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Interconnected synchronicities: the production of Bombay and Glasgow as modern global ports c.1850–1880

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Abstract

Cain and Hopkins' influential theory of British imperialism opted for a metropolitan-based model of explanation, rooted in the interests of a City-of-London-based class of 'gentlemanly capitalists', and discounting in the process events and experiences in the colonies and the significance of industrialization. By focusing on the simultaneous emergence of Bombay and Glasgow as modern, global ports in the second half of the nineteenth century, this article argues, in diametrical opposition, for a fresh perspective on the relationship between metropole and periphery, based on the concept of 'interconnected synchronicity'. This proposes that 'imperial' causation be viewed, at least from this period, as occurring in both arenas, based on a set of related and mutually transformative processes generated by the 'globalizing', commodity-driven imperatives of industrial capitalism.

Introduction: towards a critique of the Cain–Hopkins paradigm

This article seeks to identify and explain the complex set of processes that led to the virtually simultaneous creation of Bombay and Glasgow as modern though unequal global ports in the second half of the nineteenth century. It views port development as an integral, if somewhat neglected, aspect of British imperial expansion. It does so, moreover, in a manner that interrogates significant aspects of the theory of British imperialism put forward by P. J. Cain and A. G. Hopkins in their now classic account of 'gentlemanly capitalism', which argues for the predominance of the City-of-London-based financial and service sector, at the expense of northern manufacturing industry, as the mainstay of British economic power and imperial expansion for more than two centuries.¹ Specifically, this article takes issue with their causation model between 'centre' and 'periphery', questions their perspective on nineteenth-century British industrialization, and brings to the fore the neglected Scottish dimension of British

1 P. J. Cain and A. G. Hopkins, *British imperialism: innovation and expansion 1688–1914*, Harlow: Longman, 1993.

imperial ventures, particularly the role of imperial merchants, who were fundamental ‘social agents’ of both colonial and global capitalist expansion. The argument presented here is that the ‘imperial mission’ was, in economic terms, a much more complex process than simply ‘the export version of the gentlemanly order’, involving a far wider range of networked commercial actors, interacting with both the imperial and the colonial state.²

Cain and Hopkins define imperialism as a particular state’s will and capacity to ‘shape the affairs of another by imposing upon it’.³ They argue fundamentally for a metropolitan-based model of explanation, ‘drawing a line of causation from the centre to the periphery’. Although some aspects of causation might also originate in the colonial periphery, the ‘generic causes’ of British imperialism, they assert, ‘have their origins at the centre’. This position is not substantially modified by their subsequent redefinition of their view of imperial power, which distinguishes between ‘structural power’ (referring to ‘the way in which a dominant state shapes the framework of international relations’) and ‘relational power’ (‘the negotiations, pressures and conflicts that determine the outcome of particular contests within this broad framework’).⁴

In contrast, this article seeks to offer a fresh perspective on the relationship between metropole and periphery, based on the concept of ‘interconnected synchronicity’, whereby ‘imperial’ causation occurs in both arenas, through a set of related, continuous, and mutually transformative processes. In this instance, it was of paramount importance for industrial imperialism to secure increasingly rapid communications between strategically vital geographical nodes. This concept draws on fresh insights offered by practitioners of both the new imperial history and the new global history. Catherine Hall argues persuasively for situating colony and metropole in a single analytical framework, because relations between them were ‘mutually constitutive’.⁵ Patrick O’Brien identifies the making of ‘connections and comparisons’ across ‘regional and national boundaries as well as continents, oceans, and separable cultures’ as being at the heart of the current relaunch of global history.⁶ Chris Bayly contends, similarly, that ‘all local, national, or regional histories must, in important ways, be global histories’.⁷

The focus on the making of the ports of Bombay and Glasgow, and on the related development of new commercial relationships between the two cities in the second half of the nineteenth century, is not intended to suggest that these relationships were in any way exclusive.⁸ Rather, it is meant to indicate the nature of the commodity movements and

2 Ibid., p. 34.

3 Ibid., p. 43, 50–1.

4 P. J. Cain and A. G. Hopkins, ‘Afterword: the theory and practice of British imperialism’, in Raymond E. Dumett, ed., *Gentlemanly capitalism and British imperialism: the new debate on empire*, Singapore: Longman, 1999, p. 204.

5 Catherine Hall, *Civilising subjects: metropole and colony in the English imagination, 1830–1867*, Oxford: Blackwell, 2002, pp. 8–9.

6 Patrick O’Brien, ‘Historiographical traditions and modern imperatives for the restoration of global history’, *Journal of Global History*, 1, 1, 2006, pp. 4–5.

7 C.A. Bayly, *The birth of the modern world, 1780–1914*, Oxford: Blackwell, 2004, p. 2.

8 Frank Broeze, Peter Reeves, and Kenneth McPherson, ‘Imperial ports and the modern world economy: the case of the Indian Ocean’, *Journal of Transport History*, 7, 2, 1986, pp. 1–21.

the interests involved, which were driving these synchronic connections during this period. It also provides an entry point into considering the localized workings of imperial power, showing how these forces, operating in a new context of second-phase industrialization, 'shaped' both metropole and colony, albeit differently. This article proposes an understanding of these transformations as a geographically extended process, involving more-or-less simultaneous spatial changes in both locations. Moreover, if imperialism was, following Cain and Hopkins' own definition, essentially about spatial control, identifying the concrete spatial changes that it actually brought about brings into play a wide range of actors below the level of Whitehall imperial policy-makers, and the detailed causal decision-making processes that led to particular outcomes. Indeed, one of the main criticisms made of the Cain–Hopkins thesis is that their focus on the high politics of imperial intent fails to explain concrete colonial outcomes adequately.⁹

Synchronic events are not always connected. Thus, in the eighteenth century, Bombay and Glasgow developed on the back of powerful international addictions to opium and tobacco respectively, but without significant linkages between them. In every instance, it is the historian's task to make the case for synchronic connections. It is our contention that linkages (other than for military purposes) between metropole and periphery that had previously occurred in an essentially diachronic, piecemeal, and adventurous manner became, in the second half of the nineteenth century, much more synchronic, planned, and deliberate. The main causal factors contributing to this historical rupture were originally identified by Karl Marx, who foresaw the globalizing thrust of the new forces of industrial capitalism in its search for 'a constantly expanding market for its products'. Marx noted how the 'immensely facilitated means of communications', consequent upon industrialism's 'constant revolutionizing of production', had seen the emergence of steam navigation, railways, and electric telegraphs, making possible the establishment of rapid multilateral connections between different parts of the world.¹⁰

In view of this, Cain and Hopkins' criticism of Marx for overstating 'the role of the forces associated with industrialisation' in British imperialism vis-à-vis India in the second half of the nineteenth century is open to challenge. For, although they assert that this should not be seen as 'an attempt to minimise the importance of the process of industrialisation', in practice they display a reductionist understanding of the latter, which tends to be identified primarily with manufacturing.¹¹ Hence, Marx is criticized for assuming that the transfer of power from the East India Company to the British Crown, following the Indian rebellion of 1857, signalled the emergence of the 'millocracy' as the dominant voice in the conduct of Indian imperial policy. In this somewhat limited aspect, Cain and Hopkins' criticism is undoubtedly justified.

However, 'forces of industrialization' in the Victorian era also involved, as Robert Kubicek has pointed out, a wide range of activities and innovations crucial for imperial purposes, including shipbuilding and its continuous improvements, related developments in the iron and steel industries, and the emergence of a group of major ship-owners based

9 Dumett, *Gentlemanly capitalism*, pp. 10–11.

10 Karl Marx and Friedrich Engels, *The Communist manifesto*, London: Penguin, 2002 [1848], pp. 223–5.

11 Cain and Hopkins, *British imperialism*, pp. 4, 318, 348.

in Scotland and the north of England, rather than in London and the south. The ‘ship nexus’ promoted close interactions between ship-owners, shipbuilders, bankers, merchants, and industrialists, enabled the successful lobbying of both imperial and colonial governments by ship-owners, and empowered both imperial expansion and the economic penetration of vast areas of the globe.¹² Cain and Hopkins, in contrast, confine shipbuilding and communications to the service sector. Even though they acknowledge the former as ‘Britain’s greatest industrial success story of the post-1850 period’, they fail to consider the implications of this for their overall argument, particularly for their view that ‘after 1850 the epicentre of dynamic economic change began to shift back from north to south’.¹³

Amplifying Kubicek’s concept of the ship nexus, this article identifies Glasgow as pivotal both to the ‘globalizing’ thrust of British industrial capitalism and to the intensified process of imperial expansion after 1850, a factor that tends to be neglected in much of the mainstream literature on British imperialism. Glasgow’s claim to be ‘the second city of the empire’¹⁴ was no idle boast during this period, and the possession of a radically different economic profile to London did not make it any less of an imperial centre in its own right. The city’s emergence as the premier centre of world steamship-building was premised on crucial marine engineering and communications innovations. These brought together, in a series of collaborative ventures, the city’s leading marine engineers, iron shipbuilders, and academic scientists. The deepening of the river Clyde enabled the development of Glasgow as a modern port, capable of accommodating the progressively bigger and faster steamships that carried the industrial goods produced in the factories of the city and the wider Scottish region to the four continents beyond Europe.

