

An Analysis of the Railway Enterprise in Nineteenth-Century British India (1849-1900)

تحليل مشروع السكك الحديدية في الهند البريطانية
في القرن التاسع عشر (1849-1900)

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ملخص: إنَّ زيادة الأرباح كان هدفا رئيسيًّا للبريطانيين في الهند، وقد أحدث النقل البري في الهند البريطانية ثورة في النصف الثاني من القرن التاسع عشر عن طريق الترويج للسكك الحديدية، التي كان يُنظر إليها على أنها من بين مشاريع البنية التحتية الاستعمارية الرئيسية فيها بسبب ضخامة الاهتمام الذي تلقته، ومع ذلك فهي ليست دائما إيجابية، هذه هي رؤية المؤرخين أو العلماء فيما يتعلق بما تحقّقه البنية التحتية الاستعمارية أو كان لها حساب التفاضل والتكامل.

يظهر التحليل الشامل لمؤسسة السكك الحديدية أن الرأي العام مستقطب حول فائدة السكك الحديدية، في حين أنَّ المفكرين المعاصرين أو ما بعد القرن التاسع عشر يرون أن هذه السكك الحديدية مفيدة للغاية للمستعمرين، ويرى آخرون وهو أكثر أنها مفيدة بشكل منهجي للمستعمرين البريطانيين ومُضِرَّة للهنود المُستَعْمَرين، بينما يزعم العديد من المُراقبين أنَّ السكك الحديدية جاءت بمثابة نعمة حضارية، وتحديث للهنود من الأب المستعمر، ويُعارض آخرون هذا الرأي بحجّة أن وسيلة النقل الجديدة هذه كانت لعنة مُدمّرة قوّضت الاقتصاد الهندي، إذ كثيرا ما يقال إن السكك الحديدية قد خدمت احتياجات بريطانيا الكبرى من خلال استغلال الثروات الطبيعية الهندية على حساب التنمية الهندية، كما قيل أيضا إنَّ التجارة الهندية المحلية والخارجية قد زادت ولكن لصالح بريطانيا فقط.

الكلمات المفتاحية: الاستعمار؛ بريطانيا؛ الهند؛ السكك الحديدية؛ الاقتصاد؛ التجارة؛ الاستغلال؛ النقل؛ المواد الخام؛ القطن؛ التجديد؛ الدمار؛ الأبوية.

Abstract: Making increasing profits was a major aim of the British in India. So, land conveyance therein was revolutionized in the second half of the nineteenth century by railway promotion. This enterprise is seen as amongst the main British colonial infrastructural undertakings in the Indian subcontinent due to the magnitude of devotion it received. However, not always positive is the vision of historians or scholars regarding what that fulfilment involved or had as its underlying calculus. A comprehensive analysis of that railway enterprise shows that public opinion is polarized on the utility of railways. While contemporary or post-nineteenth-century thinkers see that new means of transport as highly beneficial for the colonized, many others rather see them as systematically beneficial for the British and harmful for the colonized Indians. While many observers claim that railways came as a civilizing and modernizing blessing for the Indians from a paternalistic colonizer, many others contradict this view arguing that this technology was rather a destructive curse undermining Indian economy. The railways are often said to have served the needs of metropolitan Britain through the exploitation of Indian natural riches to the detriment of Indian development. Indian local and foreign trade is said to have increased but for the benefit of Britain only.

Keywords: colonization; Britain; India; railways; economy; trade; exploitation; transport; raw materials; cotton; regeneration; destruction; paternalism.

Introduction: Nineteenth-century British colonization of India bore the theory of modernizing paternalism exemplified by the promotion of railway transport between 1849 and 1900 so as to give an air of legitimacy to that hegemonic rule. However, public opinion is polarized on the issue of whom it benefited: the colonizer or the colonized? This article tries to assess that technological project putting light on its advantages and disadvantages for the Indians so as to see to what extent regenerative it was vis-à-vis the colonized. One may presume that railways had both good and bad effects for the colonized. This paper will first deal with the terms or circumstances, in Britain or India, that determined the commencement and realization of the project. Then, part of the paper will be devoted to the polarization of views on the rationale of the railway enterprise and the character of that means of conveyance

by showing different observations on the impacts of trains on Indian economy. As the objective of this work, the most plausible conclusion will be drawn about the utility and results of that project.

The Railway-Building Commitment: Of all Britain's imperial performances in nineteenth-century India, railway building and running together constitute one of her most challenging and demanding commitments there. The enterprise was from the start known to be seriously difficult in terms of planning, funds, and labour. Yet, the British resolved to indulge in it.¹

The economist Daniel Thorner claims that the process of railway building was not launched until upon increasingly-louder calls voiced by English and Scottish traders operating in groups in the East or Indian port cities. These British capitalistic profit-seekers, being aware of India's scope as an endless source of raw materials and a favourable market for British-made goods, jumped up in several committees to require from the British government licencing terms for that technical realization. In London, Liverpool, Calcutta, Bombay, and Madras, those activists heralded in press, pamphlets, and public meetings private enterprise as more likely to succeed than state undertaking in opposition to the administration of the East India Company as the head of the colonial State.²

What permitted the launching of that westernizing enterprise is said to be an official compromise reached in 1849 between the British Cabinet, the East India Company, and private engineers. According to this triangular agreement, the metropolitan government guaranteed proportional gain to the private promoters in protection against failure risk.³

It may be worth mentioning that the 1849 contractual compromise suited so finely the interests of the East India Company and those of the private promoters that it would subsequently be taken as a specimen for many other similar railway projects that ended in the making of the main rail lines of British India. According to Thorner, the 1849 chief

1- Sharma. A. K, 2011, "The Indian Railway and its Rapid Development in British India", www.essaysinhistory.com/articles/2011/5, pp. 1-5.

