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Arthur Cotton and the Development of Public Works

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In the long history of violence and cruelty that defined the period of British rule in India, Arthur Cotton is one of the few men remembered today not for his crimes, but for the good he did for the people of India. Cotton's irrigation projects protected millions of Indians from the threat of famine, but the true legacy of his work is global in scope. As a major figure in the development of India's infrastructure for most of the nineteenth century, Cotton witnessed the British Empire struggle with questions about its role in facilitating public works projects. Despite the Empire's dedication to the principles of free-market capitalism for issues relating to India, by the final decades of the nineteenth century the British had recognized the need for government-funded infrastructure projects, and they became the first modern nation to leverage public debt for major infrastructure projects. Arthur Cotton played an instrumental role in the development of state-supported public works through his highly successful irrigation projects on the Cauvery and Godavari rivers, promoting the success of these projects in his writing, and by providing a solution to the challenge of developing Indian cotton agriculture.

Despite the importance of water in India, it is only recently that historians have turned their attention to the ways that water influenced British rule in India. In the twenty-first century, there has been an explosion of scholarship on the topics of water and irrigation in British India. Articles like David Hardiman's "The Politics of Water in Colonial India" and David Mosse's "Transformations in the Governance of the Water Commons in British South India" seek to understand how India's unique relationship with water shaped the colonial administration.[1] These articles focus on the environmental factors that caused shifts in British policy, but do not

[1] David Hardiman, "The Politics of Water in Colonial India," *Journal of South Asian Studies,* no. 2 (2002); David Mosse, "Rule and Representation: Transformations in the Governance of Water Commons in British South India," *The Journal of Asian Studies*, no. 1 (2006), https://doi.org/10.1017/S0021911806000064.

examine the role of individuals in these changes. Other works, such as Sunil Amrith's elegant environmental history of India, *Unruly Waters*, discuss the actions of some individuals, but these histories are too broad to focus too much on any one individual. In Amrith's book, Arthur Cotton is mentioned only briefly as an introduction to the inseparable nature of water and British power in India, and his life is not discussed beyond his infrastructure projects.[2] Closest to this paper's topic of interest is Aditya Ramesh's article "Indian Rivers, 'Productive Works', and the Emergence of Large Dams in Nineteenth-Century Madras." Ramesh chronicles how the British Empire's ideas for funding public works in India changed over time. In the article, Ramesh portrays Cotton as one of the leading figures in encouraging private investment in irrigation projects.[3]

In 1863, Cotton was appointed as a consulting engineer for the Madras Irrigation and Canal Company, one of the few private ventures developing Indian water infrastructure, but Cotton was consistently opposed to private investment taking the lead in developing public works.[4] In his second book, published in 1856, Cotton wrote that "the Government *must*, therefore, take the lead" in matters of irrigation and canal construction.[5] Cotton's position became even more evident in the 1870s with his speeches to the East India Association, but Ramesh only focuses on Cotton during the 1860s and neglects to discuss Cotton's own writing. Throughout his lifetime, Cotton consistently favors public over private support for infrastructure

[2] Amrith, *Unruly Waters*, (United States: Basic Books, 2018).
[3] Aditya Ramesh, "Indian Rivers, 'Productive Works', and the Emergence of Large Dams in Nineteenth-Century Madras," *The Historical Journal*, no. 1 (2021), 294, https://doi.org/10.1017/S0018246X20000163.
[4] Aditya Ramesh, "Indian Rivers, 'Productive Works', and the Emergence of Large Dams in Nineteenth-Century Madras," *The Historical Journal*, no. 1 (2021), 297, https://doi.org/10.1017/S0018246X20000163.
[5] Arthur Cotton, *Profits Upon British Capital Expended on Indian Public Works, as Shown by the Results of the Godavery Delta Works of Irrigation and Navigation*, (London: Richardson Brothers, 1856) 60.

projects on the subcontinent. By studying Cotton's writings about public works in India, one can better understand how he influenced Britain's development of state-sponsored public works.