This global vocation was premised on networks established within an expanding British empire. Here, India held particular significance, both on account of the longstanding nature of the Scottish colonial presence, and as the leading destination of Clydeside’s ‘fancy’ cotton goods exports. It was the threat to Glasgow’s raw cotton supplies, during the American Civil War, that made the city’s commercial class an important part of the coalition of textile interests that pressed upon both imperial and colonial governments the necessity of revolutionizing cotton cultivation in western India, alongside a radical improvement in communications. The spatial transformation of the port of Bombay through land reclamation was one of the significant outcomes of this process, resulting ultimately in its dependent modernization in the interests of the steamship-driven, European trade.

Glasgow’s reaching out towards Bombay and other parts of the southern world thus required substantial spatial changes to its own urban form, with significant social and demographic consequences. The attractiveness of Bombay as a regular destination for its steamships was premised on the latter’s importance as a ‘sub-imperial’ location, offering, beyond India, potential access to the ports of the Indian Ocean. Bombay was also a port where most of the social agents of the colonial capitalist enterprise were Scottish merchants.

12 Robert Kubicek, ‘The proliferation and diffusion of steamship technology and the beginnings of “new imperialism”’, in David Killingray, Margarette Lincoln, and Nigel Rigby, eds., *Maritime empires: British imperial maritime trade in the nineteenth century*, Woodbridge: Boydell, 2004, pp. 100–10.

13 Cain and Hopkins, *British imperialism*, pp. 40, 179.

14 John M. MacKenzie, ‘“The second city of the empire”: Glasgow – imperial municipality’, in Felix Driver and David Gilbert, eds., *Imperial cities*, Manchester: Manchester University Press, 1999, pp. 215–37.

Far from simply functioning as a seat of ‘relational power’, Bombay was crucial to the construction of the most significant networks of this era based on the ship nexus. The ‘Bombay experience’ shaped the development of the business networks established by William Mackinnon and Charles Cayzer. An important institutional role was played by the Bombay Chamber of Commerce, a transplanted institution largely created by Scottish merchants. As a collective body, the chamber had the capacity to act both autonomously and in collaboration with metropolitan chambers, making it a particularly influential pressure group on a usually well-disposed colonial government.

Under its umbrella, merchant agency houses could also, again largely on the basis of Scottish kinship ties, accumulate considerable economic clout and political influence. The firm of William Nicol & Co. effectively constituted the nerve centre of these networks, with its spatial stretch and multiple functions. It was the leading agency in the import–export cotton trade on behalf of Scottish manufacturers, an indispensable source of information for Scottish businesses, a manager of steamships, and an owner of port accommodation sites. Furthermore, it had close ties with the Bombay government. These activities made it a particularly appropriate conduit for a new type of imperial merchant, who, via the communications revolution, could now operate on a genuinely transnational basis, enjoying access to much wider sources of capital mobilization than London.

Nicol & Co. provides an excellent illustration of the functional diversification of agency houses in Asia, brought about by the new forces of industrialization back in Britain. Ambitious imperial merchants such as MacKinnon and Cayzer were able to make use of positions, contacts, and experience gained with this Bombay firm to put together synchronic networks that reached out across vast geographical spaces. These networks comprised shipbuilders, manufacturers, marine and civil engineers, import–export merchants, financial backers, coal suppliers, agents, and business collaborators, stretching back to Glasgow, as well as forward to other colonial port cities such as Sydney and Surabaya. The insider Scottish complexion of these networks placed a premium on trust, and favoured the interlocking of interests between different factions of capital, thus greatly increasing the effectiveness of their operations.

These interests did not therefore operate as purely ‘industrial lobbies’ (Cain and Hopkins’ crucial criteria for assessing the influence of manufacturers on imperial policy¹⁵) but as ‘networks of trust’, keenly alive to possibilities of the coincidence of priorities between government and business. This enabled levels of collaboration, mobility, and penetration that went beyond what was possible for Cain and Hopkins’ rather sedentary ‘gentlemanly capitalists’, based in London’s square mile. More generally, in contrast to these historians’ view of a continuous and largely unchanging imperialism, dominated by the City of London for two centuries, the argument presented here suggests a historical rupture: it was the emergence of geographically circulating coalitions of capital, made possible by the development of industrial productive forces, that gave British imperialism new possibilities in the second half of the nineteenth century.

Such ambitious transnational entrepreneurship also led to networking with colonial governments. The Mackinnon group’s increasing penetration of the southern hemisphere was initially made possible by generous subsidies from the government of India for the

15 Cain and Hopkins, *British imperialism*, p. 334.

conveyance of mails, while Cayzer secured the lucrative cargo of stores for both the central and provincial governments in India. Involvement in the ship nexus gave European merchants other collaborative opportunities with the colonial state, as seen in the development of the port of Bombay by the Elphinstone Land & Press Company. Typically, such collaboration involved agencies of the colonial rather than the London-based state, and Cain and Hopkins' Whitehall-based civil servants and politicians did not figure prominently. Collaboration often generated a formidable type of power, which could secure unparalleled mobility of production factors to achieve spatial changes in record time. As Rosa Luxemburg observed, this was more easily achieved in a colonial context, where government policies provided capitalism with an elasticity it did not possess at home, enabling the speedy appropriation of 'the most important means of production' to secure 'miraculous' changes in the landscape.¹⁶

Glasgow's industrial imperialism

The cotton industry of Glasgow and its west-of-Scotland hinterland was founded on attempts by local weavers to imitate and replace cotton fabrics, which represented the bulk of the East India Company's imports from India.¹⁷ In particular, the finer and lighter cotton cloths, known as muslins, became the staple textile manufacture of Glasgow from the 1780s, whereas thicker fabrics, such as calicoes, cambrics, and shirtings, tended to be made in Lancashire.¹⁸ The introduction of power weaving initially enhanced rather than replaced the capacities of handloom weaving, lowering prices and making cottons more affordable to a wider domestic public. At the same time, subsidiary bleaching and dyeing industries were also established, leading to increased imports of Indian saltpetre, much in demand with dyers.¹⁹ As muslins set the tone for fashionable dressing during the first half of the nineteenth century, the cost of fine cotton cloth fell, by 1850, to just 1% of its 1784 price.²⁰ At the Great Exhibition of 1851, it was reported that 'Glasgow's textile displays really outshone everything else in the cotton section'. Especially prominent was the great variety of muslins, advertised as 'suited to East Indian, home, American and continental markets'.²¹

As an expanding cotton textile industry replaced tobacco and linen as Glasgow's leading manufacturer,²² the need for new overseas markets beyond the old transatlantic colonies

16 Rosa Luxemburg, *The accumulation of capital*, London: Routledge, 1963 [1913], pp. 358, 370.

17 'The beginnings of the Chamber of Commerce', *Glasgow Chamber of Commerce Journal*, 55, 7, 1970, p. 357.

18 *Glasgow ancient and modern, or the history of Glasgow from the earliest to the present time*, Glasgow: John Tweed, 1872, pp. 1227, 1229.

19 'The early days of the Chamber of Commerce', *Glasgow Chamber of Commerce Journal*, 55, 11, 1970, p. 555.

20 Toby and Will Musgrave, *An empire of plants: people and plants that changed the world*, London: Cassell Illustrated, 2002, p. 85.

21 'The second empire – the Glasgow Chamber in the 1830s and 1840s', *Glasgow Chamber of Commerce Journal*, 57, 10, 1972, p. 333.

22 John Butt, 'The industries of Glasgow', in W. Hamish Fraser and Irene Maver, eds., *Glasgow, vol. II: 1830 to 1912*, Manchester: Manchester University Press, 1996, p. 98.

made the city's commercial class strong supporters of 'free trade'. Indeed, Glasgow became one of the main centres of the campaign to end the East India Company's trading monopolies with India and China. Among the stated grievances against the Company, with its London base, were its lack of interest in exporting northern manufactured cotton goods and its denial to outports such as Glasgow of shipping opportunities on the route to India.²³

More than any other part of Britain, Glasgow and its Clydeside hinterland housed the 'meshworks of mutually supporting innovations' in the coal-iron-steam-cotton circuit, which led to the emergence of scientific engineering, including marine engineering, and large-scale industry.²⁴ Scottish landed and merchant capital flowed into the region, enabling coal extraction and iron production, which triggered steam power. Steam power in factories in turn triggered, through the influence of colonial connections, a flow of cotton textiles, which created profits and demand for new machinery, which produced further experiments with iron and steam technologies. These included, crucially, experiments in steam navigation, carried out by the Napiers on the Clyde, which initially led to the emergence of small steamships, linking Scotland with Ireland by the 1820s. These 'triggers and flows' would not perhaps quite have worked without the enabling contextual framework of colonies, pointing to a significant influence of the 'periphery' on metropolitan development. This is perhaps best illustrated by the East India Company's award of a prestigious contract to the rising Glaswegian marine engineer Robert Napier to create the engines for the *Berenice*, the first steamship built to carry the valuable mails between Bombay and Suez, operating from 1837.²⁵

These experiments also brought industrial and academic interests into regular interaction, and in 1841 the first chair of engineering in Britain was created at Glasgow University.²⁶ One of the results of this collaboration was the iron steamship equipped with the new compound engine, invented by Clydeside engineers, which improved the function of steam by reducing coal use by about 40%. This enabled longer distances to be covered without coaling.²⁷ Between 1870 and 1920, Clyde shipyards dominated world shipbuilding, a position based on a virtual monopoly of the British merchant marine market.²⁸ It is important to emphasize just how intimate the relationship between industrial invention and imperial venture became during this period: the iron, and subsequently steel, steamship was fundamentally a response to the demand for ever more rapid connections with the southern world, for both commercial and political purposes.