2- Thorner. D, 1951, "Capital Movement and Transportation: Great Britain and the Development of India's Railways" in The Journal of Economic History, Vol. 11, No. 4, pp. 389-402, New York, Cambridge University Press, pp. 389, 390.

3- Handy. J and Kirkpatrick. M. D, 2016, "'A Terrible Necessity': The Economist on India" in Canadian Journal of History, Vol. 2, No. 51, pp. 269-300, Toronto, University of Toronto Press, pp. 292, 293.

contractual terms pertained to the nature of the undertaking, guarantee of profit, supervision, and control. On the basis of precise contractual terms, British India was to have in the early 1850s its first two rail lines laid across strategic regional areas.¹

Firstly, it was ratified that the enterprise was to be private, not public, and funded by capital-raising non-state firms in the United Kingdom, but the colonial State retained the right to buy the railways after twenty-five years following their achievement.²

Secondly, so as to motivate private businessmen to put their money in the venture, it was agreed that the colonial State was to conform to certain financial duties fulfilled through Indian-land taxation.³ The metropolitan taxpayers, as for them, were in no way to be held in charge of the project. The main of these duties, to come into force upon the inauguration of each railway, was paying an annual contribution to each railway unable to earn five per cent of the invested money.⁴ This contribution was to be enough for each deficient railway company to pay a five-per-cent dividend to each of its shareholders. In this very respect, the colonial State had to pay by the end of the nineteenth century an aggregate sum of £ 50 million.⁵ The state-guarantee contractual term also granted to the private companies the right to hand back their projects at any time to the colonial State in case of total unprofitability and this after a warning, made one year beforehand, upon which they would have all their invested money back.⁶

Thirdly, it was agreed under the terms of the 1849 contract that the foregoing financial state assistance to the railway companies would in return earn the State supervision and control of the enterprise. In this frame, all of line administration, the selection of construction type and function mode, and the fixing of rates and fares would be the prerogatives of the colonial State precisely the central government

1- Thorner. D, op. cit. , pp. 389, 390.

2- Prasad. R, 2013, “‘Time-Sense’: Railways and Temporality in Colonial India” in Modern Asian Studies, Vol. 47, No. 4, pp. 1252-1282, New York, Cambridge University Press, p. 1254.

3- Chattopadhyay. S, 2011, “Tracking Modernity: India’s Railway and the Culture of Mobility” in Victorian Studies, Vol. 55, No. 4, pp. 719-721, Minneapolis, University of Minnesota Press, p. 719.

4- Matikkala. M, 2011, Empire and Imperial Ambition, New York, I. B, Tauris, p. 67.

5- Satya. L. D, 2008, “British Imperial Railways in Nineteenth-Century South Asia” in Economic and Political Weekly, Vol. 43, No. 47, pp. 69-77, Mumbai, Economic and Political Weekly, pp. 69, 70.

6- Thorner. D, op. cit. , pp. 390, 391.

located in Calcutta.¹ Having had to his credit the supervision of Britain's railroad-making, as chairman of London's Board of Trade, Lord Dalhousie had now to do the same in British India being under his general governorship.² Notwithstanding, those prerogatives were counterbalanced by the acknowledged right of the railway private companies to appeal to the metropolitan government against any unfavourable decision taken by the colonial State. Thus, the 1849 compromise, which would be imitated for other railway projects in the Indian colony, reserved the last adjudicating word for the British Cabinet headed by the British Prime Minister.³

So, it was mostly in concert with the colonial State that private companies went on making railroads through territorial grants and profit being guaranteed to the promoters by contract and payable by the Indian taxpayer.⁴ The realization of the railways was thus often private, but their ownership sometimes ended for the State buying the lines. Between 1879 and 1889, in conformity with the railway contractual terms, the colonial government is said to have repeatedly used its buying right to come into possession of lines previously privately owned such as the East Indian Railway linking Calcutta to Delhi and the North-Western Provinces.⁵

On the basis of this state guarantee principle the collection of funds from the investing public in the metropolis would go without difficulty so that the length of operative railway would increase in miles from 4,000 by 1868 to 10,000 by 1882 then to less than 25,000 by 1900. This upswing in line construction resulted from an enthused upturn in invested capital totalling in million pounds sterling 80, 135, and then 236 by 1868, 1882, and 1902 respectively.⁶ Robert Watson Frazer puts a similar account of the progress in the building of railways reaching a length of 300 miles by 1856 and over 21,072 miles by 1895 at an aggregate cost rising to 227 million pounds sterling.⁷ Meanwhile, the guarantee principle was duly applied costing the colonial government around £ 1,300,000 annually in the late 1850s.⁸ As such, the colonial State played

1- Ibid. , p. 391.

2- Walsh. J. E, op. cit. , p. 107.

3- Thorner. D, op. cit. , p. 391.