Arthur Cotton's successful career as an engineer made him a celebrity among the British public and gave him the credibility to weigh in on debates involving public works in India. He began his career with the Royal Engineers in 1819 as a second lieutenant.[6] In May 1821, at just eighteen years old, Cotton was sent to Madras to serve in the office of the presidency's chief engineer.[7] Cotton served in the First Anglo-Burmese War, and stories of his bravery and fearlessness in the face of the enemy are abundant, though Cotton is the primary source for much of this information.[8] The engineer returned to public works with the construction of two anicuts, a style of dam common in India, on the Cauvery River in the district of Tanjore. In 1830, when the work began, Tanjore was one of India's most destitute districts.[9]

The project was completed in 6 years, and it was soon apparent that it was a fantastic success. One year after the project's completion, Cotton wrote to the Board of Revenue that, by his calculations, the value of the district's private property has increased by at least half a million pounds sterling.[10] In addition to the direct financial benefits, the works protected Tanjore's agricultural laborers from the threat of drought or inundation. In the words of the Board of Revenue, "the anicut has laid a new foundation of prosperity" in the district.[11] Most importantly for future irrigation works in India, the British government also realized high profits from the project. Indeed, official government figures from 1845 showed that the upper and lower anicuts

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[6] Elizabeth Hope and William Digby, *General Sir Arthur Cotton, R.E., K. C. S. I.*, (London: Hodder & Stoughton, 1900), 14.
[7] Hope, *General Sir Arthur Cotton*, (London: Hodder & Stoughton, 1900), 15.
[8] Hope, *General Sir Arthur Cotton*, (London: Hodder & Stoughton, 1900), 16-18.
[9] Hope, *General Sir Arthur Cotton*, (London: Hodder & Stoughton, 1900), 21.
[10] Hope, *General Sir Arthur Cotton*, (London: Hodder & Stoughton, 1900), 62.
[11] Hope, *General Sir Arthur Cotton*, (London: Hodder & Stoughton, 1900), 63.

were yielding 144% and 133% annual returns on the project's initial cost from the first year of construction.[12] Nearly overnight, Cotton became one of Britain's most successful irrigation engineers, and the success at Tanjore afforded him the operational freedom necessary to initiate a project on the Godavari River.

The Godavari anicut is widely considered to be the most important irrigation project Arthur Cotton completed in his lifetime. In his history of the Godavari district published in 1878, the district's chronicler, Henry Morris, described the project as "perhaps the noblest feat of engineering skill which has yet been accomplished in British India."[13] In this quotation, Morris was not only referring to the project's impressive engineering, but also to the prosperity that the anicut brought to the district. The irrigation provided by the anicut lifted the district from poverty, rendered nearly two million acres of land suitable for cultivation, and eliminated the risk of famine from the district.[14] Opposition from within the colonial administration put the project's future in doubt at many points, but Cotton's dedication eventually resulted in the successful completion of the anicut.

The idea for a dam on the Godavari River was first proposed in the late eighteenth century by Michael Topping, one of the first to survey the subcontinent with modern techniques.[15] Though the project had clear potential, construction would not begin until over half a century later. At the time, the British administration in India was not able to fund such a large, complex, and expensive project because public works were funded directly from the revenue of

[12] Hope, *General Sir Arthur Cotton*, (London: Hodder & Stoughton, 1900), 63.
[13] Henry Morris, *A Descriptive and Historical Account of the Godavery District in the Presidency of Madras*, (London: Trübner, 1878), 109.
[14] Morris, *A Descriptive and Historical Account*, 114.
[15] Morris, *A Descriptive and Historical Account*, 109.

the colony.[16] After Topping's report, the idea of a dam on the Godavari would disappear from the official mind until 1840. In February of that year, John Sullivan, a member of the Council of Madras, wrote a minute discussing the importance of developing irrigation infrastructure in India. In this report, Sullivan discussed the success of Cotton's irrigation project at Tanjore to advocate for similar works in Madras, and he specifically mentioned the Godavari River having the potential to generate comparable benefits.[17] It would be another four years before any concrete progress was to be made on the project. In 1844, Henry Montgomery was appointed as a special commissioner in the district of Godavari, and he was tasked with finding a way to lift the district "from its lamentable state of depression."[18] Coming from Tanjore, Montgomery had witnessed the benefits of large-scale irrigation works firsthand, and he was eager to get a similar project underway in his district.

