

evident ; since the average returns per mile, per week, of the above four lengths of line, amounting to 1183 miles, are already less than half of those in the best district, viz. : £19 19s. to £45 10s., the average returns of the 4611 miles of railway, when the "triangulation of India" is complete, are not likely to be more than a sixteenth or twentieth part of those near Calcutta ! and even if they are as much as a tenth, which would be £4 11s., a sum of less than £5 per mile, per week, of which about half is paid away for working expenses, would not go far towards paying a guaranteed interest of 5 per cent., and a charge for "deterioration" of 3 per cent. on railways that have cost £21,000 a mile ; viz. : £5 a week from the average traffic returns, less working expenses, is £2 10s. ; and 8 per cent. a week on £21,000 is £32 6s. ; so that the difference, or weekly loss per mile of railway, would be £29 16s. ; which, multiplied by 4,000 miles, would make a weekly loss of £119,200, and an annual loss of £6,198,000, to be defrayed by the tax-payers of India, whose patience may ultimately be taxed too far, as well as their pockets.

Another vitally important consideration in estimating the profit or loss of railways, is, whether their traffic is what is technically called a "poor traffic," or a "rich traffic ;" which means a traffic paying much or little for the work done.

Of course it makes all the difference in the world to people's profits, whether they receive pounds or shillings for a given amount of work. For instance, there is a difference between England and many parts of the continent, literally of pounds to shillings in the payment of professional men, Ministers of State, &c. ; and such classes abroad could not live on their pay, and would

be ruined, if they had the same expenses to defray on the continent as the corresponding classes have in England.

Now all Mr. Danvers ventures to hope about Indian Railways, is that their expenses "will not be greater than "those in other countries," (para. 165 of First Report); he assumes that they will be about the same; and therefore we ought to be told what rates of payment they receive; whether these also are the same as here; or whether, on the contrary, the Indian Railways are not obliged to carry the bulk of their passengers at rates of from three to five times as low as the rates in England; whether their first-class passengers are not a mere fraction, only about 1 per cent. of the total number; whether they are not obliged to carry the bulk of their goods at equally low rates by comparison; in short, whether their traffic is not what is called a "poor traffic," in the strongest sense of the term.

And further, we ought to be told whether even these low rates on Indian Railways are not still too high to allow Native passengers and goods to travel more than very 'short distances after all? We ought to know what is the average number of first, second, and third-class passengers, and the average tonnage of first, second, third, and fourth-class goods carried over the whole length of their lines; in short, what is the average distance that their different sorts of freight can afford to travel? We have a right to something more definite than the very vague information given by Mr. Danvers on all these points; for it is only by comparing specific results with those obtained in other countries that we can estimate the profit or loss on these Indian Railways.

Finally, let the Government Reporter not forget to

tell us how much of their present traffic returns is derived from a charge for the carriage of their own materials and fuel, which forms a very large proportion of their total tonnage, on some of the lines?

The next item on which Mr. Danvers's Reports are not explicit is with regard to the development of the traffic of the country by these railways.

There is one way in which they must have developed its commerce, viz., by a lavish expenditure. The country had been so drained of capital until the last few years, that expenditure in the interior, for any purpose, even for carrying on war, had the effect indirectly of stimulating the industry of the people; as every rupee spent among them enabled them to produce something not produced before, and was sure to fructify in a land where labour only waited for capital to set it to work. An expenditure, therefore, of forty millions sterling on these railways, of which rather more than half appears to be spent in India, must have enormously increased the general wealth and trade of the country.

But we want to know something more than the general and indirect effect of this expenditure. We have been used to receive reports from Indian officials of the success of any really and eminently useful public work, tracing its effects distinctly in the rise of the Government revenue, and the material and moral progress of the people, in that particular district where the work was constructed. Mr. Danvers ought, therefore, to tell us precisely what has been the effect of carrying ten miles of railway through any inland county of India?

It must, of course, have raised the value of labour and the price of commodities immensely for a time, and perhaps the money spent locally in constructing

it may have doubled the produce of all the neighbouring parishes. But the question is, What has been its permanent effect on the district? Has it made so great a difference in the price of exports and imports, by raising the first and lowering the second, as to establish a simultaneous increase of public revenue and private fortunes, sufficiently marked to induce the Collectors to report upon it to the Government? We know that they would have done so if they could, for their pens are only too fluent, and therefore we cannot help inferring from their silence that the results of these costly railways in developing the traffic of their districts have quite disappointed them.

The last item, and by far the most important of all, on which we require specific information, is with regard to the capacity of these railways for carrying passengers and goods, in such quantities, and at such rates, as India requires.

The Government Reporter was especially bound to give some definite statement on this head, because the capacity of these railways to fulfil either of the above objects has been publicly and repeatedly denied on the highest professional authority, with illustrations furnished by experience in other countries similarly situated to India and in India itself. Yet these arguments have never even been noticed by any responsible official authority; although if the Government knows that they are unanswerable, its conduct in squandering a hundred millions of money on railways, which it knows to be comparatively useless to the people, and refusing to develop water communications, which it knows to be essential to them, is dangerous in the extreme.

Because this tacit admission that railways in India

are comparatively useless to the people, involves the further admission that these railways will not pay that guaranteed interest, whose amount the Government is continually increasing; so that the Native taxpayers will be simultaneously burthened with a dead loss of several millions a year to defray the interest of railway capital, and deprived, by the entire appropriation of State credit to the railways, of those really useful works that could alone make them rich enough to afford such communications.