4- Walsh. J. E, 2006, *A Brief History of India*, New York, Facts on File, p. 108.

5- Harmand. J, 1892, *L'Inde*, Paris, Société d'éditions scientifique, p. 136.

6- Thorner. D, op. cit. , p. 391.

7- Frazer. R. W, 1972, *British India*, New York, New World Book Manufacturing Co. Inc, pp. 374, 375.

8- Handy. J and Kirkpatrick. M. D, op. cit., p. 296.

an encouraging role vis-à-vis the private railway companies, which is confirmed by Jules Harmand, a witness of the epoch under study, in these ensuing words: *“Il faut encore ajouter la tâche de sauvegarder les énormes intérêts commerciaux de la mère patrie, représentés par un capital garanti de plus de 200 millions de livres sterling, avancé à l’État au grand bénéfice de l’Inde, ou placé dans les chemins de fer. Il serait donc criminel de nier la responsabilité du gouvernement à l’égard de ceux qui ont consacré des sommes immenses au développement des ressources de l’Inde sur la foi des promesses officielles, et qui ont déposé leur argent dans les affaires de l’Inde sur l’invitation des autorités impériales.”*¹.

Formerly, in the Anglo-Indian relationship, wealth had long been directed towards the needs of the metropolis. However, from the mid-nineteenth century, wealth flow had to be partially inverted for the whole railway enterprise.² Hence, the colonial railway network set operating with a hundred-fifty mile merchandise line in Calcutta between Howrah and Raniganj and a twenty-one mile line in Bombay between the city and its suburbs. It is estimated that the first five thousand miles of track had been laid by 1869 and another eleven thousand miles by 1890.³ The precise number of lines grew from 20 in 1853 to 23,627 in 1900.⁴ Asia had got its largest railway network in British India by the 1860s.⁵ By 1880, British India’s railroad network had by far become superior and more extensive than anyone made in a non-European country as the United States of America.⁶ The historian Ian Kerr puts the world-scale length ranking of Indian railway network at fourth in 1901 and the number of its passengers in that year at 183,098,000.⁷

To round up, the whole colonial railway enterprise in nineteenth-century British India owes its accomplishment to a combination of hand-in-hand factors. While it was carried out by British private capitalists

1- Harmand. J, op. cit. , pp. 126, 127, 375.

2- Habib. I, 1975, “Colonization of the Indian Economy 1757-1900”, in Social Scientist, Vol. 3, No. 8, pp. 23-53, New Delhi, Social Scientist, pp. 20-21.

3- Walsh. J. E, op. cit. , p. 107, 108.

4- Das. P. V, 2013, “Railway Fuel and its Impact on the Forests in Colonial India: The Case of the Punjab, 1860–1884” in Modern Asian Studies, Vol. 47, No. 4, pp. 1283-1309, New York, Cambridge University Press, p. 1287.

5- Chattopadhyay. S, op. cit. , p. 719.

6- Sharma. A. K, op. cit. , p. 1.

7- Kerr. I. J, 2014, “Colonial India, its Railways, and the Cliometricians” in The Journal of Transport History, Vol. 35, No. 1, pp. 114-120, Manchester, Manchester University Press, p. 114.

under peripheral state supervision and metropolitan governmental ultimate arbitrage, it was also relying on Indian-land tax revenues.

Assessing Views: The realization and utilization of railway infrastructure in British India between 1849 and 1900 were eulogized but not immune from controversy on account of consequential economic inconveniences for the colonized.

Throughout the second half of the nineteenth century, the railway enterprise did not go in a regular pattern. It rather underwent several changes in ownership, management, and operation so as to better suit the changing interests of those who carried it out. To make things advance, compromises between the colonial State, the metropolitan government, and the British private investors had to be found and applied.¹ The British colonists cared for modifying the enterprise's terms and conditions on the altar of their own economic interests. It is worthwhile considering the three different phases through which the whole enterprise was run with certain accompanying premeditated facts.

As the colonial State found itself overcharged for the aforementioned five-per cent guarantee duty totalling around £ 15 million by 1869 during the first phase, it resorted, with the approval of the Secretary of State for India in London, to restrict the interference of the railway private companies. In 1869, it was decided that the latter would maintain their ownership and management of the already-built railways and that new lines would be made and administered by the colonial State. According to Thorner, the advantage in the second railway-building phase stretching from 1870 to 1880 was that the new rail lines were subject to no such guarantee payment and could be built and operated as well as the private lines. Moreover, railway construction would cost much less when performed by the State than by any private company.²

However, this resolution was not entirely successful as the colonial government was seen as slow and incompetent. In the metropolis as in the periphery, there grew a concern about the selection of the type of ownership and the type of management of Indian railways that would serve best as many involved British colonists were still unsatisfied by the way those lines had been functioning.³ So, a new project compromise between the colonial State and private entrepreneurs was signed in 1879

1- Thorner. D, op. cit., pp.392,394.

2- Ibid., pp. 392, 393.

