Birmingham led to a speciality in iron- and steel-working throughout the medieval period (Chapter One). These metalworking techniques, learned and garnered over centuries, were readily transferred to the manufacture of brass products, such as locks, in the second half of the seventeenth century. An increased demand for copper and brass products both domestically and abroad, led to a gradual shift to brassware production. Originally small workshops ordered pre-made brass from Bristol to work with but, as international demand continued to be high, larger brass houses were built in Birmingham in order to produce brass to sell to the increasing number of local tradesmen who used the metal in their products.³ The first brass-producing house of this kind was established in 1740 by the Turner family. The term brass founder was a flexible label, referring not only to industrialists who produced brass, but also to smaller businesses that made specialised brass products: these two types of businesses co-existed throughout the period in a mutually beneficial relationship. The decades following the creation of Turner's brass house were characterised by a rise in the number of listed brass founders and brass houses as brass proved to be a profitable industry, despite allegedly stalling and struggling at

¹ M. Berg, *The Age of Manufactures 1700-1820: Industry, Innovation and Work in Britain*, (Abingdon: Routledge, 1994), 223-232.

² S. Mason, *Jewellery Making in Birmingham: 1750-1995* (Felpham: Phillimore, 1998); N. Goodison, *Ormolu: The Work of Matthew Boulton* (New York: Prager Publishers, 1974); J. Grayson, "South Staffordshire Enamels: The Lost Craftsmanship of Eighteenth-Century Copper Substrate" (Birmingham City University PhD thesis, 2018); F. Sjögren, "Entrepreneurship and Technological Change: the Birmingham and District Cut-Nail Trade, c. 1811-1913" (University of Birmingham PhD thesis, 2019). At the time of writing J. Dixon at the University of Birmingham is conducting doctoral research into toys which were made in eighteenth-century Birmingham.

³ A. Darling, "Non-Ferrous Metals," in *An Encyclopaedia of the History of Technology*, ed. I. McNeil (Abingdon: Routledge, 1990), 91.

times. The demand for brass products continued to be high, both nationally and internationally, which encouraged industrialists in Birmingham to invest in brass manufacturing and enabling the industry to expand.

This thesis has revealed that the secondary literature has incorrectly portrayed a dramatic introduction and expansion of the brass industry between 1740 and 1760, but the origins of brass manufacturing in Birmingham were earlier than William Hutton originally suggested.⁴ It would be more accurate to say that centuries of iron- and steel-working had given the metal workers of Birmingham and District specialist metallurgical knowledge that was transferred to brass- manufacturing techniques in the second half of the seventeenth century. The rise in the production of Birmingham brass products can be explained by the restoration of Charles II, the influx of religious nonconformists following the Clarendon codes, the loss of France from the marketplace following the Nine Years' War, and the impact of the success of Bristolian brass manufacturers. The industry grew steadily throughout the early eighteenth century, followed by a period of relatively fast expansion after 1740. The flexibility, and lack of specificity, in the label 'brass founder' that emerged in the 1760s, has caused confusion in the secondary literature and a misconception regarding the origins of brass manufacturing. The original introduction of brass manufacturing was much less sudden and dramatic than Hutton indicated. The organisation and protection of the trade however saw more radical and sudden shifts.

⁴ W. Hutton, *An History of Birmingham* (Birmingham: Pearson and Rollason Publishing, 1783), 329; See also W. Aitken, "Brass and Brass Manufacturers," in *The Resources, Products and Industrial History of Birmingham and the Midland Hardware District*, ed. S. Timmins (London: Robert Hardwicke Publishing, 1866), 225.

Question 2: Organisation and Expansion

Eric Hopkins' work highlighted the difficulties of summarising the uneven growth of industry, but this research has defined periods of both industrial growth and stagnation in the brass industry, outlining who was responsible for its organisation and what methods they employed.⁵ Following the establishment of Turner's brass house in 1740, Birmingham was physically transformed by the appearance of numerous brass houses throughout the second half of the eighteenth century, as revealed in trade directories and in the descriptions and sketches by Swedish travellers.⁶ Despite the growth of the industry, the beginnings of political and social unrest in America during the 1760s led to trade restrictions imposed by the Government, which negatively impacted upon the Birmingham brass industry (Chapter Two), as trade to the financially lucrative North American market was restricted. One of the most damaging restrictions was the 1779 Privy Council Order Prohibiting the Exportation of Copper (PCOPEC).⁷ The ongoing conflict between Britain and America proved to be the catalyst for collective action by brass founders, initially unsuccessfully through petitioning, as trade continued to suffer because of the international impact of war. A period of relative stability was only achieved after the establishment of the co-operatively funded 1781 Broad Street Brass House (Chapters Two and Three). The brass founders also formed a formal committee