Imperial connections were also at the heart of another engineering feat, submarine telegraphy, an invention based largely, once again, on collaboration between marine engineers and research scientists at Glasgow University. This enabled the harmonization of theory and

23 Margaret A. Whitehead, 'The development of the Clyde's eastern trade circa 1815–1850', PhD thesis, University of Strathclyde, 1993, p. 631.

24 Manuel De Landa, *A thousand years of nonlinear history*, New York: Swerve, 2000, pp. 76–7.

25 Ben Marsden and Crosbie Smith, *Engineering empires*, London: Palgrave Macmillan, 2005, pp. 94, 108.

26 Crosbie Smith and M. Norton Wise, *Energy and empire*, Cambridge: Cambridge University Press, 1989, p. 654.

27 Stephen Fox, *The ocean railway*, London: HarperCollins, 2003, pp. 274.

28 Anthony Slaven, 'Modern British shipbuilding, 1800–1990', in L. A. Ritchie, ed., *The shipbuilding industry: a guide to historical records*, Manchester: Manchester University Press, 1992, p. 5.

practice, overcoming earlier failures, such as the 3,500 miles of the Suez–Bombay telegraph of 1859–60.²⁹ The promises inherent in the ‘dematerialization of telecommunication’³⁰ were not immediately realized, and commercial interests complained additionally about the poor quality of existing government-controlled overland lines to India via Persia. The Manchester Chamber of Commerce was much exercised by long delays and garbled and incomprehensible messages, due, it claimed, to the lines passing through ‘several continental countries and amongst many half civilised tribes’.³¹

The Glasgow Chamber of Commerce dispatched a memorial to the Secretary of State for India, urging the setting up of ‘a new line of communication to be worked exclusively by British subjects and under British rule as far as practicable’. The Chamber advocated that the telegraph network should coincide with the impending steamer route to Bombay, via the Suez Canal and Aden.³² With the imperial government having invested heavily in land lines, however, it was a private company, the British Indian Submarine Telegraph Company, that took the initiative, prompted by the success of the Glasgow-designed Atlantic telegraph of 1866. The Suez–Bombay submarine cable via Aden was successfully laid in April 1870, an operation that required the use of the biggest ship in the world, the *Great Eastern*, carrying the heaviest ever weight in freight of 21,000 tons. At Aden, the cable linked up with the existing Aden–Alexandria–Malta line.³³ A few months later, the laying of another submarine cable between Falmouth, Gibraltar, and Malta, again by a private company, completed the 8,000-mile transoceanic connection between Britain and Bombay.³⁴ These emerging submarine cable companies were at pains to point out to the India Office that, although the telegraphs were ‘primarily established for commercial gain’, they also fulfilled ‘great imperial purposes’.³⁵

The opening of the Suez Canal in 1869 cut the distance from Glasgow to Bombay from 10,860 nautical miles via the Cape to 6,020. As the *Bombay Gazette* observed, ‘Bombay happens to be that part of the East where the saving of distance appears greatest’.³⁶ Glasgow’s growing significance and reputation as a major shipping centre is illustrated by invitations to the Glasgow Chamber of Commerce and the Anchor Line for the festivities marking the Canal’s inauguration; the latter’s steamer *Dido* was one of sixty-four vessels chosen to participate in the procession through the Canal.³⁷ This shipping company, whose initial field of operations in the 1850s was the export trade to New York, soon offered an

29 Smith and Norton Wise, *Energy and empire*, pp. 675, 678.

30 Roland Wenzlhuemer, ‘The dematerialization of telecommunication: communication centres and peripheries in Europe and the world, 1850–1920’, *Journal of Global History*, 2, 2, 2007, pp. 345–72.

31 Mitchell Library Glasgow (henceforth MLG), Glasgow Chamber of Commerce Records (henceforth GCCR), Manchester Chamber of Commerce to Glasgow Chamber of Commerce, 8 October 1867; ‘Minutes of the Glasgow Chamber of Commerce for the year 1867’, p. 340.

32 MLG, GCCR, ‘Minutes of the Glasgow Chamber of Commerce for the year 1867’, pp. 347–9.

33 MLG, Newspapers on microfilm (henceforth NM), *The Glasgow Daily Herald*, 11 November 1869.

34 British Library, India Office Records (henceforth BL, IOR), Parliamentary Papers (henceforth PP), 1871, 51: East India Telegraphs, pp. 366–7.

35 *Ibid.*, p. 390.

36 BL, IOR, Newspapers on microfilm (henceforth NM), *Bombay Gazette*, 1 January 1870.

37 MLG, NM, *The Glasgow Daily Herald*, 13 December 1869.

‘Indian Service’ to Bombay, Madras, and Calcutta, as well as a ‘Mediterranean Service’ to Spain, Portugal, Italy, Sicily, and Egypt.³⁸ By the late 1870s, the considerable expansion in the Bombay trade, involving commodities such as cotton piece goods, locomotives, metal goods, and various kinds of machinery, led to ‘specially constructed steamers of large cargo capacity’, which were held to be ‘among the largest carriers of their time’.³⁹

The creation of Glasgow as a global port

Perhaps the most significant engineering achievement was the deepening of the river Clyde and its transformation from a ‘shallow Scottish salmon river’⁴⁰ into a busy waterway to an expanding Asian and African empire. This resulted in the concomitant development of Glasgow as Britain’s third most important port. In the eighteenth century, Glasgow was not physically a port but an important commercial town, directing Scotland’s tobacco-based transatlantic trade with the colonies of North America and the Caribbean. Even when the British Empire turned eastwards, following the loss of its American colonies, trade between Scotland and India was for much of the first half of the nineteenth century conducted primarily from Greenock rather than from Glasgow, which was sited at a relatively narrow and shallow point on the river. Only in the late 1840s did Glasgow overtake Greenock in foreign trade tonnage.⁴¹ Machines belonging to the new industrial age, in particular steam dredgers, both deepened and widened the Clyde, creating the channel that made it navigable by the ever bigger and faster steamers engaged in intercontinental trade. Steamers could sail from Glasgow on regular schedules, and at all states of the tide, by the time of the opening of the Suez Canal. Writing a few years afterwards, James Deas, Engineer of the Clyde Trust, who planned many of the most significant works, observed that ‘from a mile below Bowling upwards to Glasgow, a length of 12 miles, the Clyde of the present day is nearly as much an artificial navigation as the Suez Canal’.⁴² River correction and regulation occurred elsewhere in Europe, as enthusiasm for the ‘magical properties’ of the steamship drove this process of the conquest of nature.⁴³

The excavated material was used to fill in the ground along the river, creating new riverbanks, which enabled shipbuilders such as John Barclay and Alexander Stephen, and marine engineers like the Napiers, to set up establishments close to the river.⁴⁴ By the mid 1870s, there were no fewer than forty shipbuilding yards along the banks of the Clyde.⁴⁵

38 MLG, NM, Anchor Line advertisement, *The Glasgow Daily Herald*, 19 December 1870.

39 Anchor Line Ltd., *History of the Anchor Line 1852–1911*, Glasgow: Anchor Line, 1911, p. 23.

40 Marsden and Crosbie Smith, *Engineering empires*, p. 93.

41 John F. Riddell, *Clyde navigation: a history of the development and deepening of the River Clyde*, Edinburgh: Donald, 1979, p. 326.

42 James Deas, ‘The River Clyde,’ in James Forrest, ed., *Minutes of proceedings of the Institution of Civil Engineers*, vol. 36, session 1872–3, part II, p. 124.

43 David Blackbourn, *The conquest of nature: water, landscape and the making of modern Germany*, London: Jonathan Cape, 2006, p. 153.

44 John F. Riddell, ‘Glasgow and the Clyde’, in Peter Reed, ed., *Glasgow: the forming of the city*, Edinburgh: Edinburgh University Press, 1999, p. 43.

45 MLG, T-CN series (news cuttings), ‘The Clyde shipbuilding trade in 1875’, *The Scotsman*, 30 December 1875.

Meanwhile, pressing demand for sufficient shipping accommodation led to heated debate – and a series of reports commissioned by the Clyde Trustees – on harbour improvement. The development of docks only took off in earnest following the passage of the Clyde Navigation Act of 1858, establishing a new management authority, the Clyde Navigation Trust. The Trust was given generous borrowing powers, amounting to £1.5 million, and the Scottish shipping companies and the Chamber of Commerce were well represented amongst its twenty-five members. Its chairman was to be the post-holder of lord provost of Glasgow, thus ensuring a large measure of civic support.⁴⁶

The building of Kingston Dock and, especially, Queen's Dock at Stobcross, was designed to place Glasgow alongside London and Liverpool as the third 'first-class deep-sea port' in Britain. In his report proposing these works, Deas' predecessor, John Ure, had pointed to the exponential increase of the 'foreign steam trade', and the need both to accommodate the largest steamers 'so many of which are built on the river', and to anticipate the 'steady increase in the size of all ocean-going steamers'.⁴⁷ Constructed as open tidal basins, the docks enabled steamers to enter and leave the harbour at all times without having to wait, as in the case of enclosed wet docks, for the opening of gates at high water.