3- Reddy. M. A, 1990, "Travails of an Irrigation Canal Company in South India, 1857-1882" in Economic and Political Weekly, Vol. 25, No. 12, pp. 619-621+623-628, Mumbai, Economic and Political Weekly, p. 628.

followed in the century by similar arrangements all of which made the period from 1880 to 1900 that of public-private harmonious collaboration in almost all India's railway service with a revised guarantee principle. So as to keep low the railway-building cost and make the quality of rail transport higher, it was agreed that the colonial State would progressively get the ownership of all the rail lines by buying out all the shareholders upon the contractual term of twenty five years following every rail line inauguration. As for management, it would be privatised except for military lines left to the colonial public authorities. Through this third phase, the land tax revenues of British India did not stop taking part in the business as the new guarantee, rated at four per cent on the invested capital and paid by the colonial State to each managing-company shareholder, would be settled out of that colonial fiscal income.¹

Thorner explains that those railways showed not only success in their realization but also certain failures in the way they operated. Through the three enterprise phases discussed above, arrangements that constituted advantages for the British reverberated as inconveniences for the Indians. The fact that India's railways had their administration, through the three phases, residing with the British, either colonial governors or private companies, and never shared with the natives of India resulted in the latter being deprived of several economic benefits.

Before and after the 1879 regulation, the British railway managers retained the right to staff the lines at their pleasure.² Because of this prerogative, from the railway inauguration to the end of the nineteenth century the service deliberately included just very few Indians in its personnel. What is more, the colonial State and the private railway companies developed for the Indians no training program that could have enabled them to assume all levels and sorts of railway work.³

Another related point being negative for the colonized concerns the distribution of those railways across the country, which may make the researcher believe that the British were regionally selective in their whole enterprise. Railways were not randomly laid.⁴ This venture aimed to link interior resourceful areas to the major Indian port cities so as to make

1- Thorner. D, op. cit. , pp. 394, 395.

2- Ibid. , pp. 392, 401.

3- Satya. L. D, op. cit. , pp. 71, 73.

4- Donaldson. D, 2010, "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure" in Asia Research Centre Working Paper, Vol. 41, London, Asia Research Centre, lse.ac.uk/collections/AsiaResearchCentre, pp. 4, 7.

way for maritime raw-material on-going exportation.¹ This geo-economic plan resulted in vast Indian areas remaining entirely devoid of railway service during and after the period under study.²

Inadequacy persisted not solely in the railway network itself but equally in the serviceability rate owing to systematic financial State control and constraint on the private managing companies. The Indian railway service met with severe undercapitalization engendered by the contractual principle according to which no budgetary expenditure could be done without the assent of the Finance Department of the Government of India. Consequently, the existing lines were not permitted to provide enough conveyance for the Indian overcrowding passengers, which caused tenacious congestion and discomfort to traffic. From their opening to the end of the period under study, India's railways were always subject to financial shortage, which did not facilitate transit for the indigenes. Instead of offering high-rate conveyance at low fares, they kept providing low-rate conveyance at high fares.³

While that inadequate budgetary allotment concomitantly limited the rail lines in conveyance rate and heightened fares, the guarantee clause within the third contract produced little inducement for the private managing companies to relieve this insufficiency. The private shareholders knew that their dividends would always be paid by the colonial State no matter what would happen, which did not motivate them to make substantial progress in the railway service.⁴ Just in 1884-85, a total of £ 4,750,000 was paid in England as being such company dividends.⁵

Still with British selectiveness, Thorner paints another controversial picture of nineteenth-century British India where the new transport infrastructure made no economic contribution for the natives. It is claimed that one drawback to India's railways is that they did not take part in the development of local industry whatsoever. The British just failed to promote indigenous industries capable to provide the country with railway necessities and accessories. Before and after the 1879 regulation, British railway managers retained the right to buy equipment

1- Sugihara. K, 1971, "Notes on the Trade Statistics of British India", www.ier.hit-u.ac.jp/COE/Japanese/Newsletter/No.6.../SUGI.html, p. 1.

2- Thorner. D, op. cit. , p. 392.

3- Ibid. , pp. 395, 396.

4- Ibid. , p. 397.

5- Harmand. J, op. cit. , p. 113.

at their pleasure.¹ Due to this prerogative, all needed equipment-locomotives, rolling stocks, spare parts, and various stores- was to be imported from homeland, which caused India to remain self-insufficient in railway material requirements. Indian businessmen were in constant discord with this provision policy because the same imported items either were or could have been made in India.²

However, historians do not put converging views about the rationale or results of the whole railway enterprise, these views being either negative or positive. Ritika Prasad, for example, verbalizes the opinion that the new mode of transport became highly-estimated by the colonized population regarding it as a move towards modernity, which rendered imperative the popular adaptation to this technological innovation. Prasad supports his opinion by mentioning that the yearly number of railway Indian travellers kept increasing so that only between 1854 and 1867 it moved from 0.5 to 13.8 million.³ That passengers number had gone up to 110 million by 1889. This mounting passenger use rate may account for the mounting gross returns of the railway business attaining £18 million by 1887 and for the net returns of £ 276,000 realized in just 1888-89 by the East Indian Railway alone.⁴ Even Indian commoners and paupers proved keen on train travel although the major aim of constructing railroads was to transport British trade and military forces.⁵

Thinkers such as Rudyard Kipling view colonial trains as a confirmation of the benevolent interventionism of British rule in India, producing in return popular thankfulness as well as good spirit towards the Raj. In this respect, one argument put forward by Sumangala Bhattacharya for this railway usefulness is technical; the scholar affirms that the new means of conveyance raised travel velocity much beyond that of the then common natural transport means. What illustrates that popular adaptation is said to be the Indians taking to trains for

1- Thorner. D, op. cit. , pp. 392, 398.