I do not see any escape from this dilemma. Either the Government can answer the arguments of Sir Arthur Cotton, Captain Haig, &c., or it can not; if it can not, its policy in continuing this railway expenditure is quite unjustifiable; if it can, its Reporter was bound to make some answer. But a man must be simple indeed if he can doubt that Mr. Danvers would have gladly answered Sir Arthur Cotton, if it were possible to confute his reasoning.

As I will refer the reader in an Appendix to the public documents in which the above-mentioned arguments against these railways are contained, it will be unnecessary to do more than give a mere outline of them here. (See Appendix A.)

The incapacity of railways to carry the quantities required in India, results from two causes; partly from the inherent impossibility of carrying more than a limited amount of goods on a *passenger* line, and partly from the vast traffic that must be provided for on the trunk lines of India.

The first cause may easily be conceived by those who have witnessed the choking on the thoroughfares of London; although on these, vehicles can at least pass each other at every step of the way, which is not the case on a railroad.

This choking arises from the fact, that passengers will not, and cannot be expected to travel at the slow pace of goods ; whilst, as every increase of speed involves a proportionate increase of expense, goods cannot afford to travel as fast as passengers, and therefore are continually stopping the way.

But, whereas choking on a common road only involves loss of time and annoyance, on a railroad it involves not only frequent and sometimes fearful accidents, but such a ruinous wear and tear, by running goods too fast to get them out of the way, and such a multiplication of "sidings," that the "London and North-Western Company" found it necessary to make a third line of railway by the side of their old main line, when their traffic was a fourth less than it is now ; that is, when they were estimated to carry between three and four thousand tons a day on the busiest part of their line. They now carry probably between 4,000 and 5,000 tons a day* on the same part, by means of 120 trains worked over three lines of rail ; or five trains per hour, every hour of the day and night.

Yet even this tonnage of the "London and North-Western," large as it seems, is but a fraction of the daily traffic of London, or of what should be provided for on the trunk lines of India. In this little island (little by comparison with India), every district is so near a seaport, that the traffic is not concentrated on any long single line of communication, but divided between a great number of short lines.

In India the case is exactly the reverse. The population there is massed on the deltas of great rivers, several of which are fourteen or fifteen hundred miles

* Reckoning it at two-thirds more on week-days than Sundays.

in length; and the traffic is concentrated on the lines of these rivers to a degree which cannot have any parallel in England; though there is an analogous state of things in the United States of America.

The result is, that, to take the valley of the Ganges as an example, it would require six or seven *passenger* railways like the East Indian, where it is a double line, to give sufficient facility for developing the traffic on this single line: in fact, nothing can do it but a first-rate water communication, able to carry with ease twelve or fifteen thousand tons a day, such as the Government persist in refusing to construct.

The last and most fatal objection to these railways is their incapacity for carrying passengers and goods, at such rates as India requires. These expensive communications of highly civilized life are as useless to a country inhabited by millions of poor to a few hundreds of rich, as an importation of fashionable London equipages would be to the nations of Africa.

There are two reasons why the rates of charge for transit in India should be about twenty-five times as low as the rates in England: one is the difference in the value of money, and the other is the difference in the distance travelled, in the two countries.

It was stated in the Statistical Tables published by the Government in 1853, that the difference in the value of money, as measured by the cost of labour and of the necessaries of life, *and therefore by what men could afford to pay for transit*, was as seven to one: *i. e.*, that money was worth seven times as much in India as it is among us. No doubt its value has decreased since, in proportion to the increasing wealth of the people; but it is still estimated, and I think fairly, everywhere but in or close to the Presidency

towns, at five to one; and this difference in the value of money would alone require the rates of transit in India to be five times as cheap as in England.

But this difference must be multiplied by another still more important difference between the distances travelled in the two countries. In England our railway rates may be cheap enough, because the average distance travelled is comparatively short: ten years ago it was estimated to be about 30 miles. But if England were magnified to the size of India, and the average distance travelled was ten times as far, of course the cost of transport must be ten times as cheap, to permit the same amount of traffic: *i.e.*, if the selling price of an article will afford 5s. for cost of carriage, this sum (5s.) will pay twopence a mile for a distance of 30 miles, but only one-fifth of a penny a mile, for a distance of 300 miles.

The consequence is that in immense countries like India and America, where the average distances travelled are many times greater than in England, and where the cost of transit must be proportionately reduced, no railway can afford to carry cheaply enough to develop a great traffic; and the low rates required can only be secured by first-class water communications.

Assuming therefore that the average distance goods now travel in England is 50 miles, and the average railway charge three half-pence a ton a mile, and that the distances in India and America are five times as great, then the cost on trunk lines in the latter countries should be five times as low, if the value of money were equal; but allowing for a *much less* value of money in America, the charge should there be about one half-penny a ton a mile; and allowing for a *fivefold greater* value of money in India, it should there be about one-

sixteenth of a penny a ton a mile; to give as much opportunity for the development of traffic in these countries respectively, as is given by railways in England.

Now it is curious that this charge of one-sixteenth of a penny a ton a mile, *at which of course no railway can ever afford to carry*, is the actual charge by ocean freight to Calcutta (and it used to be much lower); it is the actual charge for minerals, at long distances, on the Mississippi and the Ohio; it is not much below the present charge on some water lines in India (which is being gradually reduced); and it might soon be the *average* charge by inland navigation in India, if anything like the same interest were felt in its improvement, that is and has long been felt in America.

