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978-0-521-09681-2 - Britain and the Onset of Modernization in Brazil 1850-1914

Richard Graham

Excerpt

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INTRODUCTION

CONTRASTING SOCIETIES:
BRITAIN AND BRAZIL

Brazil was a backward country in 1850. To make this point, it is worthwhile to contrast it with a society which was modernizing at that time. There has sometimes been a tendency to draw precise lines to separate those nations that are modern from those that are not. Whether these measurements are based on the degree of urbanization or on per capita income or on the number of automobiles, they are all misleading in that they focus attention on secondary factors. It is the direction and rate of change that must be examined and not the establishment of particular benchmarks. Therefore, a look at Britain in 1850, no matter how brief, and perforce superficial, will here be useful; for it is not only by contrast with modern nations of the twentieth century that Brazil's condition at that time must be evaluated. In addition, even a hasty glance at Britain will make clear that the British presence in Brazil was not an isolated instance of British expansion, but part of a larger trend in that nation's history.

The steadily increasing flow of innovation—which goes hand-in-hand with rapid economic growth and the steady process of capital formation—is an identifying mark of modern economies. It is especially by this standard that Britain may be considered modernizing over a hundred years ago.¹ Thus, although by 1850 the adoption of mechanical means of production had not yet become common in any but a small number of industries, the goal of mechanization had been accepted and rapid strides toward it were being taken. The ever-accelerating stream of technological improvement had begun, and the dynamic quality of English economic and social life in 1850 clearly requires the label 'modernizing'.

¹ The contrast between Brazil and Great Britain has not disappeared even today, as can be seen from the wealth of secondary literature on British history and the relative dearth of historical writing for this period in Brazil. Boldness verging on recklessness is required in both cases if summaries are to be made, but it seems worthwhile, for the reasons mentioned, to take the risk.

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At least a century of ever more rapid industrial growth, based upon the accumulated wealth of the old merchant capitalists, lay behind the Britain of 1850.¹ By the mid-nineteenth century cotton manufacture had been completely transformed by the use of mechanized processes, and the industry was experiencing an especially productive period. World economic prosperity, stimulated by the increased supply of gold mined in California and, later, in Australia, spurred on the export of British products, especially textiles. In the early 1850s over 60 per cent of Britain's export earnings were derived from this item. Six-tenths of the cotton fabrics produced in the United Kingdom were being exported, and the total value of cotton manufactures had risen 43 per cent in the preceding twenty years. Textile and apparel industries occupied one in every five gainfully employed persons.

Iron, steel, and coal were to be the basis of further economic growth, and Britain excelled at the production of all three. The annual average output of iron during 1850-54 was 2.8 million tons. Twenty years earlier it had been only a quarter of that figure and in the following twenty years it would more than double. The growth of the industry culminated in the invention of the Bessemer process for making steel in 1855, and by 1883 the production of steel was over two million tons. Coal production had risen from 17.4 million tons in 1820 to 49.4 million in 1850 and would reach 110.4 million in 1870.

Technological improvement was also having a marked effect on transportation. By 1850, only some twenty-five years after the building of the first railway, 5000 miles of track stretched across the small nation. In the face of the technical and financial obstacles to this entirely new type of enterprise, it was an astonishing achievement, and, in the sheer size and rapidity of the job, an

¹ This summary of economic aspects is based on John Harold Clapham, *An Economic History of Modern Britain*, 2nd ed., 3 vols. (Cambridge University Press, 1930-8). Other valuable surveys are by G. P. Jones and A. G. Pool, *A Hundred Years of Economic Development in Great Britain (1840-1940)* (London: Duckworth, 1940); William Ashworth, *An Economic History of England, 1870-1939* (London & New York: Methuen & Barnes & Noble, 1960); and Charles R. Fay, *Great Britain from Adam Smith to the Present Day. An Economic and Social Survey* (London: Longmans, Green, 1928). A summary of the growth of various sectors of the economy is presented in Arthur D. Gayer, *et al.*, *The Growth and Fluctuation of the British Economy, 1790-1850*, 2 vols. (Oxford: Clarendon Press, 1953), I, 406-55.

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unprecedented one. The death of George Stephenson in 1848 marked the end of this initial period but the beginning of an era of even more rapid expansion. In the next twenty years rails were not only to link together every important British center, but also to stretch across vast areas of other lands that now became easily available to the salesmen of British manufactured goods.