2- Satya. L. D, op. cit. , p. 71.

3- Prasad. R, op. cit. , pp. 1263, 1267.

4- Harmand. J, op. cit. , pp. 113, 127, 136.

5- Headrick. D, 2010, "A Double-Edged Sword: Communications and Imperial Control in British India" in Historical Social Research, Vol. 35, No. 1, pp. 51-65, Berlin, GESIS - Leibniz-Institute for the Social Sciences, Centre for Historical Social Research, p. 54.

pilgrimages in sacred locations.¹ The colonizer perceived his railway infrastructure as an agent of mobility brought to a stationary colony.²

High train velocity was equally beneficial to freight transit in a radical way.³ Pre-railway Indian trade had long been too restricted by the use of bullocks, camels, horses, ponies, donkeys, mules, and elephants.⁴ Unlike pre-railway India where overland animal-undertaken freight transport had been costly and too limited in speed, volume, and distance, railway-built India would now have her trade turning inter-regional, much more voluminous, quicker, and less expensive.⁵ Whereas bullocks could carry goods at only 30 km a day, trains could carry the same goods at 600 km a day.⁶ Moreover, trains would achieve better results than any traditional means of transport such as boats. Contrarily to railway transport, water transport, be it coastal or fluvial, was irregular and limited, due to unfavourable weather conditions caused by winter rainfall and summer dryness, and dangerous due to high-risk piracy. Trains, on the other hand, could break down these inconveniences by assuring swiftness rising up to 600 km a day, regularity through predictable timetables, affordability through relatively cheaper travel cost, and safety through the elimination of the piracy risk.⁷ Railway superiority is confirmed by David Arnold in these following words: *“Over much of northern India and Bengal, it was railways, not steamers, that ultimately supplanted the older river boats and ferries. Communication and transport by land, rather than on water, remained the greatest challenge of the age. There is an argument for seeing the paucity and poor quality of India’s roads as both a cause and a consequence of its technological backwardness and so claiming that a revolution in transportation only came with the railways.”*⁸

1- Bhattacharya. S, 2015, ““Those Two Thin Strips of Iron”: The Uncanny Mobilities of Railways in British India” in Nineteenth-Century Contexts. An Interdisciplinary Journal, Vol. 37, No. 5, pp. 411-430, London, Routledge, pp. 412, 414.

2- Chattopadhyay. S, op. cit. , p. 719.

3- Andrew. W. P, 1884, Indian Railways, London, W. H. Allen and Co, pp. 25-29.

4- Donaldson. D, op. cit. , pp. 1, 6.

5- Derbyshire. I. D, 1987, “Economic Change and the Railways in North India, 1860-1914” in Modern Asian Studies, Vol. 21, pp. 521-545, New York, Cambridge University Press, pp. 526, 527.

6- Donaldson. D, op.cit. pp. 1, 6.

7- Ibid. , p. 7.

8- Arnold. D, 2004, Science, Technology and Medicine in Colonial India, New York, Cambridge University Press, pp. 104, 105.

Furthermore, Barbara Ward states that railway conveyance secured economic improvement as well as human salvation.¹ Judith Walsh confirms that by saying that by 1890 Indian interior markets had been unified by a far-extended railway network linking Indian hinterland to the main port cities of Calcutta, Bombay, Madras, and Karachi. Transited goods rose in million ton from 3.6 in 1871 to 42.6 in 1901, which resulted in goods being cheapened and more available in both rural and urban India. Walsh claims that in famine times trains distributed victuals to different starving areas.²

Thorner puts the rise in rail-transported goods at from 12 million tons to 15 million tons between 1869 and 1882.³ Thanks to those trains, interregional grain carriage is said to have gained high speed, and Burmese rice is said to have reached famine-stricken north-Indian areas.⁴ Actually, the extension of the colonial railway network had this humanitarian objective.⁵

Morality is another argument provided for the railway enterprise by many British contemporary administrators. They assigned the new transport mode the role of overcoming Indian superstition in defiance of social backwardness.⁶ Those colonial trains are eulogized as the factor in a sharp cultural transformation by integrating the Indian castes through same-compartment overcrowded travelling.⁷ As any Indian who could afford train service would come physically very close to any fellow citizen belonging to a different caste, religious community, or ethnicity, those trains became an instrument of unprecedented socialization. Being squeezed together in one compartment, Indian passengers indulged in a move against discrimination, stigmatisation, and separatism associated with their traditional prejudices.⁸ Thus, according to the contemporary engineer G. W. MacGeorge, colonial trains constituted for the British an evidence of their devotion to improve the Indian society.⁹ This socializing role of trains was seen by the contemporary observer Lord Curzon of Kedleston as follows:

1- Ward. B, 1961, India and the West, Delhi, Publications Division, pp. 123, 124.

2- Walsh. J. E, op. cit. , p. 108.

3- Thorner. D, op. cit. , p. 392.

4- Derbyshire. I. D, op. cit. , p. 532.

5- Donaldson. D, op. cit. , pp. 7, 8.

6- Chattopadhyay. S, op. cit. , p. 719.