For it is the most remarkable point in all this controversy, that the whole question of the respective merits and capacities of water and iron communications, has been thoroughly sifted and settled in America many years ago; and the reader will find in a single official report,* presented to the United States' Legislature in 1854, the substance of the arguments on both sides, with that conclusion for which I am contending, established by statistics published by authority (and such as our Government ought to publish).

That conclusion was, that the cost of carriage by good water communication was incomparably cheaper than by railways, and that the bulk of the traffic depended on cheap carriage. The Reporter showed that where first-class water and iron lines competed, the water lines, though closed by frost for five months of the year, carried 108 tons to 1 on the railways, of

* That of the State Engineer and Surveyor, on the Canals of New York

low-priced commodities, and 32 to 1 of the total tonnage; the one 32nd part carried by the railways being either purely local freight, or else very valuable articles, or else perishable things, such as meat and vegetable food, &c., for which there was a fluctuating price and demand in the market, and which could not afford to wait five months until the canals were thawed—(there would be no waiting of this sort in India).

The above conclusion, which has been confirmed by all subsequent experience in America, and has led to the investment of immense sums by the different States in improving the inland navigations of that country, is still ignored by the Government of India, which will patronize nothing but railways, though it does not deny that they cannot give the people of India the very cheap carriage they require.

I give in an Appendix an article from a Punjaub journal on the Scinde and Lahore Railways, showing what a ruinous loss is expected in the country itself from these lines. But although the facts stated in this article are not denied by the Secretary of State for India, their publication only stimulated him to sanction immediately the expenditure of some millions more on similar lines, as if he were in a hurry to commit the Government to as large an expenditure as possible on railways, before public opinion could interfere to stop him. What can be the reason of this?

Two reasons, one a solid and the other a sentimental one, have been assigned for his preference of these railways to every other sort of communication, and his apparent eagerness to extend their construction.

The first reason is, that they will secure our military occupation of India, by enabling troops to move in any direction. But the experience of the present cam-

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paign in America shows that, although water communications secure the movement of troops to the strongest maritime power, it is a complete mistake to suppose that railways do so, in a roadless country like India.

The remarks of a military critic on this subject, written without a thought of their application to another country than America, are so conclusive that I will quote them here :—

“ It is extremely difficult to speculate with any degree of confidence on the military operations of the contending parties. In any other country in the world some conclusions might be reached by allowing a margin for contingencies. But in America the introduction of railways before there was any development of a system of ordinary turnpike roads, the nature of the stoneless clay soils in the South, the physical conditions of the mighty rivers which swell or subside capriciously with incredible velocity, the vast extent of uncleared lands, and the magnitude of the space over which operations are carried on, baffle all attempts to arrive at satisfactory conclusions from any *data* whatever. Beauregard and Johnston would have annihilated Grant, but for two days' rain, which delayed their forces, and gave Buell time to come up and save the Union troops. The rain, which cut up the roads from Manassas to Alexandria, interfered with the embarkation of M'Clellan's army for Monroe, and gave time to the enemy to move troops to the Peninsula. The same agency impeded the march of the Federals to Yorktown, checked them for days, and gave time to the Confederates to add materially to their intrenchments and to their strength. It is scarcely intelligible in Europe that the destruction of the arches of railway bridges, or the tearing up of rails, should paralyse the march of a column for several days or weeks; but it must be remembered that these railways are often the sole means of communication in large districts, that they pierce great primeval forests, span rivers by miles of trestle work, or are carried through swamps on lofty tiers of woodwork, so that the burning of a few bridges may halt an army without a chance of their being able to advance till the damage is remedied.”—*Army and Navy Gazette* of May 3.

The sentimental reason is, that railways are a symbol of our enterprise and power, which will strike the people with awe, and ensure their submission to us. But the world, even in India, has outgrown the age of symbols; and we might as well imitate the ceremony of the Doge of Venice marrying the sea, and try the moral effect of

Queen Victoria's dropping a ring into the bosom of Neptune, as imagine that the Natives will be reconciled to the cost of these railways by the "awfully enterprising" nature of the speculation.

The real reason, as I said in a recent pamphlet, the real reason for the policy of the present and past Secretaries of State for India, with regard to these railways, is the Parliamentary pressure of English public opinion, such as it is, about India. I cannot suppose that Cabinet Ministers understand less of this subject than I do, (in fact Lord Stanley formerly expressed the same convictions)*—but they yield to pressure from without, which has hitherto been exerted on the wrong side.†

In noticing the other day the quarters from which this pressure had proceeded, I forgot to mention the Manchester Chamber of Commerce; whose "*urgent pressure on the Government, from the earliest period to the present, that no consideration should be allowed to interfere with the progress of the Indian Railways,*" was dwelt upon emphatically in a memorial which a Deputation from the Chamber, headed by the Members for Manchester, presented to Sir Charles Wood on the 21st of March last.

* See Appendix C.

† It is said by one of the most plausible of the railway advocates: "No doubt water communications are very good things, as well as railways; why not make both?" (Why not? indeed!) The insinuation is, that although both are not made, it is not the "railway interest" which prevents it. Who is it, then? It cannot be the public, which takes no part in the matter; it cannot be advocates of water communications themselves. Can he mean the Government? Now it is not very likely in these days of a free press that the Government should be less enlightened than the people it governs; and I have heard it said by one of the most distinguished authors and politicians of our age and country, that he believed, from his experience, "the Government was always in advance of public opinion in its convictions." I must say I incline to think so, too; and therefore I must repeat what I said in a recent pamphlet: if the nation now believes that Sir Robert Peel was ready to repeal the Corn Laws at least as soon as the people of England were, the presumption is that Sir Charles Wood is equally ready to develop the water communications of India, as soon as public opinion is prepared to support him in doing so.