Finally, the radical improvement of the machine-tool industry in the 1850s and the application to technical problems of such scientific theories as those of thermodynamics cleared away the last obstacles to the continuous flow of technological change. And so it is not surprising to note that the years following 1850 were years of rapid economic expansion. The average annual increase of the national product from 1851 to 1891 was 3.2 per cent. Even in per capita terms, the growth rate during these four decades was 1.9 per cent per year.¹

Meanwhile, great accumulations of capital were taking place. The legislation regarding joint stock companies was finally settled in 1862 with a consequent and immediate increase in the number of companies with limited liability for their shareholders. By 1880 the London *Economist* demonstrated that the annual new capital subscriptions had almost doubled just in the preceding three years. Because of the rapidity of its accumulation, this capital was frequently directed toward investments abroad.²

Britain at this time was rapidly extending its economic interests over the entire underdeveloped world. Even at the end of the eighteenth century it had become impatient with the restraints imposed on its expanding international trade by the closed-door policies of the Spanish and Portuguese colonial empires and

¹ Statistical information has been drawn from J. R. T. Hughes, *Fluctuations in Trade, Industry, and Finance, A Study of British Economic Development, 1850-1860* (Oxford: Clarendon Press, 1960), pp. 72, 74; Phyllis Deane and W. A. Cole, *British Economic Growth, 1688-1959*, Cambridge University Department of Applied Economics, Monograph 8 (Cambridge University Press, 1962), pp. 187, 211, 216, 225, 232, 253; and Clapham, *Economic History*, II, 53-8.

² Bishop Carleton Hunt, *The Development of the Business Corporation in England, 1800-1867* (Cambridge, Mass.: Harvard Univ. Press, 1936); Clapham, *Economic History*, III, 201; *The Economist*, XXXVIII (1880), 1510; *The Bankers' Magazine, Journal of the Money Market, and Commercial Digest*, XXXVIII (London, 1878), 191. Also see A. K. Cairncross, *Home and Foreign Investment, 1870-1913. Studies in Capital Accumulation* (Cambridge University Press, 1953).

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so exerted pressure to bring about the independence of Latin America. As the country's vigor increased, the sphere of its economic life reached further and further into non-modern areas. With the transformation of techniques of ocean and land transport, more and more of the world became a part of one economic system, a system dominated by Britain. The nineteenth century was an era characterized by a rapid migration of British peoples, the spread of British governmental ideals, the growing export of British goods, and the increasing overseas investment of British money.¹

Technological improvements in shipping were one key to this development. Not only was steam applied to mail and passenger service, but notable modifications in sailing vessels were also being undertaken. The better design of these ships induced by reforms in the reckoning of tonnage for tax purposes, plus the publication in 1850 of the statistical compilations of winds and currents made by Mathew F. Maury, U.S.N., greatly cheapened sea-going transport as did the later application to sailing vessels of mechanical labor-saving devices, iron and steel hulls, and steel rigging. Finally, with improvements in steel, it was possible to build high-pressure steam engines which not only raised the speed of steamships but reduced by 90 per cent the amount of coal that had to be carried in otherwise good cargo space. Already by 1865 more tonnage was being built in steamships than in sailing vessels.²

¹ Charles K. Webster, ed., *Britain and the Independence of Latin America, 1812-1830. Select Documents from the Foreign Office Archives*, 2 vols. (London and New York: Oxford Univ. Press for the Ibero-American Institute of Great Britain, 1938), pp. 3-81; William W. Kaufmann, *British Policy and the Independence of Latin America, 1804-1828*, Yale Historical Publications Miscellany, 52 (New Haven: Yale Univ. Press, 1951); Robin A. Humphreys, 'The Fall of the Spanish American Empire', *History: the Journal of the Historical Association*, n.s. xxxvii (1952), 220-7; Caio de Freitas, *George Canning e o Brasil, influência da diplomacia inglesa na formação brasileira*, Brasiliense, 298-298A, 2 vols. (São Paulo: Editora Nacional, 1958); John Gallagher and Ronald Robinson, 'The Imperialism of Free Trade', *Economic History Review*, 2nd series, vi (1953), 5, 8-10; Carl Johannes Fuchs, *The Trade Policy of Great Britain and Her Colonies Since 1860*, transl. Constance H. M. Archibald (London: Macmillan, 1905), 109-77; S. B. Saul, *Studies in British Overseas Trade, 1870-1914* (Liverpool: Liverpool Univ. Press, 1960); Sanford A. Mosk, 'Latin America and the World Economy, 1850-1914', *Inter-American Economic Affairs*, II, no. 3 (Winter, 1948), pp. 53-82.

² Gerald S. Graham, 'The Ascendancy of the Sailing Ship, 1850-1885', *Economic History Review*, n.s. ix (1956-7), 74-88.