7- Chaudhuri. S, 1990, Calcutta the Living City, Calcutta, Oxford University Press, p. 240.

8- Bhattacharya. S, op. cit. , pp. 411, 412, 413, 415, 419, 420.

9- Arnold. D, op. cit. , pp. 109, 110.

“The instruments of Western civilization have lent powerful, though sometimes unconscious, aid to this process. Railways have not only bridged distances and helped to relieve distress, but they have broken down the barriers that separated races and communities and castes, and have exerted a unifying influence not merely in the interest of the rulers, but upon the ruled.”¹

Henry Bartle Frere, Governor of the Bombay Presidency, foretold in 1863 that India’s railways would render the colonial society more cohesive unifying its categories and races, which would ultimately push forward Western civilization. Likewise, the British official and writer N. G. Priestley affirmed that the enforced cramming of Indians of different castes into carriages was bound to overwhelm their social differences and boost mutual acceptance.² The same view is supported by Prasad quoting from an imperial official document dating from 1846 that trains were that *“mighty engine of improvement which would cause the slumbering spirit of India to awake from the sleep of ages, the sleep of apathy, superstition, and prejudice.”³*

Unlike Walsh, Rajni Palme Dutt for example is rather critical towards the railway enterprise as being useful for Britain, not for her periphery. Railway infrastructure was always carefully provided in an effort to increase imperial revenues through the transportation of increasingly-cultivated raw materials and expensive crops.⁴ Nigel Dalziel sees the investment of about £ 100 million in railway building just by 1870 as a tactic to increase the income of the colonial State through agricultural commercialization.⁵ Industrializing Europe was demanding much agricultural raw materials, which induced the opening up of an Indian market to be provisioned by means of colonial trains.⁶ The British put high hopes of making India an alternative to the United States as a supplier of raw cotton.⁷

1- Lord Curzon of Kedleston, 1910, “British Rule in India II” in The North American Review, Vol. 192, No. 657, pp. 152-164, Des Moines, University of Northern Iowa, p. 157.

2- Bhattacharya. S, op. cit. , p. 415.

3- Prasad. R, op. cit. , pp. 1253, 1254.

4- Dutt. R. P, 1957, L’Inde: Aujourd’hui et Demain, Paris, Editions Sociales, p. 65.

5- Dalziel N, 2006, Historical Atlas of the British Empire, London, Penguin Group, p. 93.

6- Derbyshire. I. D, op. cit. , pp. 523, 525.

7- Marx. K, 1853, “The Future Results of British Rule in India” in The New-York Daily Tribune, Vol. 12, No. 856, p. 217, New York, MECW, p. 217.

Thorner details in his article the metropolitan and peripheral pressures behind the imperial commitment of endowing the Indian colony with railway transport, showing the existence of an economic impetus behind that. It was not at random that the first two rail lines were laid across geographically-strategic areas. Setting one line between Calcutta city and the Burdwan coal fields and the other one between Bombay city and the Deccan cotton fields was rather deliberate and purposeful.¹ The majority of railway lines were meant to operate between the Indian agricultural interior and the major Indian harbours. The plan was to capably and continually extort profit from the colony by systematically matching its agriculture to its trade.² Colonial governors continued supporting railway construction despite recurrent losses and deficiencies undergone by railway companies because those statesmen were well aware of the magnitude of profitability trains would continually generate for Britain.³

The latter view is common to Kaoru Sugihara claiming that it was mainly Britain seeking to embark upon the continuous cycle of exporting Indian raw cotton to the British textile factories and sending back Lancaster's cotton fabric to the colony that stimulated India's nineteenth-century railroad making.⁴ That raw cotton exportation turned out to be systematic because this product, on which the British cloth manufacture greatly depended, was uncultivable in the metropolis and gradually unprocurable from the United States.⁵ Besides, other Indian primary items such as opium, wheat, rice, indigo, and tea could be ferried by train from hinterland to harbours in order to be shipped to the United Kingdom or other European countries.⁶ Sugar exportation became now much less expensive, too, thanks to the expansion of the Indian railway network.⁷ Thus, Laxman Satya thinks that Indian economy benefited British economic interests only while getting no economic relief or compensation from Britain in return.⁸

1- Thorner. D, op. cit. , pp. 389, 390.

2- Das. P. V, op. cit. , p. 1287.

3- Reddy. M. A, op. cit. , p. 619.

4- Sugihara. K, op. cit. , p. 1.

5- Handy. J and Kirkpatrick. M. D, op. cit. , pp. 286-290.

6- Ghoshray. A, 2015, "A Robust Estimation of the Terms of Trade between the United Kingdom and British India, 1858–1947" in *Economic Modelling*, Vol. 51, pp. 53-57, Amsterdam, Elsevier Inc, p. 56.

7- Bagchi. A. K, 1988, "Colonialism and the Nature of 'Capitalist Enterprise in India'" in *Economic and Political Weekly*, Vol. 23, No. 31, pp. PE38-PE50, Mumbai, Economic and Political Weekly, p. 41.

8- Satya. L. D, op. cit. , pp. 70, 75.