On completion, Queen's Dock had a combined water area and quayage accommodation of 36 acres, and a low-water depth of 20 feet, able to house simultaneously some of the largest steamships of the day.⁴⁸ It was also the first dock in Scotland to be equipped with powerful cranes, for the loading of both coal and heavy machinery, such as locomotives. Significantly, it was the Anchor Line's 2,080-ton steamer *Victoria* that was chosen to inaugurate the opening of the dock in September 1877.⁴⁹ Queen's Dock and the adjoining Stobcross Quay were dominated by imperial shipping companies, providing berthage accommodation for the Anchor, City, Clan, and Donaldson Lines. Between them, the destinations of these shipping companies covered India, Burma, Singapore, East and South Africa, the United States, Argentina, and Chile by the late 1870s.⁵⁰ By that point, India had become the most important single imperial market for Scottish (and British) manufactures, and had overtaken the USA as Glasgow's leading foreign shipping destination.⁵¹ Moreover, dues levied on goods and stores shipped to Bombay and Calcutta for the government of India provided 'a considerable portion of the revenue' of the Clyde Navigation Trust.⁵²

As always, industrial 'progress' was not without its victims, nor was it a smooth and linear forward march. The decline of Greenock led to the spectacle of 'hundreds of skilled craftsmen' walking the streets of the city 'with little to talk about except their idleness

46 Riddell, *Clyde navigation*, p. 127.

47 MLG, D-TC series, 'Report by Mr. John F. Ure on the extension of the harbour of Glasgow, 3rd October 1854', p. 12.

48 Riddell, *Clyde navigation*, p. 193.

49 MLG, NM, *The Glasgow Daily Herald*, 19 September 1877.

50 Riddell, *Clyde navigation*, pp. 216–17, 244–7.

51 Gordon Jackson and Charles Munn, 'Trade, commerce, and finance', in Fraser and Maver, *Glasgow, Volume II*, p. 68.

52 MLG, T-CN series, James King, 'Memorial of the trustees of the Clyde Navigation as to dues on government stores for India', 1887.

and misery'.⁵³ Also deprived of livelihoods were the Clyde's salmon fishermen, as the blasting operations and the churning of the waters, together with the liquid refuse discharged from the shipyards, drove the fish away.⁵⁴ Moreover, the emergence of the Suez Canal was itself partially responsible for a crisis of overcapacity, as the production of capital and consumer goods began to exceed world demand by the mid 1870s. The effect of the economic depression on steam shipbuilding was particularly acute, and the proportion of tonnage of sailing vessels built on the Clyde shipyards to that of steamers, which had fallen to 1 : 20 in 1872, was back to level pegging by 1875.⁵⁵

The Bombay experience and the emergence of Scottish imperial shipping lines

Bombay's initial importance to the British Empire in the eighteenth century was as an eastern naval base, in the context of the increasingly global imperial rivalry between Britain and France. It possessed a secure natural harbour, which could be used to control access to Indian Ocean and Persian Gulf sea routes. From early on, moreover, Scottish merchants dominated the local economy, in alliance with Indian Parsi merchants, based on a flourishing trade in raw cotton (and subsequently opium) with China. Indeed, Scottish companies constituted the dominant interest in the setting up of the Bombay Chamber of Commerce in 1836. Bombay and its Parsi shipbuilders were renowned for teak-built ships, which were seen as superior to contemporary oak-built British ships in this golden age of sail.⁵⁶

The geopolitical importance and economic prosperity of Bombay created an autonomous space for its government to pursue sub-imperial initiatives, without the formal consent of either Calcutta or London. Significantly, the major initiative was a series of steam shipping experiments, designed to open up a quicker route to Britain via the Red Sea and Suez, essentially for the carriage of mails and well-to-do passengers. Assisted by Robert Napier's steam engine, this project resulted in the inauguration of the Bombay–Suez mail route in 1837. A related initiative was the conquest of Aden in 1839, primarily to serve as a coaling station on the Bombay–Suez steamer route.⁵⁷ Aden also served as a base to influence political developments on the island of Zanzibar, and its conquest received the enthusiastic support of the Bombay Chamber of Commerce, which hoped for the penetration of cheap British cottons into the Horn of Africa.⁵⁸

53 Smith and Norton Wise, *Energy and empire*, p. 729.

54 Deas, 'The River Clyde', p. 133.

55 MLG, T-CN series, *The Scotsman*, 30 December 1875.

56 Andrew Lambert, 'Strategy, policy and shipbuilding: the Bombay dockyard, the Indian navy and imperial security in eastern seas, 1789–1869', in H. V. Bowen, Margarete Lincoln, and Nigel Rigby, eds., *The worlds of the East India Company*, Woodbridge: The Boydell Press, 2002, pp. 138, 142–3.

57 Robert J. Blyth, 'Aden, British India, and the development of steam power in the Red Sea, 1825–1839', in Killingray, Lincoln, and Rigby, *Maritime empires*, p. 68.

58 BL, IOR, Bombay Chamber of Commerce Reports (henceforth BCCR), 'Report for the first quarter of 1839–40', pp. 41, 62.

Among the original Scottish founders of the Bombay Chamber of Commerce was the firm of William Nicol & Co. By the 1850s, it had grown into arguably the most important business group in the city, with a large and diverse business portfolio. One of the leading exporters of raw cotton to Britain, it acted as agents for Scottish manufacturers selling cotton textiles in western India, owned property and warehouses in the port of Bombay, and managed three of the coastal lines of the newly established British India Steam Navigation Company (BI). The firm was also an important source of Indian market information for Scottish businesses, dispatching weekly ‘Bombay trade reports’, which appeared in the *Glasgow Herald*.⁵⁹

BI itself was owned by a Glaswegian merchant shipper, William Mackinnon, and his activities reveal the expanded networks that the steamship nexus made possible. The sub-imperial centre of Bombay provided a commercial infrastructure, as well as access to colonial political patronage. Mackinnon made an initial fortune shipping rice on steamers between Calcutta and Burma in the 1850s, whereupon he transferred the management of his company from Calcutta to Glasgow. Here, he used his fortune to buy himself on to the Board of the City of Glasgow Bank, serving as a director from 1858 to 1870.⁶⁰ This resulted in a shift in the pattern of shareholding, with Glasgow capital gaining the ascendancy over London-based capital.

When the American Civil War led to a temporary Indian cotton boom, Mackinnon decided to shift his coastal shipping operations to western India, arriving in Bombay from Glasgow in November 1861. Nicol & Co. provided both local business knowledge and access to colonial governing circles, which enabled the extension of Mackinnon’s enterprises. Through the good offices of the firm’s most prominent figure, John Fleming (another Glaswegian), Mackinnon gained access to Bombay government officials and soon developed a close personal friendship with the governor, Bartle Frere. As a result, BI was awarded mail contracts for three western India coastal steamship lines in 1862: to Cochin on the Malabar Coast, to Karachi in Sind, and to Basra in the Persian Gulf. A year later, with additional funding from the government of India, BI launched a Bombay–Calcutta service via Ceylon. By the late 1860s, the company’s various lines held government contracts worth £62,000 a year.⁶¹

In return, Mackinnon agreed to put his steamships at the disposal of Bartle Frere’s plan to promote British political influence in the Persian Gulf and Indian Ocean. The Bombay–Basra route, for instance, provided communications for a policy designed to secure British influence, including the imposition of a solution to the conflict between Oman and Zanzibar. An alliance between the colonial state and British private capital was clearly in evidence, to the benefit of both parties. Indeed, the Bombay government had removed the mail service on the Karachi route from the Parsi-owned Bombay Steam Navigation Company, thus deliberately favouring British over Indian capital.⁶²

59 J. Forbes Munro, *Maritime enterprise and empire: Sir William MacKinnon and his business network, 1823–93*, Woodbridge: The Boydell Press, 2003, pp. 44, 53; Augustus Muir and Muir Davies, *A Victorian shipowner: a portrait of Sir Charles Cayzer, Baronet of Gartmore*, London: Cayzer Irvine, 1978, pp. 19–20.

60 Michael Fry, *The Scottish empire*, Edinburgh: Tuckwell, 2001, p. 261; School of Oriental and African Studies Archives, Mackinnon Papers (henceforth SOAS, MP), box 106, file 27.

61 Munro, *Maritime enterprise*, pp. 44–55.

62 *Ibid.*, pp. 37–47, 64, 500.