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The repeal of the last export tax in 1850 symbolized the initiation of a period of rapidly rising exports. The declared value of British goods exported in 1848 was £53 million, a rise of only about £1 million since 1815; but in 1858 this figure was £117 million, and two years later £136 million. Yet these exports were not enough to pay for increasingly large food and raw material imports. Only the earnings derived from shipping and the returns on foreign investment could compensate for the unfavorable balance of trade.¹

Foreign and, especially, Latin American investments increased rapidly in the latter half of the nineteenth century. Whereas the amount of British capital in Latin America in 1850 was still small, it increased steadily during the 1850s and 1860s. Even though investments slowed down during the years 1873–9, by 1880 the nominal value of British capital invested in Latin America totaled £179 million. Of this amount, £38.8 million were applied to Brazil. British foreign investments as a whole increased rapidly during the 1880s, declined during the depression of the 1890s, and then shot up during the first decade of this century. The same trends were reflected in their Latin American investments. By 1913 the nominal value of British capital in this area was estimated at £999.3 million, of which £223.9 million were invested in Brazil.²

Britain in 1850, then, was caught up in a process of steadily accelerating change. Technological improvements in textile manufacture, metallurgy, and transport followed each other with increasing speed. Capital was mobilized for investment at home and overseas. Sail and steam vessels swiftly carried ever larger shipments of British manufactured goods into the underdeveloped world, bringing in return raw materials and foodstuffs. Change had become normal.

¹ Hughes, *Fluctuations in Trade*, pp. 4–5, 7; Ashworth, *Economic History of England*, pp. 10, 11.

² J. Fred Rippy, *British Investments in Latin America, 1822–1949. A Case Study in the Operations of Private Enterprise in Retarded Regions* (Minneapolis: Univ. of Minnesota Press, 1959), esp. pp. 25, 28, 32, 36–46, 66, 67, 150; cf. W. W. Rostow, *British Economy of the Nineteenth Century* (Oxford: Clarendon Press, 1948), pp. 191–201; Charles K. Hobson, *The Export of Capital*, Studies in Economic and Political Science, 38 (London: Constable, 1914), esp. p. 218.

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Social transformations also identify Britain as modernizing at this time. The population was rapidly increasing, and, more important, it was also shifting. Even in the eighteenth century the spread of scientific farming had led to an enclosure movement in the rural areas, driving thousands to the cities. By 1851 Great Britain was a half-rural, half-urban nation, and only 21.7 per cent of the total occupied population was engaged in agriculture, forestry and fishing, as compared with 42.9 per cent employed in manufacturing, mining and other industry. The rapid growth of the cities led to wretched living conditions, marked by overcrowding, lack of sewerage or fresh water, and poor ventilation. Although the availability of inexpensive labor during this century may have aided economic growth and ultimately increased the well-being of the population as a whole, modernization was not a pleasant experience.¹

In an urban setting it became increasingly easier for persons of non-aristocratic origins to rise within the social structure. The social mobility of nineteenth-century British society should not be exaggerated, since, by the standards of present-day America, it was certainly restricted. Nevertheless, moneyed wealth became not only respectable but increasingly the primary criterion by which a man's worth was measured. The rise of a new class to political power as reflected in the Reform Act of 1832 had been a sign of this change. A succession of educational reforms in the latter half of the century made it possible for wider and wider segments of the population to have the tools for self-advancement. And conflicts between and within individuals on the way up or down the social scale formed the material for the many English novelists whose works were read aloud in the drawing-rooms of the new middle class.

One clear expression of the upward push of the individual was the full development of the idea of capitalism and its application

¹ Clapham, *Economic History*, I, 536; II, 489; Deane and Cole, *British Economic Growth*, p. 142; Leon S. Marshall, 'The Emergence of the First Industrial City: Manchester, 1780-1850', in Caroline Ware, ed., *The Cultural Approach to History* (New York: Columbia Univ. Press, 1940), pp. 140-61; Neil J. Smelser, *Social Change in the Industrial Revolution: an Application of Theory to the British Cotton Industry* (Chicago: Univ. of Chicago Press, 1959), pp. 265-312.

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to industry. Perhaps no factor was of larger importance in Britain's rapid economic growth than the willingness to take risks which characterized the 1850s. Concerted action tending toward monopoly had not yet become the rule, and the investor in iron, coal, railways, shipbuilding, or textile industry was boldly daring in his practices.¹

Of course, some of the characteristics of this modernizing society far antedated the rise of industry. The industrial and technological developments of the era were based on scientific principles of mechanics developed in the seventeenth century; these, in turn, would have been unthinkable in an age of mysticism and otherworldliness. The belief in the individual and in his potential mobility could be dated back at least to the sixteenth century.² Britain had really been modernizing for centuries.