⁵ E. Hopkins, *Birmingham, The First Manufacturing Town in the World* (Birmingham, Weidenfeld and Nicolson Publishing), 60.

⁶ S. Schröder, *Day Book 1748-1751*, trans. D. Rood and P. Manning, (Pittsburgh: University of Pittsburgh, 2016); R. Angerstein, *Illustrated Travel Diary, 1753-1755 – Industry in England and Wales from a Swedish Perspective*, trans. P. Berg and T. Berg (Trowbridge: Cromwell Press, 2001); J. Bisset, *Bisset's A Poetic Survey and Magnificent Directory* (Birmingham: James Bisset, 1800).

⁷ The National Archives, Kew, Privy Council Catalogue, PC 1/15/128; *Draft Order Prohibiting the Exportation of Copper* (September 1779); *Order by the Privy Council, Prohibiting the Exportation of Copper* (24 September 1779) found in J. Edmond, H. Guppy, D. Lindsay, J. Lindsay and A. Philips, eds., *Handlist of Proclamations Issues by Royal and Other Constitutional Authorities, 1714-1910, George I to Edward VII: Together with an Index of Names and Places* (London: B. Franklin, 1917), 141.

to protect their interests and increasingly engaged with and pressured the political elite of the country over the 1785 and 1786 Trade Acts, and Pitt's Irish Propositions (Chapter Three). The brass founders also sought to exert their influence in other parts of Britain through the establishment of the Cornish Mining Company in 1785 and investment in Swansea smelting industries in the 1790s (Chapters Three and Four). Such incursions led to a costly conflict with Thomas Williams and other interested parties in Cornwall; this conflict continued throughout the 1790s, and profits stalled once more. To what extent there truly was a decline in the late 1780s is difficult to assess due to the tendency of brass founders to exaggerate and misuse evidence (Chapters Three, Four, and Five). Nevertheless, the ongoing fight for control of the trade is testament to the importance of brass in the town and, despite several setbacks, over one hundred industrialists joined the Commercial Committee, which pressured the Government to introduce protectionist policies.

As the number of brass houses and brass founders increased during the second half of the eighteenth century, a clear hierarchy formed within Birmingham, and the organisation of the industry changed. Brass founders, who originally had autonomy over their own small workshop businesses, became dominated by an influential few, such as Matthew Boulton, James Watt, and Samuel Garbett. These educated and privileged industrialists directed the less wealthy brass founders of smaller businesses to conduct industrial research into competitors, to solicit politicians, and to produce propaganda (Chapters Three, Four and Five). An aim of this study was to explore some of these lesser-known individuals of the Birmingham metalworking networks with the intention of raising their profile, and to acknowledge their technological achievements and importance to Birmingham. It has been difficult to create

detailed accounts of many of the brass founders' lives and works due to the limited source material. The success of the secretive policy employed by manufacturers involved in 'the art and mystery of making and selling brass,' impedes a full understanding of how the industry evolved and does not clarify the role of active agents beyond the well-known names such as Boulton and Garbett.⁸ As such, most of the credit for the success of the metalworking industries and political organisation resides with famous figures. As discussed in Chapter Two, Boulton was a pivotal figure for the brass founders of the town due to his extensive industrial, social, and political connections. The influential political contacts of the successful industrialists inevitably singled them out for the leadership of Birmingham's brass trade as others faded into obscurity.

Despite the dominance of the famous few in previous histories, this research has highlighted the crucial role played by a variety of anonymous or forgotten individuals, in creating and maintaining the brass manufacturing network and their collective lobbying. The introduction highlighted that many of the brass founders received only fleeting or passing mentions in articles despite their considerable contributions.⁹ George Simcox was one of these. An integral figure in the expansion of the industry, his persuasive arguments opened proceedings during the successful Parliamentary Enquiry of 1799 and his measured approach to questions was in stark contrast to his opponent Thomas Williams.¹⁰ His importance within Birmingham,

⁸ Wolfson Centre for Archival Research (WCAR), MS3004/9: *Articles of the Birmingham Brass Company*.