This is an exemplification of Voltaire's saying: "On aime son intérêt, et ne l'entend pas." These gentlemen have had their wish, *and no consideration has been allowed to interfere* with the progress of Indian Railways; but all this has profited them nothing, because their pre-occupation about their own interest so contracted their views, that they could not see what their true interest was.

The Manchester manufacturers supposed that all their business with the Government was to get their goods carried into the interior, which railways could do for them; therefore they pressed for railways: taking care not to invest in them. They did not believe, few of them believe now, that the supply of cotton from America could ever be so seriously and permanently diminished as to render them dependent on India for their fibre. They have been wrong on both points. After having got a railway to the North-West Provinces, they find it cannot distribute their goods any more than the Ganges could; and they learn from the Report of the late Col. Baird Smith, that not above one-third of the population can purchase their manufactures, for want of cheap communications all over the country.

If the Government had made these cheap communications, not only would they have brought Manchester goods to the doors of the people, but they would have put plenty of money in the people's pockets to buy them. As the case stands, the people remain poor from want of such communications; and are made poorer still by the heavy taxes taken out of their pockets to pay for these railways—a state of things very adverse to the interests of Manchester.

Again: the Manchester spinners did not believe in

Indian cotton, except as an article invented to keep the price of American within bounds; few of them are hearty converts even now; but now that they are just beginning to believe in Indian cotton, they suppose that a little extra cost by railway will not make an important difference to the price of such a valuable article as cotton, worth ten, and often fifteen times as much as the bulk of raw produce.

But here again they are mistaken. In the first place the extra cost is not a little, but a great deal; and if the railways do not carry cotton at a loss, the difference in cost of carriage between iron and water, will be the difference between pounds and shillings, *i.e.*, between $1\frac{1}{4}$ d. and one 16th of 1d. a ton, a mile; and when the cotton is carried hundreds of miles, this will materially affect the price even of such a valuable article as cotton.

In the second place, Indian cotton may well be disbelieved in, without a great and permanent improvement in its quality. It is of no use now to send samples of what can be done. We have known any time the last fifteen years what can be done; and now, when we want the thing done, when we are sick of hearing it talked about, when cotton planting ought to have been years ago as scientific and lucrative a business in India as in America, we are scarcely a bit forwarder than we were when M. Shaw made his experiments in Dharwar in 1847.

But we have not effected this improvement, and never shall do it, until we give the Indian grower the same advantages as the American; we must enable the Native village, like the "Negro lines," to bring its food a thousand miles, and its clothing fifteen thousand miles, if necessary, and sell its produce without an extra charge for some hundred miles of railway carriage

upon it; we must enable them to realize the same profits in the world's market as their competitors; and make it worth their while to produce an article of first-rate quality, if ever we expect to get a cotton from India that we can believe in.

In short, we must not sacrifice the Mississippis and Alabamas of India to railway speculators; we must rescue the Natives if we expect them to rescue us; and unfortunately the Manchester cotton spinners did not see this in time—they succeeded in coercing the Government, so that *no consideration was allowed to interfere* with the construction of railways; they did not succeed in getting their best markets* and best cotton in India, which they easily might have done, and the result is that their mills are still, and their operatives starving.

Moreover, after they had done so much to urge the Government in a wrong direction, with respect to Indian Public Works, they discovered that it was not their business to urge it in a right ~~one~~, and their especial organ, the "Cotton Supply Reporter," took for its motto the words: "Cotton knows no politics."

Perhaps the motto suited the period they have just passed through. Perhaps they could not be expected to look to the future, or take any thought for public interests, during years of unprecedentedly high profits. But the creed that "Cotton knows no politics," was not the opinion of Manchester manufacturers at the time of the Anti-Corn-Law League; it is not a logical deduction from the situation of the United States; and

* We may judge what the Indian market might be to us from the following facts: Although we are told that not one-third of the people can yet purchase Manchester goods for want of cheap communications, our exports to India have risen from £7,578,980 in 1850, to £21,958,947 in 1861; i.e., they have trebled in ten years; and there is no reason why they should not be trebled again.

if Mr. Bazley is right, as I believe, in saying* that, "Slavery is doomed to extinction, even if the differences in the States of America be reconciled," then the American cotton supply can no longer be depended upon, and Manchester will eventually learn that it is true wisdom, even in this world, to look beyond one's self; that "*sui amantes sine rivali* are many times un-fortunate;" and it would have been better for Manchester to support those politicians who laboured to promote the interests of the Natives of India, because a good supply of cotton, as well as good markets, depended on their success.

What, then, is to be done? Evidently the first thing is to leave off forcing India to borrow endless millions for works that will *not* pay, and allow her to borrow instead for works that *will* pay, for such cheap roads and hydraulic works, &c., as *have* paid enormously in India.