And, due to the cheapness of the imported Lancaster's textile products, most British India was doomed to cloth de-industrialization.¹ Contemporary Indian nationalist scholars such as Dadabhai Naoroji, Mahadev Ranade, and Romesh Dutt complained that India's endowment with railways in the second half of the nineteenth century had escalated the weakening of her handicrafts by extending the local market for imported British-made goods.² Statistics on Britain's exports to India between 1859 and 1877 show that British cotton manufactures exports to India doubled over this period.³ Actually, invading the Indian market through promoted rail transport enabled the British to annihilate India's industry and to create colonial dependence on Britain's one.⁴ Claude Markovits confirms that the rate of colonial economic exploitation increased concomitantly.⁵

For the Indians, the local market was extended harmfully by the railway network and a new system of land ownership. These two colonial westernising novelties were meant to boost both agriculture and agricultural commercialisation with the aim of raising the fiscal income of the colonial State to the detriment of India's traditional rural socio-economic structure.⁶ As quoted in 1865 by *The Economist* newspaper in London, the Indian Finance Ministry buttressed the general colonial taxation in British India by saying: "*we are giving India wealth and we should tax that wealth ... The native comfort, ease, and opulence which English rule creates, maintains, and improves ought to defray the costs of that rule.*"⁷

The British in India imposed a system of land privatisation which together with the railway infrastructure eroded India's traditional bucolic self-sufficiency. Private land ownership in the countryside was now to be granted to a handful of native chiefs paying taxes to the colonial State and collecting land rent in money from native peasants like in the

1- Arnold. D, op. cit. , p. 96.

2- Chattopadhyay. S, op. cit. , p. 720.

3- Habib. I, op. cit. , p. 21.

4- Satya. L. D, op. cit. , p. 72.

5- Markovits. C, 1987, "Some Trends in European (Mainly British) Historiography of Modern India" in *Economic and Political Weekly*, Vol. 22, No. 10, pp. 416-418, Mumbai, Economic and Political Weekly, p. 417.

6- Meena. H. K, 2016, "An Overview of Indian Economic Structure under British Rule" in *International Journal of Management and Social Sciences Research*, Vol. 5, No. 3, pp. 33-39, irjcjournals.org/ijmssr/Mar2016/6.pdf, pp. 3-5.

7- Handy. J and Kirkpatrick. M. D, op. cit. , p. 298.

Western World.¹ Traditionally however, Indian rural political masters had been exercising private-property rights in shares of the village crops while rural land had been owned collectively by the rural community, which characterized the Indian village as self-subsistent. By the end of the nineteenth century, this ancient mode had been considerably replaced by that of high crop marketability assured by railway transport. The new trend was a village system headed by rent-receiving landlords known as *zamindars* and driven by an Indian category of money-lenders from whom farming peasants borrowed to pay for land tenancy.²

The Indian nationalist Mahatma Gandhi regards those colonial railways too critically believing that British India was between 1860 and 1900 the scene of unprecedented agricultural commercialization and falling per-capita nutrition as a result of the promotion of rail transport.³ Although agricultural per-capita yield increased, the economic situation of the Indian rural mass kept declining. The traditional self-sufficiency of the Indian village was being subverted by the colonially-imposed trend of increased cash-returning cropping so that land rent dues could be paid in money.⁴ The railways, being the preponderant form of public investment in British India due to their high utility in agricultural commercialisation, nourished the evil side of many colonized who preferred to serve the colonial markets rather than the bellies of their hungry compatriots.⁵ Facility and rapidity in the rail transport of grains caused the frequency of famines.⁶

Rural living standards in British India were mostly deteriorating. While the new system was giving rise to a rich village class of moneylenders solicited to meet required rent payment, it impoverished land tenants because these had to reimburse moneylenders at high interest rates.⁷ Jim Handy and Michael Kirkpatrick agree with Issac Derbyshire by claiming that colonial authority remained so rigid on land tax collection that *zamindars* resolved in their turn to collect rent dues from their tenants even at bad harvest or famine times. This entailed

1- Wagner. K. A, 2007, Thuggee, Banditry and the British in Early Nineteenth-Century India, New York, Palgrave Macmillan, pp. 34, 35, 85.

2- Thorner. D, op. cit. , p. 400.

3- Donaldson. D, op. cit. , p. 8.

4- Derbyshire. I. D, op. cit. , pp. 521, 541.

5- Satya. L. D, op. cit. , pp. 71, 75, 76.

6- Donaldson. D, op. cit. , p. 8.

7- Adams. J and Craig West. R, 1979, "Money, Prices, and Economic Development in India, 1861-1895" in The Journal of Economic History, Vol. 39, No. 1, pp. 55-68, New York, Cambridge University Press, p. 56.

relentless pauperization and frequent land eviction for the native peasantry.¹ “*The institutions and values associated with modernity in Victorian Britain were promulgated by the colonial State in India to subsume traditional culture in order to build a homogenized population suitable for industrial labour.*”² The gradual conversion of the Indian village from a self-reliant communalistic entity to a land-privatized market-oriented cash-crop colonial collaborate not only raised but also concentrated production according to regional cultivability. In other words, the new village life modality brought about regional agricultural specialization to serve imperial or European interests. For example, the United Provinces in the north were rendered “the sugar province” of British India with a sugarcane acreage rise of more or less 40 % realized between 1860 and 1895. Meanwhile, this area knew hyper-dramatic rise in its oilseed production so as to respond favourably to the growing European industrial need for this commodity.³