Mackinnon's activities, however, also reveal the limitations of British imperial networks, challenging Niall Ferguson's contention that an expanding British empire also brought about successful 'globalizing' of commercial networks.⁶³ Mackinnon's experience suggests that the steamship nexus did not have the capacity to redirect existing trade networks. In spite of the enormous resources at his disposal, he failed to achieve dominance over the trade in local commodities on western Indian lines, largely due to the resilience of established Indian merchant networks. Like many other British companies, BI initially profited from transporting raw cotton from ports along the western coast to Bombay during the American Civil War. However, when demand virtually dried up after 1865, its steamers made little headway against indigenous craft in a range of local commodities. In the 1870s, for instance, 90% of the lucrative trade in spices, fruits, and timber products between the Malabar Coast and Bombay remained in the hands of indigenous vessels, compared to BI's share of just 8%.⁶⁴ Similarly, the BI line from Bombay to Karachi remained an essentially mail and passenger service, in spite of the best efforts of the Bombay government to put business preferentially its way. The Indian press protested at the government's decision to award BI the contract for the conveyance of 8,000 tons of railway material to Karachi, at what was seen as the excessive rate of Rs8 per ton. Indian merchants pointed out that the contract was awarded without public tenders, which could have secured freight at half the rate, saving Rs40,000.⁶⁵ BI's profitability thus remained primarily dependent on government mail contracts.

Moreover, British 'political' expansion to Aden and East Africa was ultimately more beneficial to Indian than to British merchants. While British capital dominated the most profitable route, between Britain and India, trade between India and much of the western Indian Ocean continued to be mainly in the hands of Gujarati merchants.⁶⁶ Unlike European merchants operating in this region, they possessed considerable experience of financing trade over large seaborne areas, which enabled them to exploit the economic niches of an expanding British sphere of influence. As citizens of sub-imperial Bombay, they belonged to the most affluent region of India and were able to make the most of Bombay's growing importance as a major international commercial *entrepot*.

As the Bombay Chamber of Commerce had hoped, cheap British cotton textiles did enter the Horn of Africa, but the profits were made by Gujarati merchants. A small number of Gujarati firms in Aden controlled a vast distributing network of cotton piece goods and yarns, to which they added Indian handloom products, from the Red Sea ports to Mombasa.⁶⁷ Zanzibar emerged as the focal point of another substantial Gujarati trade network between India and East Africa, carried by traditional *dhows* and extending as far

63 Niall Ferguson, *Empire: how Britain made the modern world*, London: Penguin Books, 2003.

64 Munro, *Maritime enterprise*, p. 61.

65 BL, IOR, Native Newspaper Reports (henceforth NNR), 'Report on native papers for the week ending 20th September', *Jam-e-Jamshed*, 20 September 1879, p. 12.

66 Pedro Machado, 'Gujarati Indian merchant networks in Mozambique, 1777–c1830', PhD thesis, University of London, 2005, p. 13.

67 Rajat Kanta Ray, 'Asian capital in the age of European domination: the rise of the bazaar, 1800–1914', *Modern Asian Studies*, 29, 3, 1995, pp. 534, 547–8.

south as Mozambique. It involved cotton cloths, rice, salt, and furniture, exchanged for ivory and cloves.⁶⁸ Gujarati capitalists, Hindu and Muslim, operated from Bombay, Gujarat, and Zanzibar.⁶⁹ Despite repeated attempts, Mackinnon failed to obtain any commercial concession from the Sultan of Zanzibar, thus shattering his hopes of competing successfully with the Gujaratis on this route.⁷⁰

Another merchant shipper, Charles Cayzer, founder of the Clan Line, used Bombay's resources to construct a different kind of steamship network. Like Mackinnon, Cayzer arrived in Bombay in 1861, but to take up a relatively junior post in the steamer department of Nicol & Co. Over the next decade, Cayzer's involvement in the management of BI's coastal lines led to the ambition of setting up his own shipping company, which would link Bombay to the western seaports of Britain. Returning home on leave in 1873, he carried out market research in Glasgow and Liverpool to ascertain the feasibility of the venture, aided by the regular receipt of commercial news from the *Bombay Gazette*. He became convinced that there was a strong demand from Scottish and north-of-England manufacturers for an increase in direct shipping services from the Clyde and the Mersey to Bombay, not least because of the heavy rail charges to London incurred by their goods. Cayzer was especially interested in cotton piece goods from Clydeside and Lancashire, and machinery and railway equipment from Glasgow.⁷¹

An Englishman impressed by the close-knit nature of the Scottish Bombay business community, Cayzer shrewdly made use of these connections to penetrate the Glasgow commercial circles that had relationships with India. Alexander Stephen, senior partner in the leading shipbuilding firm of Alexander Stephen & Sons of Govan, which specialized in ships for the Indian trade, provided him with an entry into Glasgow business circles. The influential Stephen brought on board John Muir, head of James Finlay & Co., the most successful 'India' merchant house in the city. Although Cayzer was able, with the support of Stephen, to raise sufficient capital for an initial fleet of six ships by selling shares in the company to business subscribers from Clydeside, it was Muir who took the vital steps that led to the establishment of the Clan Line. He not only invested Finlay & Co. funds in the new shipping venture but also, trading on the prestige of the firm, persuaded the six main Scottish banks to put at the disposal of the new shipping line credits totalling £600,000. Together with a further £120,000 from a London bank, these funds were used to extend and consolidate the fleet. Muir also advantageously secured the appointment of James Finlay's Bombay branch, Finlay, Muir & Co., as sole local agents of the Clan Line. In addition, these connections secured the lucrative cargo of stores for the government of India for the shipping company.⁷² By the early twentieth century, the Clan Line's routes had been extended to South Africa and Australasia.

68 Erik Gilbert, *Dhows and the colonial economy of Zanzibar 1860–1970*, Oxford: James Currey, 2004, pp. 54–5.

69 Claude Markovits, *The global world of Indian merchants, 1750–1947: traders of Sind from Bukhara to Panama*, Cambridge: Cambridge University Press, 2000, p. 16.

70 Munro, *Maritime enterprise*, p. 501.

71 *Ibid.*, pp. 36–7, 46, 49, 108.

72 *Ibid.*, pp. 58, 82.

The colonial modernization of the port of Bombay

With thirty square miles of sheltered water, Bombay was a more natural harbour than Glasgow, but its fashioning into a modern port was also ultimately motivated by anticipated growth in the steam shipping trade. There were, however, two crucial differences. First, there was a wider range of both government and commercial interests involved in colonial port operations, with a huge potential for disagreement. Secondly, as Indians were excluded from the decision-making process, there was no civic consensus on the desired nature of port development. As a result, the modernization of the port occurred in an uneven and conflictual manner.

A coalition of expatriate Scottish merchant shipping interests and agencies of the colonial state was at the heart of the process of Bombay's port modernization, which occurred in two phases during the 1860s and 1870s. The first phase was pioneered by Nicol & Co.'s John Fleming, who, together with his brother James Nicol Fleming, set up the Elphinstone Land and Press Company, with the objective of reclaiming land from the sea for harbourside development. They were motivated by the expectation of huge profits from rising land values. Even before the outbreak of the American Civil War, the Manchester, Glasgow, and Bombay Chambers of Commerce perceived Indian cotton as a promising alternative to American supplies, and pressed the government to construct the required railways, roads, and canals to open up the interior cotton-growing districts. Arguing along classic Lockian lines that an important function of colonial rule was to 'improve' indigenous land so that it yielded exchange-value, the Glasgow Chamber asserted that 'ample supplies of cotton might be derived from British India, where the cultivation can be greatly extended, and where labour is abundant and cheap, provided sufficient encouragement were given for the application of British Capital to the cultivation of the soil'.⁷³

When the American Civil War broke out, the Glasgow Chamber joined Lancashire in demanding that India should make good the shortfall, to protect the livelihoods of the '4 millions of our people [who] are directly or indirectly dependent for their daily bread on our cotton manufacturers'.⁷⁴ The Government of India responded by directing those provincial governments with substantial cotton-producing regions to report immediately on what needed to be done to improve 'the lines of traffic between the cotton producing districts and the ports of shipment'.⁷⁵ By the mid 1860s, India was supplying 71% of the cotton imported into Britain, compared to just over 12% before the outbreak of the American Civil War.⁷⁶ The prospect of full cargoes at inflated rates led George Smith, Glasgow's first specialist ship-owner, to establish regular monthly sailings of his City Line ships to Bombay from January 1863.⁷⁷

73 MLG, GCCR, 'Minutes of the Glasgow Chamber of Commerce for the year 1857', p. 134.

74 MLG, GCCR, 'Minutes of the Glasgow Chamber of Commerce for the year 1861', p. 403.

75 BL, IOR, PP, 1863, 44: Cultivation of Cotton in India: Correspondence 1860–3, part III – Bombay, M. J. Shaw Stewart to W. C. Anderson, 25 April 1861.

76 BL, IOR, NM, *Bombay Gazette*, 23 July 1870.

77 Glasgow University Archives and Business Records Centre, UGD series, 'A century of progress 1839–1939: the centenary of the City Line', p. 13.

In this context, the Bombay Chamber of Commerce believed that urgent attention needed to be paid to the modernization of the port itself: in particular, increased wharfage accommodation for ships, a speedier and more efficient system of landing cargo, and the building of warehouses for storage and dry docks for ship repairs.⁷⁸ Port development, however, occurred in a climate of unprecedented speculation. The sudden wealth produced by the high price of Indian cotton during the American Civil War, to the equal benefit of both European and Indian merchants, led to a burst of speculative investments. Facilitated by the European-controlled Bank of Bombay, this saw the sudden emergence of companies offering shares in a host of ventures, including land reclamation.