Loans for these objects, to the amount of three or four millions a year, to be repaid within a given period, either by a sinking fund added to the interest, or by an appropriation of the profits of the works;—loans supplemented by an annual publication of local Government reports, giving maps, levels of the country, lists of bazaar prices in different localities, authentic accounts of the direct or indirect profits on such expenditure, and every encouragement to private contractors to undertake parts or the whole of any scheme sanctioned, with such checks on the initiation and sanction of schemes as were suggested by the Consult-

* *Vide the Globe of May 21.*

ing Engineer to the Government of India ; *—loans of this sort would have the following effects :—

1st. They would permit the repeal of the most obnoxious taxes ;

2nd. They would not only save the people's money, but put more money in their pockets ; †

3rd. They would compel an effectual supervision of Public Works expenditure ; and ensure that the most remunerative works, in other words, the works *most useful to the people*, were preferred in the choice of projects, and those prosecuted to completion ;

4th. They would facilitate the introduction of European skill and science, improve our supplies of raw produce, and probably extend the sale of our manufactures, in a few years, from twenty to sixty millions ;

5th. They would soon relieve the Government from the necessity for interference, by tempting individuals to invest their capital independently in the development of the country's resources ; which independent invest-

* Parliamentary Paper, No. 149 of 1861, page 51.

† It is a serious qualification to the warm feelings of admiration with which every intelligent Englishman must read Mr. Laing's Budget speech, to come to such sentences as these : "At least £2,000,000 of our expenditure on Public Works is optional, and could be suspended in an emergency"—"The reserve is there if needed."—"The Government has not been unmindful of the maxim, *si vis pacem para bellum*." Surely the able Indian financier has not risen, in this instance, "*aux niveaux de la science actuelle* ?" Might he not rather have said, "The greatest lesson we have learnt from the contest in America is, that the best reserve we can make for war is to make comparatively none!—to devote almost the entire means at the disposal of Government to promote the education and wealth of the people ; this alone has rendered possible the prodigious development of military force effected by the Federals in a single year ; and though the lesson may not be applicable to Europe, where one country proportions its armaments to those of another, it is applicable to India, where we have no dangerous neighbours, and where we can devote our revenues as exclusively to education and improvement as the Free Labour States of North America did."

ment has raised a thousand-fold the value of the people's industry in England and America ;

6th. They would employ, on national objects, some portion of those tens of millions of English funds, which are now being lent to Russian, Turkish, Egyptian, and other foreign Governments ;

7th. They would be the first instance of the application of India's credit to the making of her own fortune, and would ensure a great name in History for the Minister who inaugurated such a policy.

APPENDIX A.

"Memorandum of Col. A. Cotton, on the Bombay Minutes of the Members of Council on a railway from *Beithkul* Harbour to *Hyderabad*."

"Report on the direct and indirect effects of the Godavery and Kistnah Annicuts, in *Rajahmundry*, *Masulipatam*, *Guntoor*, &c., and the Coleroon Annicuts in *Tanjore* and *South Arcot*."—Parliamentary Return No. 234, 15th April, 1859.

"Reports on certain projects," by Col. A. Cotton, "on the means of connecting Calcutta directly with the Ganges."—H. Smith, Fort St. George, Madras.

"Letter to the Society of Arts, on Indian Public Works; being a reply to the Report on Col. Cotton's papers on Indian public works, made by Col. Baker, by order of the late Governor-General, Lord Dalhousie. By Col. A. Cotton."—Richardson Brothers, Cornhill, London.

"Letter addressed by Captain Haig to the Secretary of State for India, on the navigation of the Godavery river; and Minute of Sir Charles Trevelyan, relating to the Irrigation works, and the Navigation of the Godavery river."—Parliamentary Return No. 54, 6th February, 1860.

Evidence of Captain Haig before the Colonization Committee, 28th March, 31st March, and 4th April, 1859. Report from the Select Committee on Colonization and Settlement (India), No. 198, 7th April, 1859.

APPENDIX B.

INDIA AND HER RAILWAYS.

[Leading article from the *Lahore Chronicle* of March 15th, 1862.]

"It seems ungracious to speak disparagingly of railways, and moreover it requires some degree of courage to run counter to the general delusion on the subject, but the obligations of truth being sterner and more imperative than what is due to mere popular opinion, we shall

not hesitate expressing our convictions concerning the improbability that railways in Scinde and the Punjab will ever be remunerative speculations.

"The Scinde Railway, 106 miles long, and which has been constructed at a cost of above a million sterling, has now been opened for a sufficient time to test its prospects of profit, and from what we have heard of its operation, and from what we know of its receipts, we are justified in predicting that when the traffic returns come to be published, there will be found to be no profits whatever. Meanwhile the capital account, we are informed, is allowed to be swelled by constant accumulations not contemplated by the Government in their contract, and on which they will have to pay interest. Thus it is provided in the contract that after the line has been opened for traffic, the cost of any repairs which may be necessary shall be repaid out of revenue, or be deducted from the interest payable by the Government to the company. But the Scinde line having recently suffered considerable damage from floods, incurred a considerable expense for repairs, which we understand is to be defrayed out of capital, and not of revenue, a proceeding which, if correctly reported, is one full of danger, and a most mischievous precedent, as it saddles the Government with indefinite expenses, and they can never know when their responsibility is to cease. We are further informed that with the view probably of exhibiting as large a traffic as possible on the line—however productive of loss rather than profit—the company is carrying grain at the rate of one farthing per ton per mile. In Europe and America it is found that less than one penny per ton per mile will not reimburse the expenses of carrying goods on a railway, and in India the cost of railway conveyance for goods cannot be made less than it is in other parts of the world, without a loss instead of a profit resulting. The truth cannot long be concealed by such shifts, and it is far better that the Government should look the matter in the face, and reconcile themselves to the conclusion that the Scinde Railway project was a mistake—that it was carried out with a needless expense, and that its position and prospects are now maintained in a needless obscurity. It is hopeless to contend with physical facts. If we have made a blunder it is better to admit it and to extract from the error a caution for the future. How could any reasonable man expect that a railway carried through such a country as the Scinde line traverses, could return its expenses? As well expect figs from thistles. In other countries fertility and wealth and population are supposed to be the necessary antecedents of a successful railway. Do the deserts of Scinde possess these conditions of prosperity? Those who have travelled in these districts, or have gained information from trustworthy sources, very well know that from end to end of the Scinde Railway there is not a town, and scarcely a village or field. And if any person on this locality has been led into taking shares in such a scheme, it is mainly on the inducement of the Government guarantee, which, however, recent revelations show is not of the absolute character that was supposed. In fact, it appears that, notwithstanding the guarantee, shareholders may receive nothing whatever, as