⁹ R. Hawkins, "Minor Products of British Nineteenth Century Diesinking," *British Numismatic Journal*: 30: 1 (1960), 174-87; J. Harris, "Copper and Shipping in the Eighteenth Century," *The Economic History Review*: 19: 3 (1966), 550-568; B Smith, "*The Galton of Birmingham: Quaker Gun Merchants and Bankers, 1702-1831*," *Business History*: 9: 2 (1967), 132-150.

¹⁰ *Report from the Committee Appointed to Enquire into the State of the Copper Mines and Copper Trade of this Kingdom* (RCCT), (7 May 1799), 4.

as a brass founder, magistrate, and street commissioner, has been underestimated. Little is known of his upbringing but his name is regularly mentioned by friends and opponents for his expertise in matters of copper, and he is listed as attending and chairing meetings of copper manufacturers within Birmingham, demonstrating his vital role.¹¹ Sam Smith, Thomas Hadley, William Villiers, and Joseph Lane were also significant individuals who gave evidence at the 1799 Parliamentary Enquiry; their appearance highlighted both the numbers of Birmingham manufacturers, and their ability to organise a strongly-unified lobbying force.¹² Manufacturers William Collins and John Westwood were responsible for some of the few significant technological breakthroughs in copper alloys in Birmingham, thereby improving the bolting of ships of the British Navy.¹³ Their achievements have been largely forgotten. This research extends and expands upon the list of individuals who shaped Birmingham's industrial and political cultures and reveals how the organisation and management of the industry shaped its growth.

The co-operative nature of the brass founders has not previously been explored by historians but was crucial to its continued success. The Birmingham brass foundry, and its expansion, was defined by the co-operation and co-ordinated industrial organisation of businessmen who were opposed to competition between themselves (although it did exist). This research proposes that it was the co-operative nature of brass founders in Birmingham that made them

¹¹ WCAR, MS3782/13/97, item 8: *To the Manufacturers of Birmingham in answer to an inhabitant, 1790*; WCAR, MS3782/13/97, item 13: *Mr. Simcox's Arguments Upon the Subject of the Copper Act*; WCAR, MS3782/13/97, item 24: *Letter from George Simcox to Matthew Boulton about a dispute with Mr. Evatt*.

¹² RCCT (7 May 1799).

¹³ Great Britain Patent Office: Patent 1388 and patent 1398, granted 22 October 1783, *Subject-matter Index of Invention, From March 2, 1617 (14 James I) to October 1, 1852 (16 Victoria), part II*: (London, 1857) accessed 1 November 2017.

successful in achieving their aims during the late-eighteenth century. It also proposes that whilst many grievances were raised by brass founders, who portrayed crises and economic slumps within the industry, the increase in the number of brass houses and brass founders suggests that the trade expanded steadily throughout this period and was lucrative. The Birmingham Commercial Committee, primarily comprised of brass founders, created formal groups in which to form strategies to safeguard the trade, expand the industry, and deal with competition. This research suggests that, for the most part, they were successful in achieving their aims.

Question 3: National and International Competition.

Despite the importance of the interconnectedness of the Atlantic World that has emerged from recent scholarly work by David Armitage, Michael Braddick, Chris Evans, and Göran Rydén, the West Midlands and its many of its industries have not been thoroughly studied together with the international contexts in which they operated.¹⁴ The developments in the eighteenth-century brass trade of Birmingham were shaped by many of the themes explored by Antony Hopkins; primarily the increase in international trade links, growth of services and finances, as well as the reconfiguration of political systems.¹⁵ The brass founders were often reacting to pressures from international markets, not simply domestic ones, and this thesis explores how they responded to both national and international competition and threats. Some of the most significant themes in the personal letters of brass founders concerned the

¹⁴ D. Armitage, M. Braddick, ed., *The British Atlantic World, 1500-1800* (Basingstoke: Palgrave Macmillan, 2009); C. Evans and G. Rydén, eds., *Baltic Iron in the Atlantic World in the Eighteenth Century* (Leiden: Brill, 2007).