By August of the same year, Arthur Cotton had submitted his first report on the irrigation of the district to the Secretary of the Revenue Board of the Madras Department of Public Works.[19] In this report, Cotton proposed a system of embankments, dams, and irrigation channels to irrigate the district, and he estimated the works would cost 16.5 lacs to construct. Captain Cotton drew extensive comparisons to his work at Tanjore to demonstrate the benefits the project would bring to the Godavari delta, including increased revenue for the government, greater productive capacity of the land and the population, and an increase to the money circulating in the local economy.[20] The Board of Revenue was impressed by the report and soon requested that Cotton submit a more detailed description of the proposed works. Cotton, who had

[16] A. Galloway and J. Shepherd, "Godavery Annicut," Revenue Department, Fort St. George, 1849.
[17] John Sullivan, "On the Importance of Improving Irrigation," Council of Madras, 1840.
[18] Morris, *A Descriptive and Historical Account*, 109.
[19] Arthur Cotton, "Report on the Irrigation, &c., of the Rajahmundry District," August 12, 1844, 1.
[20] Arthur Cotton, "Report on the Irrigation," 7.

been working on his own up to this point, wrote back to the board that he would require additional money and manpower to fulfill their request.[21] Cotton asked that the board provide an additional forty-two members to his department, a move that would cost two thousand rupees a month, but he put this demand into perspective by pointing out that his department generates twenty lacs of revenue annually, or over 166,000 Rs. a month.[22] This letter did not accomplish what Cotton needed, and he was forced to write to the board two months later to request more funds. In October, the engineer wrote to the board to request five hundred rupees to help him cover the many minor costs that he had been paying up to this point. Cotton mentioned that he had hired boats, stonecutters, and locals with his own money to accomplish the task set before him by the board.[23] Cotton's frustration with the Board became apparent towards the end of his letter, as he admonished the Board for delaying the project for a "trifling expenditure in officers, surveyors, &c."[24] For Captain Cotton to be forced to cover various costs with the meager salary of an officer of the East India Company exemplifies the frugal nature of the British administration in India. Despite these administrative challenges, Cotton's requests were eventually satisfied, and the project was able to move forward.

Arthur Cotton submitted his final report on the Godavari project to the Madras Government on the 17th of April 1845,[25] and work began on the anicut in 1847.[26] The final estimate provided by Cotton projected a cost of 12 lacs for the works, but after just a year it became clear that this estimate was not sufficient.[27] Cotton attributed the excess to a need for

[21] Arthur Cotton, "To the Secretary, Board of Revenue Department of Public Works," August 22, 1844, 1.
[22] Cotton, "To the Secretary," August 22, 1844.
[23] Cotton, "To the Secretary to the Board of Revenue Department, Public Works," October 25, 1844.
[24] Cotton, "To the Secretary," October 25, 1844.
[25]James C. Melvill, "Documents Referring to the Works of Irrigation on the Godavery River and Kistnah Annicut, in the Presidency of Madras," 1853.
[26] Morris, *A Descriptive and Historical Account*, 119.
[27] Morris, *A Descriptive and Historical Account*, 120.

more stone than anticipated and costs associated with the failure of the British to provide locomotives for the job site. As the work progressed, further estimates were made for various needs, and the Madras Government was on the hook for the additional funds. In July 1849 an additional 435,639 Rs. were sanctioned for the Godavari project in addition to the original amount provided by the government.[28] The Board of Revenue was quite unhappy with the additional spending, and in the same report that approved the funds the Board accused Cotton of knowingly underrepresenting the cost of the project.[29] The works were completed in 1852 at a total cost of 1,465,158 Rs., just under two and a half lacs more than anticipated in Cotton's 1845 report.[30] Despite the increased cost of the project, the Madras Government ultimately became quite satisfied with the result of their spending. In the following years, the works would go on to generate significant returns for the government and transform the district into one of the most prosperous in all the colony.