is stated by Mr. Slaughter, the secretary of the Stock Exchange, in his publication on Railway Investments. While therefore the Government suffers a heavy loss, the shareholders may be left without any dividend whatever, and in the case of the Scinde Railway it is difficult to see from whence a dividend could come.

"The line between Lahore and Umritsir presents, we are happy to say, better prospects, nevertheless we have serious doubts whether even it will prove remunerative. It has been constructed at heavy expense. Its length, 33 miles, is not such as to make it worth while to tranship grain and other commodities from the carts on the road to the railway, and the road is so good that the force of traction required to draw vehicles upon it is not much greater than it is upon the railway. The ekkas upon the road at present carry passengers from the heart of the city of Lahore to the heart of the city of Umritsir for 4 annas, or six-pence sterling, and what railway can beat that in cheapness with profit to itself?

"With regard to the Mooltan line, its prospects appear to be worse than those of the Scinde, as the country it traverses is equally destitute of towns and population, and it is 206 miles long instead of 106, and most of the materials required for its construction have to be brought nearly 1,000 miles into the interior of the country at a very heavy expense. The whole tract of country, stretching from Mooltan to Lahore, is almost one unbroken field of stunted jungle, inhabited chiefly by goats and their attendants. Can any man, woman, or child, believe that a railway carried through such a country will return its expenses? The waste of capital on such barren enterprises, lamentable though it may be, is even less to be deplored than the discouragement which will be cast by such examples on the influx of European capital into India; and who in England will believe in any Indian undertaking, when they have suffered so severely from gigantic delusions?"

APPENDIX C.

Extract from Lord Stanley's speech at a Meeting of the Manchester Cotton Supply Association in 1857:—

"As to roads, he feared we were in danger of being misled by the precedent and example of England. It seemed to be thought that because costly lines of railway for high speed were suitable for this country (before a line was constructed we had a complete canal system, adequate to our heavy traffic), they were equally suitable for India. He believed, and so did more competent judges, that *that system of proceeding was a complete mistake*. What was wanted in India was not costly lines for rapid travelling laid down in a few

parts, but a comparatively inexpensive, though slow, means of communication extending over the whole face of the country. In that matter we should follow the precedent of the United States rather than of England."

Extract from Lord Stanley's speech in the House of Commons, June 23rd, 1857. (See Hansard, page 298.)

"The result of that absence of an influential public opinion, independent of the governing class, was seen in the constant and notorious tendency in the Indian Government to quarrel with its neighbours, which quarrels invariably exhausted funds that might otherwise have been devoted to the improvement of the country. Nothing could keep an Indian Governor-General quiet except a deficit, and even that would not always do it. The public in India consisted of civilians and the military. The civilians foresaw an extension of patronage in every new annexation, and both they and the military were flattered by prospects of the extension of the power of this country. Even the missionary interest, he believed, was not hostile to what might enable it to propagate, under British protection, its opinions in a new district. And so it happened that whenever there was any prospect of a dispute it was almost certain that all parties would be in favor of a warlike policy. He did not say that from theory only. He was in India at the time that the second Burmese war broke out. He was not about to criticise the policy of that war, but this he would say, that before it was competent for any man to have formed an unbiassed opinion upon the dispute between the Indian and the Burmese Governments, before any certain or authentic information had been or could be received, there was throughout the country a cry taken up by every class of Europeans, without arguing, without hesitation, and without reflection, in favor of going to war. He mentioned that fact because the same causes still existed and were likely to exist for a long period, why we need not hope that the surplus revenue of India would be applied to the development of its resources. If we were to wait until India applied her revenue to works of internal improvement we might have to wait for a long time. These works should be undertaken without regard to the question of surplus or deficit, for looking at the question in a merely financial point of view, the cost to India of delay will be much greater than if they were carried out at once."

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ADDRESS
TO THE
MEMBERS OF THE HOUSE OF COMMONS,
ON THE RELATION BETWEEN THE
COTTON CRISIS
AND
PUBLIC WORKS IN INDIA.

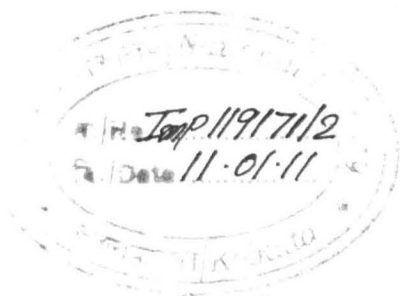
BY
JOHN DICKINSON, F.R.G.S., F.R.A.S., F.E.S.,

Chairman of the India Reform Society.