¹⁵ A. Hopkins, *Globalisation in World History* (London: Pimlico Publishing, 2003) 3.

importance of maintaining dominance in international markets. Samuel Garbett, James Watt, and James Keir wrote extensively about their foreign business links, how Government foreign trade restrictions encouraged Birmingham workmen to move abroad, and the negative impact those restrictions had on manufacturing in Birmingham and District.¹⁶

The brass founders produced extensive plans and demands to tackle competition and restrictions on trade, including the prohibition of import tax on copper to ensure they could access it cheaply from Scandinavia and Ireland. As explored in Chapter Two, the political unrest in America was the catalyst that instigated the politicisation of the brass industry and provoked an angry petitioning campaign. Their tactics were not revolutionary as many mercantile pressure groups had been using this approach to influence ministerial policy for decades: the Goldsmith Company in London for example had drafted an Act against importing foreign plate as early as 1726.¹⁷ Despite this, the thesis outlines how the Birmingham petitions were noticeably more combative and aggressive than those of other similar merchant groups, such as those from Bristol or Manchester (Chapter Two). The content and tone of petitions varied depending upon who produced them. Industrial groups representing a variety of trades from different urban centres had varying approaches to petitioning; they were not homogenous, or there were important distinctions between them. The tone of the initial petitions from Birmingham brass founders was not well-received by the general public and ultimately proved counterproductive, requiring a change of tactics.

¹⁶ WCAR, MS3782/12/87, item 22: J. Keir and J. Watt, *Observations on the Copper Trade and the Danger of Exporting Tools & Machines Used Therein*.

¹⁷ J. Black, *Robert Walpole and the Nature of Politics in Early Eighteenth-Century Britain* (New York: Macmillan Education, 1990), 67.

After early petitioning failed, the ways in which industrial and political connections were formed diversified. Fresh and productive relationships were formed by the Birmingham brass founders which were vital in tackling competition and industry restrictions. Most notably a supply of cheap copper from Thomas Williams was secured, which initially stabilised manufacturing costs. As foreign industrialists attempted to lure workmen from Birmingham to Italy and France, the Birmingham Commercial Committee contacted copper suppliers, industrialists, and MPs in Wales, Liverpool, Cornwall, and Bristol in private correspondence, and also lauded these contacts openly through the national press.¹⁸ This proved to be more effective in creating productive partnerships. An initial relationship with Edmund Burke MP had proved to be less than successful as he was a controversial and individualistic politician, unable to provide the brass founders with the support in Government they needed (Chapter Two). As the century progressed however the co-operative and collective network of brass founders was able to persuade more influential men, Thomas Williams, Lord Liverpool, and Prime Minister Pitt, to support them politically and economically. The brass founders needed influential support as they responded to both national and international threats, such as the 1779 PCOPEC, which was imposed by the British Government to stop foreign nations from learning the secrets of their industry. The significance of these international markets and trade restrictions was ignored by Eric Hopkins.¹⁹ The Commercial Committee's response to competition changed over time but, in order to put pressure on MPs, it increasingly utilised print culture via both the press and self-produced pamphlets. These pamphlets have been analysed and reveal a political sophistication that manipulated facts and figures, as well as emotive themes, such as poverty, employment, and revolution. The Committee was also

¹⁸ Keir and Watt, *Observations on the Copper Trade*.

¹⁹ E. Hopkins, *Birmingham, The First Manufacturing Town in the World*.

advised on strategy by former influential Government ministers, such as Lords Shelbourne and Dartmouth, who knew the mechanics and workings of Government.

This thesis explored the developing sophistication of industrial and political methods employed by brass founders to safeguard their profitable trade, which showed their adaptability when tactics such as the early petitions proved ineffective. The second half of the eighteenth century was an extended learning exercise for the brass founders and the failures and subsequent successes have been identified for the first time. This thesis, also for the first time, outlines the changing phases of lobbying strategies used by brass founders to safeguard their trade; including petitioning in the 1770s, the formation of formal committees in the 1780s, as well as the aggressive use of propaganda through the press and print culture in the 1790s. It argues that the use of lobbying strategies was heavily influenced by international dimensions. Political strategies and campaigns were an important means by which brass founders responded to national and international competition.