The activities of the Elphinstone Land & Press Company were very much part of this process. Nicol & Co.'s close ties with the Bombay government ensured that the Elphinstone Company was able to engage in a process of privileged land-grabbing. The Company secured a government contract to reclaim and develop 100 acres of land for the construction of a goods and passenger terminus for the Great Indian Peninsula Railway. In return, it was given the concession to reclaim a further 250 acres of land alongside the properties it had already acquired on the Elphinstone Estate,⁷⁹ with Governor Bartle Frere, keen to give 'every reasonable support to those taking proper steps . . . to increase the facilities for trade at the port'.⁸⁰

Possession of these sites, however, meant taking over the spatial locations of the Indian trade, including existing shipping and landing facilities for native craft. Right at the heart of indigenous commerce was the Masjid Bunder: set up in the early part of the century through local public subscriptions, it was available to all merchants free of charge. As from 1867, however, the Elphinstone Company introduced transit duties on goods passing through the Bunder, ending centuries of free transit, which local merchants had come to see as a customary right.⁸¹ State-guaranteed land reclamation thus incorporated a form of 'primitive accumulation', involving the privatization of indigenous maritime space, hitherto a collective resource.

John 'Bombay Jock' Fleming, the Elphinstone Land & Press Company's founder, first chairman, and major shareholder, straddled the commercial worlds of Bombay, Glasgow, and the city of London with equal ease, the dominant figure of a shipping and cotton network that extended to Karachi, Colombo, and Rangoon. The initial hub of his activities was Bombay, where, as senior partner in the firm, he repatriated to Britain the profits made by Nicol & Co. during the cotton boom years of the early 1860s.⁸² He also owned shares in Mackinnon's BI, acting as the company's agent in Karachi, where he established a profitable commission agency house. He then moved to London as senior partner of

78 Raymond J. F. Sullivan, *One hundred years of Bombay: history of the Bombay Chamber of Commerce*, Bombay: Times of India Press, 1936, p. 71.

79 Sharada Dwivedi and Rahul Mehrotra, *Bombay: the cities within*, Mumbai: India Book House, 1995, p. 129.

80 BL, IOR, 'Elphinstone Land & Press Co. Ltd: report of the third annual general meeting, 3rd September 1862', p. 3.

81 Edward Pratt, *The Bombay wharves: how the right of way over them was lost to the public and the commerce of the port*, London: J. Weare, 1881, pp. 3, 30–2.

82 Munro, *Maritime enterprise*, p. 103.

Smith, Fleming and Co., which rapidly acquired the reputation as ‘the best commission agency business in London’.⁸³ He also became a director of the City of Glasgow Bank, and was among those directors accused of fraud when the bank collapsed in the 1870s.⁸⁴ His brother, James Nicol Fleming, ‘after reputedly making £300,000 from cornering raw cotton supplies in Bombay’, moved to Glasgow, where he invested his profits in a new Glasgow merchant house, before also becoming a director of the City of Glasgow Bank (nominated by Mackinnon) and of the Glasgow Chamber of Commerce.⁸⁵

The firms associated with the Flemings operated a system of open and virtually unrestricted credit, advanced to them by the City of Glasgow Bank. In effect, the Flemings channelled back to Glasgow not only some of the profits made in Bombay but also the accompanying loose business practices of the cotton boom era, which had seen newly created banks provide European merchants with large credit advances, without any corresponding demand for security.⁸⁶ The cotton crash of 1865 brought down many of these banks, including the Bank of Bombay. The City of Glasgow Bank was to meet a similar fate, collapsing in the late 1870s, and causing the ruin of the Flemings.⁸⁷ Mackinnon himself had to face a claim of £312,000 from the bank’s liquidators, and was compelled to draw up a detailed account of his movements between 1864 and 1870, to establish that he was not an active director of the bank during this period.⁸⁸ Other victims of the City of Glasgow’s collapse would eventually include Nicol & Co. itself, and a host of other firms in both Bombay and Glasgow. In the early 1860s, however, the profits of Fleming’s London, Bombay, and Karachi agencies from the cotton consignment trade reached ‘hundreds of thousands’ of pounds per annum. Even after the end of the cotton boom, the average earnings of the three firms during the period 1867–70 still exceeded £90,000 a year.⁸⁹

Capital for the land reclamation project was raised locally by issuing shares, worth Rs1000 each, to prominent members of the local merchant community, both European and Indian. Parsis more than held their own among the largest shareholders, who included the millionaire Premchand Raichand, the city’s leading Indian broker, cotton merchant – and share speculator.⁹⁰ In the context of the rapid extension of the cotton trade of western India and the consequent need for improved port accommodation facilities, the Company’s directors were confident that ‘the unquestionably lucrative nature of the enterprise . . . is the best guarantee of the ability of the company to command any amount of capital which may

83 *Report of the trial before the High Court of Justiciary: Her Majesty’s Advocate against the directors and the manager of the City of Glasgow Bank*, Edinburgh: The Edinburgh Publishing Company, 1879, p. 201.

84 SOAS, MP, box 101, file 24.

85 Munro, *Maritime enterprise*, p. 103; MLG, T-CN series, ‘Report on the annual meeting of the Glasgow Chamber of Commerce’, *North British Daily Mail*, 12 January 1870.

86 Marika Vicziany, ‘Bombay merchants and structural changes in the export community 1850 to 1880’, in K. N. Chaudhuri and C. J. Dewey, eds., *Economy and society: essays in Indian economic and social history*, Delhi: Oxford University Press, 1976, pp. 173–4.

87 SOAS, MP, box 103, file 4, Fleming to Mackinnon, 17 November 1892.

88 SOAS, MP, box 106, file 27.

89 *Report of the trial*, pp. 161, 189, 195.

90 BL, IOR, ‘Elphinstone Land & Press Co. Ltd: sixth report to the annual general meeting, 17 August 1865’, pp. 19–21.

be required for its prosecution'.⁹¹ They also believed that a steadily rising income would be derived from fees levied for the use of this new accommodation, as well as from sales of reclaimed and developed land to merchants and commercial enterprises. The Company was anxious to secure the services of a chief engineer of international reputation to supervise the extensive works planned and, in 1864, Thomas Ormiston, previously employed by the Clyde Navigation Trust and responsible for the design of Glasgow's big steam cranes, was given the appointment and also became a Company shareholder.⁹²

Wharves and warehouses were built on 275 acres of land, which the Elphinstone Company reclaimed from the sea during the decade 1860–70. The reclamation came to be known as the 'Elphinstone Estate', comprising the Nicol, Masjid, and Carnac bunders (wharves), and newly developed plots of land. Meanwhile, the GIP Railway terminus at Wari Bunder, which included two and a half miles of single railway lines, was completed and handed over to the government in 1865.⁹³ By the early 1870s, the GIP Railway was carrying almost two-thirds of all raw cotton consignments brought into the port from the hinterland.⁹⁴ During the cotton boom of the early 1860s, the Company was able to report a steadily growing income from wharfage fees and warehouse rent. However, the depression in trade following the collapse of cotton prices curtailed the demand for wharfage and warehouse accommodation and, by 1866, the Company's revenues began to decline.⁹⁵ Moreover, the recession hit just as plots of land, reclaimed at great cost, were coming on the market, and it proved 'impossible to make any sales', as Indian merchants curtailed their expenditure. Indeed, many of the big merchants, including Premchand Raichand, faced ruin as a result of the cotton crash.⁹⁶

In an era of speculative and unstable colonial capitalism, the recession also underlined the perennial 'problem' of the high cost of labour. Both day and night shifts were required to complete the government's railway terminus order on time, with the directors lamenting being 'forced to pay hitherto unheard of wages' to get sufficient numbers of labourers to do the work. They expected being in a position 'to reduce the wages of all kinds of labourers' once the order had been completed.⁹⁷ Labour was in particular demand during this period because Bartle Frere's demolition of the city's old fortifications in 1862 led to an extensive programme of public and commercial building works. This brought about a dramatic rise in the urban population and consequently an escalation in house rents, particularly for workers. Labour costs also rose due to a sharp increase in the price of food grains, caused in large measure by the diminishing output of cereals in the Deccan, displaced from the most fertile soils by increased cotton cultivation.⁹⁸

91 BL, IOR, 'Elphinstone Land & Press Co. Ltd: third report, 3 September 1862', p. 3.

92 MLG, T-CN series, *Glasgow News*, 17 April 1876; BL, IOR, 'Elphinstone Land & Press Co. Ltd: sixth report', p. 1.

93 BL, IOR, 'Elphinstone Land & Press Co. Ltd: fifth report', p. 6; 'Final report, 6 December 1870', p. iv.

94 BL, IOR, NM, *Bombay Gazette*, 6 January 1873.

95 BL, IOR, 'Elphinstone Land & Press Co. Ltd: third report', p. 1; 'Seventh report, 15 August 1866', p. 6.

96 BL, IOR, 'Elphinstone Land & Press Co. Ltd: eighth report, 28 August 1867', p. 9; Christine Dobbin, *Urban leadership in western India: politics and communities in Bombay city, 1840–1885*, London: Oxford University Press, 1972, p. 131.

97 BL, IOR, 'Elphinstone Land & Press Co. Ltd: fourth report', pp. 5–6.

98 Mike Davis, *Late Victorian holocausts: El Nino famines and the making of the Third World*, London: Verso, 2001, p. 329.