There is perhaps no better symbol of the exuberant attitudes of the modern society of constant technological improvement and unquestioned mastery over nature than the Great Exhibition of the Works of Industry of All Nations held in the Crystal Palace in 1851. The Palace itself—conceived by Joseph Paxton, a large-scale gardener and entrepreneur—was a result of innovation, applying as it did the new industry of iron work to the old profession of architecture. It was essentially a huge greenhouse and it had this distinct advantage over the exhibits within it: it was entirely functional. The absence of guidelines for the design of new products led to blatant expressions of bad taste on the part of the new middle class, devoid as it was of the traditions of aristocratic life. Leafing through the illustrated publications of this first world's fair, one notes what today would be called a Babbittish love of 'gadgets' and gimcracks, a glorification of the latest practical achievements of science. And here we have one of the most important aspects of the exhibition: it was considered irrefutable proof of man's progress. A weekly publication concerning the exhibition opened with these words: 'The Great

¹ Hughes, *Fluctuations in Trade*, pp. 288–9; Ashworth, *Economic History of England*, p. 19.

² See the provocative study by F. S. C. Northrop, *The Meeting of East and West: an Inquiry Concerning World Understanding* (New York: Macmillan, 1947), esp. pp. 66–192.

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Industrial Exhibition of 1851... is an achievement, the beneficial effects of which are not for our own day only, but “for all time”.¹

It was this spirit—innovative, practical, a bit crass, scientific, and optimistic—that Englishmen were to carry to Brazil during the next seventy years. As one British engineer there put it, ‘the introduction of machinery refines labor and links it to art’, and he urged Brazil to move in this direction.² This same admiration for the wonders of modern technology inspired struggling industrial entrepreneurs in Brazil, one of whom referred to the steam engine as ‘the sublime invention whose practical application honors the century in which we live’.³ The ‘English ornamentation which is today [1887] dominant in industrial art’, evoked ohs and ahs from Eduardo Prado because of its blending of ‘the classic, the modern, the exotic, the archaic, the Japanese and the Byzantine’.⁴ The memory of 1851 dominated the similar London Exposition of 1862 where young Brazilians received inspiration to begin the transformation of their own country. But to the Crystal Palace in 1851 no official Brazilian representation had been sent. Those who held power then were not interested.⁵

¹ *The Crystal Palace and Its Contents: Being an Illustrated Cyclopaedia of the Great Exhibition of the Industry of All Nations, 1851*... (London: W. M. Clark, 1852); *The Art Journal Illustrated Catalogue: The Industry of All Nations, 1851* (London: Virtus, 1851); London, Great Exhibition of the Works of Industry of All Nations, *Official Catalogue*, 2nd ed. (London: Spicer & Clowes, 1851); Society of Arts, Manufactures and Commerce, *Lectures on the Results of the Exhibition* (London: Bogue, 1852); Christopher Hobhouse, *1851 and the Crystal Palace; Being an Account of the Great Exhibition and its Contents*, 2nd ed. (London: Murray, 1950); Yvonne Ffrench, *The Great Exhibition, 1851* (London: Harvill, 1951); Charles R. Fay, *Palace of Industry, 1851. A Study of the Great Exhibition and its Fruits* (Cambridge University Press, 1951); Asa Briggs, *1851*, Historical Association General Series, 18 (London: Historical Association, 1951).

² J. J. Aubertin, ‘Communicado. Ilms. amigos e snrs. fazendeiros de S. Paulo’, *Correio paulistano*, 3 Jan. 1867, p. 2; J. J. Aubertin, ‘O algodão [carta a Fidelis Preta]’, *Correio paulistano*, 21 July 1864, p. 3.

³ Irineo Evangelista de Souza, visconde de Mauá, *Autobiografia* (‘Exposição aos credores e ao público’) seguida de ‘O meio circulante no Brasil’, 2nd ed. (Rio: Valverde, 1942), p. 146.

⁴ Eduardo Prado, *Collectaneas*, 4 vols. (São Paulo: Escola Typographica Salesiana, 1904–5), 1, 263.

⁵ Francisco Carvalho Moreira, *barão do Penedo, Relatório sobre a exposição internacional de 1862* (London: Brettell, 1863), pp. xxxiii, lxiv; André Rebouças, *Agricultura nacional, estudos economicos; propaganda abolicionista e democratica* (Rio: Lamoureux, 1883), p. 88; Agostinho Victor de Borja Castro, ‘Relatório do 2º grupo’, in Antonio José de Souza Rego, comp., *Relatório da segunda exposição nacional de 1866* (Rio: Typ. Nacional, 1869), p. 55; Joaquim Thomas de Amaral (Brazilian chargé d’affaires in London) to Paulino José Soares de Sousa (Brazilian foreign minister), London, 6 May 1851, AHI, 216/2/215, no. 22.