Question 4: Political Connections and Strategy

This work traces the growing influence and power of the town's brass founders in forming advantageous relationships in order to tackle trade restrictions, as well as developing tactics to combat aggressive competitors. The lobbying group that formed, and the legislative changes they helped realise, allowed Birmingham brass founders to compete with competition from other powerful industrial centres and industrialists.²⁰ When the

²⁰ WCAR, MS3782/13/97, item 43: *Act of Parliament for regulating the Copper trade* (30 June 1801).

relationship between Birmingham brass founders, Thomas Williams, and the Cornish mining community deteriorated due to attempts by Boulton and Watt to extend their influence into Cornwall and Swansea, the Birmingham brass founders created a smear campaign against their industrial opponents. Exaggeration, lies, and misleading statistics were produced in pamphlets, published letters, and newspapers in order to garner sympathy from the general public, as well as politicians (Chapters Three, Four and Five). The ability of the Birmingham brass founders to organise expensive and extensive propaganda, legal defences, and to lobby for their own interests, highlights the increased wealth and influence of the Birmingham lobbying group on a national level; until this research their changing protectionist policies do not appear to have been explored by historians.

By 1799, as a result of their protectionist policies and increased contact with various MPs, the industrialists of Birmingham had manoeuvred their way into the heart of Government and were producing and distributing expensive propaganda. The use of print through newspapers and pamphlets, fearmongering about enemies of the State and creating arguments based on financial uncertainty, raised the profile of their grievances with both politicians and the public (Chapter Four and Five). Many of the ideas published by the brass founders, or expressed to politicians, had an element of truth but were often exaggerated to pressure Parliament, and thereby encourage Government support and increase the likelihood of reform and investment. By the time of the 1799 Enquiry into the State of the British Copper Trade, the political sophistication of the pressure group had developed significantly from the time of the American War of Independence.

There was a duality to the relationship between politics and industry in Birmingham; brass founders were responding both to political decisions that affected their industry, whilst simultaneously using the lucrative industry to influence politics. Private letters reveal that brass founders were in contact with the men in charge of the 1799 Enquiry into the Copper Trade of Britain, revealing a mutually beneficial relationship: Birmingham brass founders and Parliament benefitted from keeping the price of copper low.²¹ The naval applications of brass and copper products produced in Birmingham had enormous value to the Government, especially copper bolt and sheathing technology. Lord Liverpool, Edmund Burke, William Pitt, and other MPs (Chapter Three) expressed their admiration for the industrial ingenuity and quality of products from Birmingham. This research argues that the 1799 Enquiry provides an important date when the copper trade was reformed and secured the continued success of the Birmingham brass trade.

This research agrees with Paul Langford's claim about the lack of importance placed upon Birmingham within British history and adds to scholarly research about the town.²² The town and its industrial elite, were more integrated and active within British political developments than has previously been acknowledged. John Money, Roger Ward, and Peter Jones have dealt with aspects of Birmingham industry, economy and politics in the late-eighteenth and early-nineteenth centuries, but not the political dimensions of the Birmingham metal industries.²³ Money's assertion that Birmingham was politically unimportant until 1838, and

²¹ National Library of Australia; *Lord Liverpool to Henry Dundas* (20 October 1799). <https://nla.gov.au/nla.obj-761977845/findingaid#nla-obj-761983434>, accessed 10 July 2019.

²² P. Langford, *A Polite and Commercial People: England 1727-1783* (Oxford: Clarendon Press, 2010), 768-803.

²³ J. Money, *Experience, and Identity: Birmingham and the West Midlands, 1760-1800* (Manchester: Manchester University Press, 1977); R. Ward, *City-State and Nation: Birmingham's Political History, c. 1830-1940* (Felpham, Phillimore, 2005); P. Jones, *Industrial Enlightenment: Science, Technology and Culture in Birmingham and the West Midlands, 1760-1820* (Manchester: Manchester University Press, 2008).

had no claim to any significance in the affairs of the nation, is unconvincing when the links between the Birmingham lobbying group and elected MPs of Britain are studied.²⁴ Birmingham continued to lack genuine political representation, but the town's network of brass founders was accruing power and influence and had become increasingly adept at utilising political connections. The insights of this research can lead to studies to further understand some of the highlighted themes.