The Elphinstone Company initially sought to keep the labour wage bill to a minimum by employing cheaper, imported Chinese labour, particularly stonemasons, carpenters, and blacksmiths, together with ordinary labourers or 'coolies'.⁹⁹ This move backfired, with the directors soon blaming the Chinese labourers' poor productivity as the 'most serious impediment to progress' of the reclamation works. Shareholders were told that this was due to large numbers of 'coolies' arriving 'in a sickly, and many in a dying state, and it has been found a most difficult task to get the others to work steadily'.¹⁰⁰ In fact, out of 2,304 Chinese workers shipped from Hong Kong between January and March 1864, 38 died during the passage to Bombay and another 537 either died or deserted on arrival.¹⁰¹ By 1866, the sad experiment with Chinese labour was ended, Ormiston declaring at a shareholders' meeting: 'I am glad to report that we may be considered to be done with the Chinese or nearly so'.¹⁰² The Elphinstone Company switched to reducing the number of workers employed drastically, and to ensuring that the majority of them were hired under the casual contract system. By 1867, the company had succeeded in reducing the overall wage bill from Rs12.2 million in 1864 to just Rs2.2 million.¹⁰³ However, shareholders, seeing the value of their shares plummet to half their original value, were now looking to recoup their losses. In 1870, Nicol & Co., as managers of the Elphinstone Company, made a final 'killing' by selling the entire Elphinstone Estate with its reclaimed lands to the government of India for just under £2 million, 'a price nearly double the capitalised net revenue of the property at the time'.¹⁰⁴

The Bombay government had been a keen advocate of the purchase, justifying it to the government of India on the grounds of the estate's strategic location in the harbour area and the seemingly inevitable hike in the value of its properties.¹⁰⁵ An increasingly critical local public opinion, however, viewed the acquisition as an indication of the 'pernicious influence' of the firm of Nicol & Co. 'in the counsels of the Bombay government'.¹⁰⁶ Even the Bombay Chamber of Commerce saw the acquisition as a 'bad bargain' for the trade of the port. The purchase saddled the colonial government with interest payments on a debt of Rs28 million, which, at the insistence of the government of India, the Bombay government transferred to the trade of the port, further incurring the hostility of the merchant community, both European and Indian. It passed legislation that gave it the power to tax the trade of the port equal to interest payments on the debt at 4.5% per annum for a period of thirty years.¹⁰⁷

99 BL, IOR, 'Elphinstone Land & Press Co. Ltd: fifth report', p. 2.

100 Ibid., p. 4.

101 BL, IOR, 'Elphinstone Land & Press Co. Ltd: sixth report', p. 9.

102 BL, IOR, 'Elphinstone Land & Press Co. Ltd: seventh report', p. 23.

103 BL, IOR, 'Elphinstone Land & Press Co. Ltd: eighth report', p. x.

104 BL, IOR, 'Elphinstone Land & Press Co. Ltd: final report', p. iv; BL, IOR, BCCR, 'Report for the year 1878-9', Appendix M, p. 334.

105 BL, IOR, BCCR, 'Report for the year 1878-9', Appendix M, p. 332.

106 Pratt, *The Bombay wharves*, pp. 55-6.

107 BL, IOR, BCCR, 'Report for the year 1878-9', Appendix M, p. 332.

The second phase of the modernization of the port of Bombay thus began under inauspicious circumstances, and matters soon took a further downward turn. The Elphinstone Estate and other harbour properties were entrusted to a new form of harbour administration, the Bombay Port Trust, set up in 1873. Although theoretically based on the pioneering ‘public ownership’ models of the Mersey Docks and Harbour Board and the Clyde Navigation Trust, unlike its British counterparts, the Port Trust did not initially control the entire harbour foreshore, but coexisted and competed for business with a number of private companies that operated beyond the Elphinstone Estate. One of these, the influential local firm of David Sassoon & Co., even had a small wet dock, a facility still lacking on properties controlled by the government.

The result was a disastrous initial seven-year period during which the Trust experienced low revenues and large annual deficits, as private companies enticed business away by lowering landing, wharfage, and warehouse charges.¹⁰⁸ This had a crippling effect on the Trust’s finances, which regularly failed to meet the interest payments required by the government on the costs of acquiring the estate. It was indeed a terrible irony that the main source of the Port Trust’s revenues during these years was not global trade, but the local Deccan famine.¹⁰⁹ This brought about a massive increase in the coasting food-grain trade, as the port became the nerve centre for the distribution of supplies to the afflicted localities in Bombay’s hinterland, coming from as far as the Persian Gulf.¹¹⁰

Faced with mounting public criticism, and keen to secure a major improvement in the revenues of the Port Trust, the government of India moved to acquire the remaining foreshore properties owned by the private companies, and to incorporate them within a reconstituted Port Trust. In the restructured Board, five out of the thirteen members were to be elected by the Chamber of Commerce; the eight others were to be nominated by the Bombay government, and included three natives of India, who had to be ‘acquainted with the English language’, as well as a salaried European chairman.¹¹¹ There was immediate dissent in the Indian press at the latter’s ‘exorbitant’ salary of Rs1,800 a month.¹¹²

Another conflict broke out at this point over the issue of improved dock accommodation. This time there was dissension within the colonial state, with the government of India and the Bombay government taking opposite views, as well as within the merchant community between Indians and Europeans. Indian merchants were not, on the whole, favourable to wet docks in a sheltered, natural harbour such as Bombay ‘which is for nine months of the year a wet dock presenting every facility for loading and unloading, for entering and leaving without regard to tides or . . . dock fees’.¹¹³ They also feared that the siting of the new dock would further disrupt the sail-based Indian trade. The major European

108 Ibid., p. 351.

109 Davis, *Late Victorian holocausts*, pp. 328–31.

110 BL, IOR, Bombay Port Trust Records (henceforth BPTR), ‘Administration report for the year 1877–8’, p. 49; ‘Administration report for the year 1878–9’, p. 54.

111 BL, IOR, BPTR, ‘Administration report to 31st March 1880’, p. 1.

112 BL, IOR, NM, ‘Report on native papers for the week ending 3rd April 1880’, *Indian Spectator*, 28 March 1880, p. 3.

113 BL, IOR, NM, *Bombay Gazette*, 3 January 1880.

commercial houses and shipping companies, in contrast, were anxious for year-round facilities for the bigger steamers, saving time and avoiding the risks and costs of transhipment by lighters or cargo boats. Both the Chamber of Commerce and the Port Trust produced reports on the advisability of wet docks. Although arguments were made for adopting, on sanitary grounds, the Glasgow model of tidal basins, it was felt that wet docks would be more convenient for Bombay, as the gates would enable the retention of high water levels, important given the extreme fluctuations of the tide in the harbour that would otherwise require steamers to be constantly changing position.¹¹⁴

There were also issues relating to the size and location of the proposed new dock. The European steamship companies, as well as majority opinion in the Chamber of Commerce and the Port Trust, advocated building a large dock on the Elphinstone Estate, capable of accommodating up to fifty ships each month, half of which would be steamers and the other half sailing ships.¹¹⁵ A large dock could also receive steamers immediately upon arrival, as well as enabling different cargoes to be unloaded at different parts of the dock.¹¹⁶ In contrast, Henry Ballard, Chairman of the Port Trust, supported by a minority of trustees, favoured a smaller, less ambitious wet dock on the Masjid Bunder. This, he argued, would first help ascertain the needs of the trade and thus provide a secure basis for future dock development.¹¹⁷ The Bombay government, still reeling from criticism of its role in the acquisition of the Elphinstone Estate, came out strongly in support of Ballard, adding that the smaller dock could be constructed in half the time, would provide valuable lessons on the practicalities of dredging in the harbour, and ‘in the event of failure, the loss would be less serious’.¹¹⁸ It was taken aback when the government of India declared its preference for the larger project, ‘satisfied that the smaller dock which the minority of the Trust and the government of Bombay advocate would not provide sufficient accommodation to the trade of the port even at first’.¹¹⁹ The government of India had clearly reached the view at this point that a large wet dock was crucial to the global trade of India as a whole, and was therefore of ‘imperial’ rather than merely ‘local’ importance.

Funded by a government of India loan, the Prince’s Dock, as the new dock on the Elphinstone Estate came to be called, took four years to build, opening in 1880, just three years after Glasgow’s Queen’s Dock. Glasgow influences on the new Bombay dock came, above all, in the person of Thomas Ormiston, who moved from the defunct Elphinstone Land & Trust Company to become Consulting Engineer to the Port Trust. With his nine years’ engineering experience in Glasgow harbour, it was Ormiston who made full use of

114 BL, IOR, BCCR, ‘Report for the year 1873–4’, p. 115; BL, IOR, BCCR, George A. Kittredge, ‘Memorandum on wet docks’ in ‘Report for the year 1873–4’, pp. 132–3.

115 BL, IOR, BCCR, ‘Report of the Chamber of Commerce Committee on wet docks’, in ‘Report for the year 1873–4’, pp. 111–12.

116 Kittredge, ‘Memorandum on wet docks’, pp. 127–30.

117 BL, IOR, BCCR, ‘Report of the Chamber of Commerce Committee on wet docks: note of dissent from H. Ballard’, in ‘Report for the year 1873–4’, p. 113.