London :
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ADDRESS, &c.

It has occurred to me that it may be useful to Members of Parliament, to give them at the beginning of every Session a clear explanation, not of India questions generally, but of those one or two India questions which press for solution at that particular moment. I shall therefore begin such a system now, intending to follow it up in future, if I have the opportunity of doing so.

The particular instance in which our India policy most requires reconsideration and reform at this crisis, is in the system pursued with regard to Public Works. But in confining my remarks to this subject, because of its urgency on the present occasion, I must beg that it be understood that there are many other first-rate questions, both political and administrative, which are in an equally unsatisfactory state, and whose consideration cannot be indefinitely postponed with safety.

The radically vicious system which has been, and is still, pursued with regard to Public Works, has received the strongest illustrations that can be conceived in the last year.

First came the famine in the North-West Provinces, and the Reports of the late Colonel Baird Smith upon it, have borne out the statements made in my pamphlet last Session, that a drought need not bring a famine; and the famine might have been prevented if those works of irrigation and communication had been constructed, whose necessity has been constantly urged

upon the Government since the previous famines in the same quarter. He also confirmed my statements, that distances of less than fifty miles sufficed to raise prices to famine rates in many places, from the utter impossibility of communicating between them for want of roads; he showed that the value of produce, and the sale of British manufactures, was measured exactly by the cheapness or expensiveness of communicating with the interior; and, finally, he stated that the profits of irrigation were estimated to add about 50 per cent. to the land revenue; so that the works required for the preservation and the profit of the people, as well as of our manufactures, would have been also enormously profitable to the Government, and yet they were not made! nor, as I shall show presently, is there any adequate provision for their being made, even now.

Next came the premonitory symptoms of a cotton famine in England; a famine which will be due entirely to the refusal of the India Government to make the required cheap communications and works of irrigation, although they yield an enormous profit.

The important fact that India might compete with America in our cotton supply, was first developed by General Briggs, with an extraordinary amount of accurate information, in the year 1842.

Five years afterwards, in 1847, Mr. Bright moved for a Parliamentary Committee to inquire into the question; and in 1850, in consequence of the Report of that Committee, he moved for a Royal Commission of Inquiry to India, on the model of the one which had elicited such valuable information, and produced such beneficial results, in the previous case of Ceylon.

This being refused, the Manchester men sent out a Special Commissioner for the purpose at their own

expense; but the premature death of this gentleman, Mr. Mackay, rendered his mission almost abortive, though he did collect much valuable information; his posthumous papers could not be published till just after the great struggle against the Company in 1853, when both Parliament and public were tired of the India question.

The first warnings of a cotton famine, however, led some of the cotton spinners to adopt a very wise resolution, which must eventually bring this question of Public Works in India, to a successful issue. This was, to step out of their legitimate course of business in such an emergency, to form a Cotton Supply Company, and send out an experienced agent to India, to develop the supply from that country, and report upon the obstacles which had prevented its competition with America to the present time.

The energetic action of these gentlemen obtained one great concession from the India Government, almost before their agent, Mr. Haywood, had commenced his work. Their representations of the obstacles opposed to progress of every kind, by the defective system of land tenures in India, after being snubbed by the Government at first, elicited a few weeks later the announcement from the same Government, of a complete change of policy on the subject; viz., the promise that a permanent settlement of the land tax should be substituted for the present temporary settlements, that its redemption should be permitted at twenty years purchase of the present rate; and that the waste lands should be sold as freehold property.

In the same spirit their representations of the present defects in the native mode of cultivating cotton, were snubbed by the Government at first, though a few

weeks afterwards it was obliged to explain away its denial of their statements, when it was proved by Mr. Haywood that in every district, by the mere difference of ploughing the soil, instead of scratching the surface a few inches deep, as practised by the native cultivators, the yield of cotton and all other produce was increased to between three and four times the quantity; besides other improvements which could be made in the cultivation.

The only point on which their representations have hitherto failed to obtain anything but evasion and paltry palliatives, is the question of Public Works.

I should mention here, that an agitation for cheap communications and works of irrigation in India, has been going on now for upwards of sixty years, as I can trace it back so far; and during the last twelve years, in which it has been the chief business of my life, it has been continued, either in the press, or in Parliament, or in public meetings, without the intermission of a single year, although to this hour we should perhaps have no more chance of obtaining an adequate provision for such works, without the accident of a cotton famine, than we had when the present generation began.

It may be different now that the attention of Parliament is called to the question, as it cannot fail to be this Session, by the distress and danger of our manufacturing districts; and when Members of Parliament see that the interests of India and England are identical in this matter, that the Reports of Mr. Haywood in the South, entirely confirm those of Colonel Baird Smith in the North, as to the effect of leaving the country without such works, and that the want of them is the sole cause why India did not long ago compete with,

and even beat America, as a source of cotton supply, and a market for our manufactures, it will then be seen whether they will support the Government in its reiterated refusal to make a proper provision for the construction of these Public Works.

It may be asked: Why, since the reported advantages of constructing cheap communications and works of irrigation, are so great, should the Government refuse to make a regular provision for them?

The real reason is, that this has for years been a *party question*, in the House of Commons as well as out of it; and as the strongest party in the House were opposed to a change of policy in respect to Public Works, it has of course prevented it. I will endeavour to explain clearly the rise and progress of this party spirit; because it is impossible to understand the situation of a political question without some clue to the *dessous des cartes*, and some knowledge of the private interests and passions enlisted for or against it.