Future Research

This work has engaged with current debates and added fresh insights. Similar political and industrial movements existed in other manufacturing towns; the petitions of Birmingham refer to petitioners from manufacturing groups in Bristol, Leeds, Norwich, and Glasgow. Did those lobbying groups and industries evolve in a similar manner, or use different approaches and tactics? There are references to the industrial groups of Glasgow, Norwich, and Leeds in the broader histories of each town, as well as articles about eighteenth-century petitioning, but more studies of each specific industry are needed to understand the links between industry and politics.²⁵ Some comparisons can be made between the activities in Birmingham and other pressure groups and manufacturing networks from different towns. Birmingham brass founders successfully achieved more reforms than woollen merchants in Norwich, who also sought Government support, but more research is needed to understand the reasons for

²⁴ Money, *Experience and Identity*, 158.

²⁵ M. Prichard, "The Decline of Norwich," *The Economic History Review*: 3:3 (1951), 371-377; R. Wilson, *Gentlemen Merchants: the Merchant Community in Leeds, 1700-1830* (Manchester: Manchester University Press, 1971); D. Allen, *Scotland in the Eighteenth Century: Union and Enlightenment* (Abingdon: Routledge, 2014), 101; K. Bowie, "Early Modern Political Petitioning and Public Engagement in Scotland, Britain and Scandinavia, c. 1550-1795," *Parliaments, Estates and Representation*: 38: 3 (November 2018), 271-278; R. Huzzey, "Petitions, Parliament and Political Culture: Petitioning the House of Commons, 1780-1918," *Past and Present*: 248: 1 (August 2020), 123-164:

different levels of success and failure.²⁶ Lobbying by Birmingham brass founders and merchants has been underestimated by Money's study of Birmingham's eighteenth-century politics.²⁷ Did other groups in different towns, such as the industrial capitalists of the nineteenth-century Bradford Wool exchange, use similar organisational techniques and political strategies as the Birmingham brass founders?²⁸ Did the brass founders of the eighteenth century pave the way for future generations within Birmingham and District to be more politically conscious? Certainly, the revelations made, and conclusions reached in this study, pose questions for future research. Understanding of eighteenth-century manufacturing cultures in emerging urban regions in England is changing, through the studies of Jones, Geoffrey Tweedale, and Sven Beckert, and similar studies could provide useful insights into the socio-economic, cultural, and political dynamics of the Industrial Revolution.²⁹

The relationship between the effective lobbyists of eighteenth-century Birmingham and the Birmingham Political Union (BPU) of the nineteenth century could also be explored in future work. Parallels exist between Thomas Attwood's grass-roots pressure group of the 1820s and 1830s and the brass founders of the late-eighteenth century: the Political Union sought political reform, demanded representation, and combined the efforts of both the middling

²⁶ Prichard, "The Decline of Norwich," 371-377; S. Poole, "The Moral Economy of the English Middling Sort in the Eighteenth Century: the Case of Norwich in 1766 and 176," in *Markets, Market Culture and Popular Protest in Eighteenth Century Britain and Ireland*, eds. A. Randall and A. Charlesworth (Liverpool: Liverpool University Press, 1996), 115-137.

²⁷ Money, *Experience and Identity*; E. Hopkins, *Birmingham, The First Manufacturing Town in the World*.

²⁸ I. Webb, "The Bradford Wool Exchange: Industrial Capitalism and the Popularity of Gothic," *Victorian Studies* 20: 1 (1976), 45-68.

²⁹ Jones, *Industrial Enlightenment*; G. Tweedale, *Sheffield Steel and America: A Century of Commercial and Technological Interdependence 1830-1930* (Cambridge, 2009); S. Beckert, *Empire of Cotton: A Global History* (New York: Vintage Books Publishing, 2015), 3-29.

and lower industrial classes.³⁰ Thomas Attwood's father opened a copper mill in 1797, so the family would have had connections with the Birmingham lobbyists. Attwood was politically lobbying before the Union existed and led a local campaign to pressure the Orders in Council in 1812.³¹ There may be links, or influences, between the brass founders' lobbying group and the emergence of Attwood's BPU. Asa Briggs believes that the origins of the Union are embedded in Birmingham economic history between 1812 and 1832, but it may be the case that the origins were earlier and had links to brass founders.³² The Union itself may have been inspired by the politics of brass, and the organisational and lobbying methods that directly preceded it. It is known for instance, that brass founders were present in large numbers at the Political Union events that welcomed former Hungarian President Lajos Kossuth to the town.³³ The time frame and similarities suggest that a relationship could exist between the two movements that has yet to be researched.