Colonial railway making and using, which caused agricultural and industrial dislocation and recurrent famines, were disapproved of not only by colonized intellectuals but also by European contemporary thinkers or officials such as the social reformers Florence Nightingale and Vaughan Nash.⁴ The British journalist and humanitarian William Digby, too, rebuked that colonial policy for being selfish since it caused Britain to thrive economically to the detriment of India of which population had consequently to fall into destitution and starvation.⁵ Another example is the British theosophist Allan Octavian Hume whose outspoken criticism earned him in 1882 a demotion from his job as a high colonial fiscal bureaucrat. Hume had attributed Indian misery and wretchedness to the British colonial system that he qualified as economically exploitative. He therefore called for a legitimate Indian rising.⁶ The year following his downgrading, he meant the following written words to the young diploma holders of Calcutta’s university: “*Every nation secures precisely as good a Government as it merits. If you the picked men, the most highly educated of the nation, cannot, scorning personal ease and selfish objects, make a resolute struggle to*

1- Handy. J and Kirkpatrick. M. D, op. cit. , pp. 282, 283.

2- Bhattacharya. S, op. cit. , p. 413.

3- Derbyshire. I. D, op. cit. , pp. 529-531.

4- Chattopadhyay. S, op. cit. , p. 720.

5- Matikkala. M, op. cit. , pp. 67, 68.

6- Pécastaing-Boissière. M, 2015, Annie Besant (1847-1933) La lutte et la quête, Paris, Editions Adyar, p. 223.

secure greater freedom for yourselves and your country, a more impartial administration, a larger share in the management of your own affairs, then we, your friends, are wrong and our adversaries right, ... rightly and inevitably have they become your rulers.”¹

In sharing her technology with India, the metropolis intended not only to strengthen her imperial foothold but also to control her territorial possessions more profitably there.² In Pallavi Das's view, if the colonial State gave priority to the Calcutta-Lahore trunk line including the Amritsar-Multan Line, it was with both military and economic aims. The latter line was in fact meant for goods, soldiers, and ordnance.³ That is confirmed by Harmand stating that the achievement of such a railway enterprise was known by the colonial government to be indispensable for increasing its power of action through better interregional communication.⁴ Dave Donaldson explains that this military motivation gathered momentum due to the 1857-58 *sepoy* mutiny which showed the vital importance of military connection across the colony through elaborated railway transport.⁵ The railway network fetched the advantage of decreasing the need for troops by accelerating their movement.⁶ The new transport means had reduced British India, in the view of the contemporary engineer MacGeorge, to a twentieth of its prior size by the end of the nineteenth century as remote Indian areas had been rendered much closer to each other.⁷ Meanwhile, on the economic ground, the process of subordinating the Indian economy to the British industrialized capitalistic one was being successfully achieved by the Indian railroad network.⁸

Das focuses on the regional specimen of the Punjab as being much affected by the railway enterprise ending in the connection of its agricultural interior with the nearest port city namely Karachi. Hence, the author believes that a key intention behind the fulfilment of that Western railway enterprise was the adjustment of the Punjab to the British industrial home needs in a durable way. Furthermore, so as to render the

1- Patabhi. B. S, 1935, The History of the Indian National Congress (1885-1935), Masulipatam, The Working Committee of the Congress, pp. 12, 13.

2- Sharma. A. K, op. cit. , pp. 1-2.

3- Das. P. V, op. cit. , p. 1289.

4- Harmand. J, op. cit. , pp. 125, 127.

5- Donaldson. D, op. cit. , p. 7.

6- Adams. J and Craig West. R, op. cit. , p. 63.

7- Arnold. D, op. cit. , p. 109.

8- Das. P. V, op. cit. , p. 1285.

Multan-Karachi connection more advantageous, the Amritsar-Multan Line was lengthened from Multan to Shershah and Jullalpoor, which effectively decreased the travel time between Multan and Karachi from four days to around two hours.¹ Other similar improvements in Punjab followed. In 1879, a further extension to the Amritsar-Multan Line, called the Indus Valley Railway, was inaugurated to further augment the Punjabi trade by linking Lahore to Karachi. Three years later, the colonial Punjabi government deemed in a written report this extension an economic success on account of a resultant substantial growth in wheat trade, which encouraged the maximization of train use for intensifying global Punjabi commerce. Then, the Punjab Northern Railway, inaugurated in 1875, caused since 1883 an increase in wheat trade, too. This is said to illustrate the fact that a railway line made specifically for military objectives could also attain commercial ones.²

Conclusion: On the whole, colonial railways in British India between 1849 and 1900 were a double-edge enterprise as they brought modernity to the Indians and decline to their economy. Britain was concerned only about keeping high her exportation of Indian natural riches through promoted railway transport. Owing to the magnitude of profits to be made thanks to this transport means, Britain was not deterred by the cost of the enterprise. The huge capitals and efforts invested in the Indian periphery for the purpose of railway promotion were known to be later on offset by final enrichment taking place in the British metropolis only. In fact, by 1900, British India had as such been made an underdeveloped subservient economy while Britain could further commit herself to imperial trade and capitalism. So, vis-à-vis the Indians, those railways were much more destructive than regenerative, in other words, much more exploitative than paternalistic contrarily to the justifying theory of British colonialism.

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1- Das. P. V, op. cit. , pp. 1288-1290.

2- Ibid, p.1290.

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