From his earliest days in India, Arthur Cotton was convinced of the importance of irrigation to the subcontinent, but the success of the Godavari anicut created an audience in Britain for his ideas. The works were completed in 1852, and their benefits to the district's population quickly became apparent.[31] Cotton recognized the opportunity and was swift to capitalize on the momentary attention his work was receiving. In 1854 Cotton published *Public Works in India, their Importance: With Suggestions for their Extension and Improvement*. The book was written for private circulation among Cotton's colleagues in London and India, but the recipients of the book were so impressed with Cotton's conclusions that they convinced him to

[28] Morris, *A Descriptive and Historical Account*, 124.
[29] A. Galloway and J. Shepherd, "Godavery Annicut," Revenue Department, Fort St. George, 1849, 1.
[30] Morris, *A Descriptive and Historical Account*, 139.
[31] Henry Morris, *A Descriptive and Historical Account of the Godavery District in the Presidency of Madras*, (London: Trübner, 1878), 139.

create an edition for public circulation in London.[32] In the book, Cotton sought to present his vision of a subcontinent connected by a comprehensive system of water communication. Though the engineer wrote with an agenda, his facts were confirmed by other sources within the colonial administration.[33] Cotton understood the value of using writing to spread his ideas on public works.

In this first book, Cotton explained how irrigation and navigation could be used to address the empire's challenges, and one of the greatest strategic challenges facing the empire at the time was its dependence on American cotton. Ending Britain's reliance on American cotton was a major strategic goal of the British Empire in the 1850s and 1860s, so Cotton's readers were particularly engaged by his discussion of this topic.[34] The engineer described the extra cotton produced by proper irrigation as worth 115 times more than the fee that would be paid for the water.[35] Thus, the project's benefits would not be limited to the companies involved in the trade and manufacturing related to the cotton industry, but every farmer growing cotton in India would stand to benefit. Berar, a province in south central India, was a major cotton producing region, and Arthur Cotton proposed opening the Godavari River for navigation into the province. Cotton estimated that this project would allow Berar to supply cotton to Britain at 25% below the cost currently being paid for American cotton,[36] and these claims were of interest to many involved with the British cotton industry, which was a powerful lobby at the time.[37]

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[32] Arthur Cotton, *Public Works in India, their Importance; With Suggestions for their Extension and Improvement*, (London: Richardson Brothers, 1854) iii.
[33] Morris, *A Descriptive and Historical Account*, (London: Trübner, 1878), 123.
[34] HC Deb 19 June 1862, vol 167, col 776.
[35] Arthur Cotton, *Public Works in India*, (London: Richardson Brothers, 1854) 187.
[36] Arthur Cotton, *Public Works in India*, (London: Richardson Brothers, 1854) 81
[37] HC Deb 5 August 1869, vol 198, col 1348.

Cotton suggested many major irrigation and navigation projects in his first book, but he was aware that the public works administration in India was not sufficient to handle the increased spending these plans would require. As a solution, Cotton proposed creating a new Board of Irrigation and Navigation to take the place of the Board of Works for developments related to water communication.[38] Cotton often complained about the state of the Department of Public Works, but his proposal for a new government body to oversee irrigation and navigation projects indicated his belief that the government should be responsible for developing public works in India. In the following years, Cotton would continue to pressure the government to increase its spending on public works in India, and his ideas would continue to grow in their influence.