This research draws attention to Birmingham's international connections and relationships with external trading centres. There is scope for more research into the relationship between Birmingham brass founders and France, Italy, or America, which has the potential to reveal specifics about the evolution of the town. The significance of the American trade has been highlighted but needs further exploration. Birmingham-based manufacturers were concerned about the damaging restrictions placed upon American trade, but there has been no in-depth

³⁰ C. Flick, *The Birmingham Political Union, and the Movements for Reform in Britain, 1830-1839* (Birmingham: Archon Books, 1978), 27-28.

³¹ A. Briggs, "Thomas Attwood and the Economic Background of the Birmingham Political Union," *The Cambridge Historical Journal*: 9: 2 (1948), 190-216.

³² Briggs, "Thomas Attwood," 190.

³³ S. Maccoby, *English Radicalism, 1832-1852* (Abingdon: Routledge, 2002), 376.

study of the connections between Birmingham and American industries and trades.³⁴ The majority of academic research on Birmingham and America at this time has focused on the relationship between Lunar Society member William Small and Thomas Jefferson.³⁵ Malcolm Dick has also explored Joseph Priestley and his links with America.³⁶ Birmingham manufacturers had an important trade relationship with the colony and, subsequently, the independent United States, and whilst this has been acknowledged by James Gaynor and Nancy Hagedorn, the topic deserves further investigation.³⁷ The same applies to the relationship between the industrialists of Birmingham and French merchants; Liliane Hilaire-Pérez has explored Matthew Boulton's Jewish Partners in France, but this is clearly not the only trading link between Birmingham brass founders and French merchants.³⁸ Industrialists in France, such as Monsieur Camus Delim, were actively trying to entice Birmingham workers to their businesses and to reveal the secrets of brassworking.³⁹ Industrial espionage is something that concerned both the British Government and the Birmingham manufacturers (Chapter Three), but the specifics of this espionage are still not fully understood. It is clear that manufacturers and industrialists in France and Italy were trying to entice workers from Birmingham; further examples and case-studies would shed light on, and provide evidence for, this practice. It is also clear that Ireland was an important country for manufacturers of

³⁴ WCAR, MS3782/12/87, item 6: *Letter of thanks from the Merchants, Traders and Manufacturers of Birmingham, concerned in the Trade to America, to Edmund Burke*, in *Lloyd's Evening Post* (13 February 1775).

³⁵ P. Ford, ed., *The Works of Thomas Jefferson: Correspondence, volume 2, 1771-1779* (Augsburg: Jazybee Verlag, 2010); W. Randall, *Thomas Jefferson: A Life* (London: Harper Collins, 1994).

³⁶ M. Dick, "Joseph Priestley and America," in *Joseph Priestley and Birmingham*, ed. M. Dick (Studley: Brewin Books, 2005), 105-109.

³⁷ J. Gaynor and N. Hagedorn, "English and American Toolmaking," in *Eighteenth-Century Woodworking Tools*, eds. J. Gaynor and N. Hagedorn (Williamsburg VA: The Colonial Williamsburg Foundation, 1993), 1-16.

³⁸ L. Hilaire-Pérez and B. Vaisbrot, "Matthew Boulton's Jewish Partners between France and England: Innovative Networks and Merchant Enlightenment," in *Matthew Boulton: Enterprising Industrialist of the Enlightenment*, eds. S. Baggot, M. Dick, K. Quickenden (Abingdon: Ashgate Publishing, 2013), 199-215.

³⁹ WCAR, MS3782/12/87: item 22, *Observations on the Copper Trade and the Danger of Exporting Tools & Machines Used Therein*;

brass and copper (Chapters Three, Four, and Five), yet there are limited studies of the relationship between eighteenth-century Birmingham manufacturers and Ireland, and these are mainly focused on the migration of workers and radical ideas from Ireland during the early-nineteenth century.⁴⁰ The different trade partners, markets, and links could provide insights into the wider global context of the Midlands.