118 BL, IOR, BCCR, J. Macdonald to Bombay Chamber of Commerce, 12 November 1873, in ‘Report for the year 1873–4’, p. 148.

119 BL, IOR, BCCR, Secretary to the Government of India, Public Works Dept, to Secretary, Government of Bombay, Public Works Dept, 28 January 1874, in ‘Report for the year 1873–4’, pp. 149–50.

his expertise to champion the more ambitious wet-dock project in Bombay. Even though opposed by his Port Trust superiors, Ormiston was able to convince the government of India to override the wishes of the Bombay government, on the basis of his carefully prepared and costed dock construction plans and specifications. Once given the go-ahead, he planned and supervised the construction works on the Prince's Dock. His knowledge of big crane design contributed to the new dock being equipped with twenty travelling cranes, including a 100-ton crane for lifting very heavy cargo, which was regarded as the 'special pride' of the dock. He also ensured the provision of state-of-the-art technologies, such as powerful steam dredgers and steam hoppers, ordered from the Glasgow firms of J. and G. Rennie and John Elder & Co., which were used to dredge a channel of sufficient depth and width in the harbour to facilitate steamship access to the dock.¹²⁰

The *Times of India* declared that the Prince's Dock was 'one of the most important works ever constructed in India'. At the opening ceremony, the Bombay Governor, Richard Temple, waxed lyrical, describing the new wet dock as a 'feat of science and skill', which was not only the first of its kind in all of Asia but was also not to be found in the 'great ports of the Mediterranean' such as Marseilles, Venice, and Constantinople. It provided a combined water and quayage space of just over 36 acres, virtually identical to that of Glasgow's Queen's Dock, and was capable of accommodating '22 large Canal steamers alongside as well as 12 more awaiting their turn in the middle'.¹²¹ The Prince's Dock was quite openly designed to cater for the major shipping companies dominating the import-export trade with Europe, such as the P & O, Anchor, Hall, and Clan Lines, which were each awarded several berths, as well as the state-subsidized BL. Sailing-vessel tonnage entering the dock fell from 23% in 1880-1 to just 9% in 1885-6.¹²²

The dominance of steamers meant the eviction from the centre of the harbour of the smaller 'country' craft, the *dhow*s, *pattemars*, *botellas*, and *baglas* that continued to carry the major part of both the coasting and the Indian Ocean trade. In the early 1880s, these vessels still amounted to 24% of overall ship traffic in the harbour, numbering 800 to 1,000 during the busiest months of the trade calendar.¹²³ Prior to the construction of the Prince's Dock, they were able to enjoy free anchorage off the shores of the Elphinstone Estate.¹²⁴ Many of their owners belonged to the newly established 'Native Merchants and Traders of Bombay', which had petitioned the governor against the site chosen for the new dock. The petition pointed out that the proposed access channel to the Prince's Dock for the bigger ships would, for much of the time, effectively block off smaller vessels from landing in that part of the harbour closest to the native town. As their boats would now have to land much further north, land carriage for the transport of their cargoes to and from the Indian town would entail great extra expense and potentially heavy losses. In reminding the governor that 'before the purchase of the Elphinstone property by Government, the greater portion of the foreign trade was carried on at Colaba and the Fort

120 BL, IOR, NM, 'The Prince's Dock', *The Times of India*, 11 April 1879.

121 Ibid.

122 BL, IOR, BPTR, 'Administration report for the year ending 31st March 1885', p. iv.

123 BL, IOR, BPTR, 'Administration report for the year ending 31st March 1884', p. ii.

124 BL, IOR, BCCR, 'Report for the year 1873-4', p. 170.

Customs Bunder . . . whereas the native trade was bound to the Elphinstone Estate',¹²⁵ the Indian merchants recognized that the construction of the new dock was also about the extension of colonial maritime space and the displacement from accustomed locations of less powerful groups. They received little sympathy from Governor Temple, who, in his speech at the opening ceremony of the Prince's Dock, singled out 'the native craft' as being wholly out of place in the new dock, and expressed the hope that the 'process of engineering eviction' under way would soon force them out of the Elphinstone Estate altogether.¹²⁶

Conclusion

The eviction of native sailing vessels from the heart of Bombay harbour was the culmination of a complex, layered process that had seen a range of different imperial interests preside over the modernization of the port. These interests coalesced around the ship nexus, and involved collaboration between business institutions, shipping companies, merchants, bankers, industrialists, engineers, and imperial and colonial government officials. Powered by the incremental innovations of the industrial era, British imperial expansion, of which port development was a significant feature, involved a range of related motivations, which facilitated the participation of these groups as stakeholders in the imperial mission. These motivations included expectations of greater business opportunities, brilliant political and diplomatic careers through the aggressive pursuit of national interests, and increased (and often better) job opportunities for the new professional experts of the industrial age, particularly engineers, perhaps the first modern professional group whose movements became truly 'global'. The fact that these stakeholders were not, in the main, industrialists did not preclude their cultural embrace of the enhanced expectations of economic gain made possible by the forces of industrial capitalism.

In this context, the merchant shipper John Fleming could begin the process of port development in Bombay, move on to better commercial opportunities elsewhere in the imperial arena when the going got tough, and return to Glasgow in apparent (and short-lived) triumph. With the approval of the India Office in London, the government of India could then step in and complete the process, inheriting from Fleming's defunct private company the expertise of the engineer Thomas Ormiston. Ormiston had moved to Bombay on the strength of a reputation largely earned from his original technical contribution to the development of the Glasgow docks. In fact, he chose to retire in Bombay, enjoying a comfortable lifestyle as Dean of the Faculty of Engineering at Bombay University.

Still, the process of port modernization was far from smooth, involving conflicting colonial perceptions of its requirements, Indian opposition, multiple ownership of sites, and problematic financial arrangements. All of these led to lengthy delays in decision-making, as well as uncertainties of outcome. Port modernization in Bombay thus remained a contested event. These problems were intrinsic to colonial governance and contrasted with the far less fraught development of the port of Glasgow. Here, a more generally shared sense

125 BL, IOR, BCCR, 'Memorial of native merchants and traders of Bombay against the proposed docks, 20th July 1874', in 'Report for the year 1873-4', pp. 208-9.

126 'The Prince's Dock'.

of civic pride, coupled with a profound awareness of the importance of the port's growing foreign trade, ensured that, in spite of often heated debate and discussion, the Clyde Navigation Trust, with its generous borrowing powers, was able to proceed with the incremental development of the port, largely with the support of local commercial and civic opinion.

The careers of Fleming and Ormiston, and their links with influential business and political circles in both Bombay and Glasgow, point to both the diversity and the mobility of the 'social agents' of the imperial capitalist enterprise. In tracing the synchronic connections between them, this article has suggested a more complex causal model of how British imperialism operated in practice than the single paradigm of a London-centred 'gentlemanly capitalism' advanced by Cain and Hopkins. Concrete imperial outcomes were primarily the result of a multitude of local decisions, rather than of a centrally directed metropolitan strategy. Crucially, however, these decisions were based on an increasing awareness and knowledge of wider geographies. In the process, Glasgow has been highlighted as a different imperial centre, one that was at the heart of the steamship nexus and its related engineering, industrial, and communications innovations. The city's engineers were at the forefront of experiments in exploring the ocean for imperial purposes, combining both the marine and the mechanical components of the mid-nineteenth-century mystique of engineering that seemed to promise Britain unfettered progress and prosperity. Glasgow produced ships of every variety, designed to serve both economic and naval imperialism, and furnished dredgers to help deepen and expand ports globally. The city was also crucial to the formation of dynamic and interacting networks of capital, institutions, and knowledge, producing technical experts who could be exported to work on imperial engineering projects all over the world.

The ship nexus further provided opportunities for ambitious merchants, such as Mackinnon and Cayzer, who were attracted by the increased opportunities for seaborne commerce in the imperial arena and beyond. It is significant that both men spent their formative careers in Bombay, embedded in local commercial networks dominated by Scottish merchants. These networks stretched both vertically back to Scotland and horizontally to other British colonies and zones of influence in Africa and Southeast Asia. The Bombay experience enabled the building up of commercial and shipping knowledge from the vantage point of India, practical information on the destinations of particular commodities, and, most importantly, access to colonial government officials. As perhaps the most significant sub-imperial centre in the empire during this period, Bombay and its influential political connections could facilitate Mackinnon's India-based mail-steamship enterprises, on the basis of which he would move on to secure contracts from the Dutch and Portuguese governments for the delivery of mails to their colonies in Indonesia and Mozambique respectively.

Ultimately, however, Mackinnon's dream of a global commercial empire was thwarted. Neither in western India, nor subsequently in East Africa, was he able to build on his advantages as a mail carrier to penetrate effectively the lucrative world of commodity trading. Lack of cultural insight into both people and markets in places distant from the major port cities – where expatriate Scots and Europeans tended to reside – entailed insurmountable structural constraints in penetrating the 'bazaar' economies of these regions. Here, the expanded commercial resources of sub-imperial Bombay were ultimately of greater benefit

to Indian merchants. This suggests not only the limitations of imperial industrial capitalism as a 'globalizing' phenomenon but also, perhaps, the necessity of its rehabilitation as a serious object of study for global historians, in order to determine precisely the nature and extent of the constraints and resistances that it encountered in different parts of the world.

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