Two years after his first book was published, Cotton had already completed a second book. With this book, Cotton sought to use the Godavari project to demonstrate the profits that developing India's water infrastructure could generate. By 1856, the myriad of benefits provided by the Godavari anicut and its supporting works were becoming evident, and Cotton organized this data to argue for the creation of similar works across the subcontinent. Cotton responded to criticisms about the Godavari project going well over the estimated cost with facts that illustrated the success of the project. The total expenditure on the works to the end of 1853 was £180,000, with government revenue increasing by £60,000, exports by £126,000, and net income of the local population by £156,000 in the same period.[39]

By demonstrating the success of his project at Godavari, Cotton hoped to increase government spending on similar projects across India. The engineer believed that the

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[38] Arthur Cotton, *Public Works in India*, (London: Richardson Brothers, 1854) 269.
[39] Arthur Cotton, *Profits Upon British Capital Expended on Indian Public Works, as Shown by the Results of the Godavery Delta Works of Irrigation and Navigation*, (London: Richardson Brothers, 1856) 44-45.

government was the only entity which could develop public works in the colony to any meaningful extent, but he maintained that private investment would be able to play a role at a later point.[40] To support this position, Cotton discussed the rejected proposal for a company to make the Godavari navigable to Berar. The community of Manchester, a major importer of cotton in Britain, considered creating a company to undertake the project, but none was ever formed because of the immense costs associated with the plan. In Cotton's own words, the project possessed "everything that could well be thought of to stimulate enterprise… but nothing has been done by them, and the whole matter has been left to the Government."[41] Though the project would allow Manchester to receive cotton significantly below the prices they were currently paying and reduce Britain's dependence on American cotton; it was ultimately the government alone that had the both desire and the means to undertake an infrastructure project on such a scale.

Many in Britain were receptive to Arthur Cotton's ideas, and it was not long until Parliament was considering his proposals. The outbreak of the U.S. Civil War in 1861 and the implications for British cotton imports served as the catalyst which finally brought Cotton's ideas to Parliament. In May 1861, in response to a petition from Manchester's Cotton Supply Association, the Marquess of Tweeddale suggested making the Godavari navigable to Berar, an idea for which he credited Cotton.[42] The Marquess' position was supported by Lord Harris, former governor of Madras, who called for increased government spending on irrigation projects in cotton-producing districts.[43] Harris supported his proposal on the basis of the financial success of the projects at Tanjore and the Godavari delta, something Harris witnessed personally when

[40] Cotton, *Profits Upon British Capital*, (London: Richardson Brothers, 1856) 60.
[41] Cotton, *Profits Upon British Capital*, (London: Richardson Brothers, 1856) 60.
[42] HL Deb 31 May 1861, vol 163, col 359.
[43] HL Deb 31 May 1861, vol 163, col 363.

he was governor of the region. As the future of Britain's cotton supply remained in doubt, Cotton's ideas would continue to appear in Parliament.

In July of the same year, in another debate on how to develop India's cotton production, the Earl of Shaftesbury, a member of Parliament since 1826, recommended Cotton's ideas as a potential solution to the ongoing shortage.[44] Shaftesbury thought the government must increase its expenditure on public works in India, and specifically on irrigation.[45] To illustrate the benefits of irrigation, the Earl compared the districts of Tanjore and Cuttack. Both districts were of similar size and fertility, but Cuttack had no irrigation works. According to Shaftesbury, the annual revenue of Cuttack was £85,000, while in Tanjore it was £470,000.[46] The Earl also defended Cotton's habit of underbidding, pointing out that "in all instances, the expenditure has been followed by enormous and almost fabulous profit."[47] The Earl de Grey and Ripon, who would go on to serve as the Secretary of State for India and the Governor-General of India, spoke next, and he was similarly receptive to Cotton's ideas.[48] Earl de Grey and Ripon believed that opening the Godavari for navigation was necessary for developing the cotton agriculture in Berar, just as Cotton had concluded in 1854.[49] Next to weigh in was Lord Lyveden. He served as the last President of the Board of Control, his term ending with the abolition of the office in 1858.[50] Lord Lyveden believed that funding public works from India's revenue was not enough to allow simultaneous development of railways and irrigation, and he suggested funding irrigation and water navigation projects with money raised on loan.[51] This is one of the earliest

[44] U.K. Parliamentary Papers, "Hansard Member Profile: Lord Ashley."
[45] HL Deb 5 July 1861, vol 164, col 393.
[46] HL Deb 5 July 1861, vol 164, col 385.
[47] HL Deb 5 July 1861, vol 164, col 386.
[48] U.K. Parliamentary Papers, "Hansard Member Profile: Viscount Goderich."
[49] HL Deb 5 July 1861, vol 164, col 392.
[50] U.K. Parliamentary Papers, "Hansard Member Profile: Mr Robert Smith."
[51] HL Deb 5 July 1861, vol 164, col 394.