Individual industries also need further research. Birmingham brass founders produced brass buttons, buckles, and household objects, but more investigation is needed to understand each separate industry. Another key product is the brass manilla trade in Birmingham and the links between Birmingham manufacturers of brass products and West African markets have been highlighted by Jane Guyer and Eugenia Herbert. Despite their research, both of whom refer to the extensive practice of brass manilla manufacture in the town, precise location details and records of manilla production and selling seem to be lost.⁴¹ There are obstacles to overcome; records of small businesses rarely survive, and metal products cannot be dated unless they were stamped – which was rarely the case with brass products. If the secrets of this industry could be uncovered, the involvement of Birmingham manufacturing with West African trade and currency changes, as well as the Atlantic slave trade more broadly, could significantly contribute to the historiography of the town. There are many trades that deserve further attention: Birmingham was inextricably connected to the international economy.

⁴⁰ J. Champ, *The Demographic Impact of Irish Immigration on Birmingham, 1800-1850*, *Studies in Church History*: 25:1 (1989), 233-242; S. Renton, "Irish Famine of 1799-1801: Market Culture, Moral Economies and Social Protest," in *Markets, Market Culture and Popular Protest in Eighteenth Century Britain and Ireland*, eds. A. Randall and A. Charlesworth (1996), 163-194.

⁴¹ E. Herbert, *Red Gold of Africa: Copper in Precolonial History and Culture* (Madison WIS: University of Wisconsin, 1984), 202; J. Guyer, *Marginal Gains: Monetary Transactions in Atlantic Africa* (Chicago IL: University of Chicago Press, 2004), 72.

Conclusion

The brass founders of Birmingham blurred the lines between society, politics, and industry. W.C. Aitken's assertion in 1866 that 'what Manchester is in cotton, Bradford is in wool, and Sheffield in steel, Birmingham is in brass' seems less hyperbolic than it may have appeared before this research.⁴² There are many parallels to be drawn between the rise and expansion of the Birmingham brass manufacturing network and the Cottonopolis of Manchester; Beckert outlines how the successful manufacture of cotton was facilitated by aggressive protectionist policies that were created by cotton industrialists.⁴³ Beckert's exploration of Manchester cotton manufacturing, Evans and Rydén's Baltic Iron work, as well as Tweeddale's history of Sheffield steel, provide studies of the business practices and cultures within important industries. This research has built on their work and provides another important case-study of metalworking industrialists. Whilst Birmingham brass manufacturing may not have dominated world trade to as great an extent as Manchester did in global cotton production, the trade was intricately connected to the evolution of the town. Brass was to Birmingham, what cotton was to Manchester, wool was to Bradford and steel was to Sheffield. This research has added to the study of metalworking within Birmingham and the Midlands region, as well as the industry's links to the rest of the world.

The prosperity of local brass and copper manufacturing was the primary concern for a network of industrialists in Birmingham and District, who used political influence to protect their economic interests. The efficiency of the organisation of the brass network allowed

⁴² W. Aitken, "Brass and Brass Manufacturers," 229.

⁴³ S. Beckert, *Empire of Cotton*, 3-29.

Birmingham to defeat competition within Great Britain and to make international trading connections. The ability to effectively advocate the importance of these foreign links gave the industrialists of the town the ear of Members of Parliament and friends of the Monarchy. This network of brass founders was a substantial, influential, and effective lobbying group that mobilised to effect change in national policy. Brass provided the catalyst for the development of the town's manufacturing and political culture which allowed Birmingham to evolve and thrive. The individuals who ran the brass industry extended their influence far beyond the boundaries of Birmingham and District, which supports the claim by Eric Robinson in 1964 that 'as is so often the case during the early years of the Industrial Revolution what appears at first sight to be a local affair proves to be a matter of national, even international importance in its repercussions.'⁴⁴ In sum, the Birmingham brass trade, which expanded throughout the second half of the eighteenth century, was a lucrative industry with extensive international trading connections. The success of the industry could not have been achieved without the political lobbying, organisational strategies, and active campaigning of local brass founders.

⁴⁴ E. Robinson, "Matthew Boulton and the Art of Parliamentary Lobbying," *The Birmingham Historical Journal*: 7: 2 (1964), 209.

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