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Brazil in 1850 presented a sharp contrast to Britain. True, its backwardness must not be exaggerated. It is impossible to maintain that any part of the American continent was alien to the broad changes initiated in Europe by the Renaissance and even the Reformation, except for certain areas with ancient indigenous civilizations. Portugal at one time had been characterized by a rather dynamic merchant capitalism and a secular state. Brazil had had its early colonial economic life dominated by the development of sugar plantations, and these plantations had been founded for profit by capitalists, many of whom borrowed heavily from merchants who remained in Portugal. The Negro slaves imported from Africa were considered merchandise, and the capital invested in them was one of the carefully considered factors of production. Indeed, the idea of the worker, not as a serf bound to the lord by the deepest ties of tradition and religion, but as property to be bought and sold, was in keeping with an early but essentially modern view of society. Furthermore, as a colony in a mercantilist era, Brazil was not a self-sufficient entity, but a recipient of manufactured goods from the metropolis, a subject of its political control, and a recipient of its intellectual direction. It will not do to suggest that the traditional society of Brazil in the mid-nineteenth century was equivalent to that of, say, medieval Europe.

Nevertheless, the steady stream of technological innovations that are basic to a modern society had not yet become a part of Brazilian life in 1850, and it may be questioned whether Brazil has even now entered this stage. Why Brazil, despite its earlier connexions with the modern world, had not yielded to more of its impulse lies outside the scope of this work. After a certain point in the sixteenth century the Iberian peninsula and the colonies of Spain and Portugal were more or less cut off from the mainstream of European development for some two hundred years. For all the early signs of change, the scientific world-view and the modern concept of the individual's place in society did not become a part of the Brazilian's mental equipment during the colonial period. The legal and social system emphasized the prestige and power of the large landowner. Even the relations between the masters and the slaves often became personal ties of

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loyalty and protection more characteristic of lord and serf than employer and employee. Little effort was made to keep up with innovations in the technique of sugar production, and Brazil lost the technological superiority that had once guaranteed its place in the world market.

In the eighteenth century there was a slow beginning of change. But, although the forces of the Enlightenment affected Portugal, Brazil still lagged behind. The predominantly rural nature of its life dampened the forces of change. The absence of any printing presses or universities is just one evidence of Brazil's backward agrarian society. There were, of course, a few persons acquainted with the ideas of the Enlightenment, and some changes did begin to take place, principally as a result of the sharply modified personal relationships created by the new mining economy and resulting urban clusters of south-central Brazil. In the 1820s and 1830s some of the leaders of the newly independent country were men formed in the context of the European Enlightenment who had completely absorbed the modern spirit.¹

Yet, Brazil remained basically traditional. By the middle of the nineteenth century it was a sparsely settled country of 3 million square miles and only 7 million inhabitants. Most of them were concentrated on the eastern seaboard, but, even so, the cities accounted for only a small proportion of the population. Towns were sleepy and provincial, made up of packed-mud (*taipa*) houses along muddy and unilluminated streets where pack mules and slaves stumbled over pigs and chickens.²

Economic life was extremely backward. No one who has traveled in the more remote parts of Brazil today will doubt the words of one foreign observer at that time who wrote that

¹ Celso Lafer, 'O problema dos valores n'Os lusiadas', *Revista camoniana*, II (1965), 9-44; Antônio Cândido de Mello e Souza, *Formação da literatura brasileira (momentos decisivos)*, 2 vols. (São Paulo: Martins, 1959), pp. 236-65; Charles R. Boxer, *The Golden Age of Brazil* (Berkeley: Univ. of California Press, 1962); Octavio Tarquínio de Sousa, *História dos fundadores do império do Brasil*, 2nd ed., 10 vols. (Rio: José Olympio, 1957), I, V, VI and VII, as well as IX, 9-25; Carlos Rizzini, *Hipólito da Costa e o 'Correio brasileiro'*, Brasília, Grande Formato, 13 (São Paulo: Editora Nacional, 1957); Lídia Besouchet, *Maud e seu tempo* (São Paulo: Anchieta, 1942), 74-5.

² For a perceptive and concise treatment of mid-nineteenth-century Brazil see Gilberto Freyre, 'Social Life in Brazil in the Middle of the Nineteenth Century', *Hispanic American Historical Review*, V (1922), 597-630.