Parliamentary endorsements of using public debt to construct public works, and it was directly inspired by Cotton's successful projects in Tanjore and Godavari.

Though Arthur Cotton would never complete another project as successful as those on the Cauvery or Godavari, he continued to influence British policy for decades. In 1867, the East India Association was founded in London to bring Indian issues to the attention of Parliament.[52] Cotton would appear in front of the association many times, and his first appearance before the East India Association was in December 1867. Cotton read a paper he had written titled "The Opening of the Godavery River."[53] This paper argues for the importance of improving navigability of India's rivers, particularly the Godavari River. Additionally, with the growth of railways in the years since Cotton's earlier writing, the irrigation engineer sought to discourage further spending on new lines. In a bid to pressure Parliament to increase their spending on water communication in India, Cotton compared the colony's infrastructure situation with that of other nations, including France, Scotland, and the United States.[54]

Cotton spent much of his time discussing the United States' Erie Canal, which he viewed as the embodiment of his ideas for how public works should be developed. When first constructed, the canal was "a mere ditch," but over time it was enlarged with funding supplied by the tolls generated by the canal.[55] Cotton hoped to mimic this financial model with India's rivers, and this strategy would limit the government's expenditure, which was an attractive idea to Parliament. Though the canal was closed due to frost for five months each year and competed with two double lines of railway running parallel with its course, it was still an incredible asset to

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[52] Gyan Prakash, "Descriptive Index of Mumbai Institutions of the Nineteenth Century," in *Govind Narayan's Mumbai* (London: Anthem Press, 2008), 359-68. https://www.jstor.org/stable/j.ctt1gxp6nf.28
[53] Arthur Cotton, "On the Opening of the Godavery River," *Journal of the East India Association* 2, (1868), 74.
[54] Arthur Cotton, "On the Opening of the Godavery River," *Journal of the East India Association* 2, (1868), 77.
[55] Arthur Cotton, "On the Opening of the Godavery River," *Journal of the East India Association* 2, (1868), 77.

the United States government. According to Cotton, the canal carried over four million tons of cargo annually and was the stimulus for the growing wealth and population of America's interior.[56] Of course, when comparing India and America, the topic of cotton was unavoidable. Arthur Cotton was confident that "the one thing that gives America the advantage over India now in cotton, is its water-carriage."[57] He believed Indian cotton could not compete with American cotton without significant spending to improve river navigation. Following Cotton, other members of the association offered their reactions. Mr. Taylor, a man with personal connections to Berar, described Cotton's paper as "of the deepest importance to the welfare of India."[58] Taylor called for everyone present to study the issue and impress its importance upon Parliament. Other members present were as passionate about the issue as Taylor, and it was not long until similar attitudes surfaced in Parliament.

During a revenue debate in August 1869, public works spending was analyzed in the House of Commons. At the time, British expenditure in India was £1,610,157 greater than the revenue generated by the colony.[59] Public works were still funded through the colony's revenue at the time, and this policy severely limited the amount which could be spent on public works annually.[60] India's revenue was also responsible for funding Britain's military presence on the subcontinent, the costs of gathering and importing salt and opium to Britain, and the railway guarantees. Expenditure in India was on the rise, and the mounting pressure from the public to develop the colony's infrastructure forced Parliament to consider other approaches to funding public works.

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[56] Arthur Cotton, "On the Opening of the Godavery River," *Journal of the East India Association* 2, (1868), 77.
[57] Arthur Cotton, "On the Opening of the Godavery River," *Journal of the East India Association* 2, (1868), 78.
[58] Arthur Cotton, "On the Opening of the Godavery River," *Journal of the East India Association* 2, (1868), 98.
[59] HC Deb 5 August 1869, vol 198, col 1343.
[60] HC Deb 5 August 1869, vol 198, col 1343-1344.

John Benjamin Smith, a liberal member of Parliament since 1847, opened the debate.[61] Smith voiced his support for using loans to fund public works projects. Like Cotton, Smith used the Erie Canal as an example. The canal was first created for small vessels using borrowed money, but the subsequent expansions were funded with the revenue raised by the canal. With a similar strategy in India, Smith believed "India might be covered with every necessary public work without cost."[62] Smith used Arthur Cotton's data from the Godavari project to further support his opinion, noting that the project produced a return five times the amount paid in construction and maintenance.[63] Next, Smith turned to the cotton question, noting that India "had been imploring the Government for years" to improve the infrastructure for transporting cotton out of the colony's interior.[64] Though Smith only mentioned India, he was also referring to Arthur Cotton and other members of the East India Association who had been calling for the same thing. Smith shared Cotton's perception that transport was the greatest challenge holding Indian cotton back. Smith compared the cost of conveying cotton from Berar to Bombay, the primary route of cotton grown for export. For every pound of cotton which made the five-hundred-mile journey, the cost of transit by land was two pennies, by rail it was one penny, and by water via the Godavari it was a half-farthing, one-eighth the price of rail.[65] From start to finish, Smith's argument follows the same course laid out by Cotton over the preceding decades.

The other members that weighed in on the debate shared Smith's assessment of the situation. Thomas Bazley, a cotton spinner before joining Parliament, was next to speak.[66] His previous employment influenced his thinking on the topic, and he proposed that an investment

[61] U.K. Parliamentary Papers, "Mr John Smith."
[62] HC Deb 5 August 1869, vol 198, col 1344.
[63] HC Deb 5 August 1869, vol 198, col 1346.
[64] HC Deb 5 August 1869, vol 198, col 1348.
[65] HC Deb 5 August 1869, vol 198, col 1348-1349.
[66] U.K. Parliamentary Papers, "Hansard Member Profile: Sir Thomas Bazley."

account should be created to fund public works projects which were expected to generate significant returns to the government.[67] Further, he implored that the government increase spending on infrastructure to support the cotton trade. Bazley estimated that the Indian cotton trade had lost £60,000,000 for want of improved infrastructure.[68] In the face of such figures, how could Britain justify limiting public works expenditure to just a portion India's revenue? John Platt, representing the town of Oldham, added to the discussion. According to Platt, Oldham used a sixth of the cotton imported to Britain.[69] Platt called on the government to develop infrastructure related to the growth and export of cotton in India. He believed that these measures were necessary if Indian cotton were to ever eliminate Britain's dependence on American cotton. Taken together, the opinions expressed in this parliamentary debate demonstrated that Cotton's ideas were now considered essential to implement by many in Britain's leadership.

It could be argued that Arthur Cotton reached the peak of his influence in the final years of the 1860s, but his ideas remained relevant and important into the next decades. Cotton's sway had been steadily building since he completed his project in Tanjore. That work convinced Cotton that irrigation could greatly benefit India and Britain, and he sought a larger project which could prove his beliefs to the British government. Upon completing the works on the Godavari delta, Cotton had what he wanted. He spent the next few years promoting the value of irrigation and water navigation, with the Godavari project as proof of his ideas. Cotton remained active after leaving India. He appeared before the East India Association multiple times to pass on his ideas to other prominent figures connected to India. Through his perseverance, Cotton's ideas would reach Parliament, and the results of his work convinced the government that public

[67] HC Deb 5 August 1869, vol 198, col 1349.
[68] HC Deb 5 August 1869, vol 198, col 1351.
[69] HC Deb 5 August 1869, vol 198, col 1356.

works could be constructed with money raised by loans. This allowed Britain to create the blueprint in India that would eventually encourage other nations to use debt to develop infrastructure on a large scale.

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