The party whose views I advocate, and which has hitherto been the weakest, is represented by the illustrious Sir Arthur Cotton; and as this party began of necessity by denouncing the shortcomings of the Government, and leant mainly on Sir Arthur Cotton's bold exposures of the impolicy and inhumanity of the old system, it has been from the first obnoxious to the hostility of men in power, and its leader has been especially odious to all the old Indian authorities, aided underhand by the jealousy of rival engineers.

The opposite party is formed by the union of the old Company's servants with the representatives of the Indian Railways; and this party has hitherto had a preponderating City and Parliamentary interest on its

side; and has, therefore, always been supported by the Minister for India, whoever he happened to be.

This last circumstance having caused a good deal of misconception, and having led even enlightened men to look upon this struggle as a personal one with the Secretary of State for India, I think it absolutely necessary to digress here for a moment, to clear up this point by the light of those general principles to which it is sometimes necessary to recur, to avoid being warped by the current of political discussion; more particularly as I have had to make this enquiry in my own case, and to consider why it was that after so many years of hard and not ineffectual labour to reform the Indian administration, and with *acknowledged* high claims to official consideration, I should still find myself dealt with as cautiously by the India authorities as if I were a "*suspect*," always under surveillance.

The explanation will be simple enough if we abstract our minds from Sir Charles Wood and the India question, and take some other illustration from history, when we shall find that the conduct of all Ministers in certain situations, is governed by laws which are independent of their personal sympathies.

I might go back for an example to the most successful of all Whig Ministers, the man whose good sense at a critical period decided the destiny of this country for a century to come, and refer to the acute analysis of Sir Robert Walpole's motives for his *quieta non movere* system, in Lord Hervey's Memoirs.

But I prefer to take the illustration, more familiar to every one at the present day, of Sir Robert Peel's conduct on the Corn Law question. The Tories have always accused Sir Robert Peel of treachery on this question, and it is the general belief of the nation that

he was convinced in private long before he gave up the defence of the Corn Law in public; nevertheless the fact is, and I am sure those who bore the brunt of the battle against him in Parliament, and in deputations, will confirm what I say, that he continued to defend the Corn Laws, not only with every fair argument, but with every dodge of the most expert political fencer, as long as defence was possible. And why? because in this country a Minister of State is really and truly the servant of the public, and can only govern on condition that he obeys public opinion; so that although one Minister may be not clever enough to see when the tide begins to ebb, in which case it will leave him on the mud; or another may be vain enough to try to stand against it, in which case the stream will go over his head; every prudent Minister knows he must publicly ally with and defend the opinion which prevails in Parliament: unless he can be sure that Parliament no longer represents public opinion, and he can safely appeal to the country against it.

The result is, that as every innovation must oppose the previously dominant opinion, every prudent Minister is disposed, as Lord Bacon has it, to *stare super antiquas vias*; and inclined, like Sir Robert Walpole, *quieta non movere*, to discourage innovators, and to argue, as Sir Robert Peel may have done, that a Minister's natural allies are those who have power, and it is his business to defend them as long as they can keep it; especially as innovators are equally sure of having power on their side in their turn, if they can change public opinion; although a Minister is sure of nothing but losing his place, if he anticipates the public in going over to them.

It is therefore premature to insist upon converting

the Minister, while there is a lion in his path, in the shape of a Parliamentary majority; whereas from the time we succeed in reversing the Parliamentary majority, we shall be sure of the support of the Minister, whoever he may happen to be: and I do not despair of effecting this during the present Session.

Now, to return from this digression, it remains for me to explain why this struggle for Public Works has been such a desperate party fight against the Railway men, as well as the old Indians, and to do this it is necessary to sketch the history of the Indian Railways *ab initio*.

The first projects for Indian Railways were hatched at the time of the "railway mania," culminating in the year 1845, when the nation was generally divided into two great classes, one of dupes, who believed that the iron age was to bring back a golden one, and another of C. E.'s, contractors, lawyers, and "promoters," who were ready to accommodate the first class by undertaking anything, anywhere, for a consideration.

Among the projects designed for India at this auspicious period, the maddest of all was deemed to be one for "triangulating India with railways," to connect the different Presidencies, at a cost of, the C. E. didn't know what, but estimated, not much less than *fifty millions*—("cost" didn't much matter then to C. E.'s; it wouldn't come out of, though a good deal of it would go into, their pockets; and "let him lend me the money and have at him," was the tone of those rollicking days of '45).

This scheme was treated at the time, by those who knew the vast extent of country covered with jungle, or deserted by its inhabitants, and the physical obstacles intervening between the three Presidencies, as simply a

"laughable absurdity;" it was pronounced on grave authority to have "nothing sound in it, either morally or financially;" and none of those who then saw it end in smoke, like other bubbles of '45, could have dreamed that the views which were *even then* considered "visionary and chimerical," would be ultimately adopted by the Government, which would seriously undertake to carry out this very scheme, at double the cost estimated by the C. E., and at the sacrifice of all those Public Works which India really required.

I must now describe how this strange turn of the wheel came about. For several years after the famous 1845, almost nothing was done in Indian Railways. At length two petty projects, connected with Bombay and Calcutta, after dragging for years through the mire of jobbery, were enabled to start, by Government assistance, in 1850 and '51; the latter of these having supplanted the scheme projected by Lord William Bentinck, and recommended after careful survey by the most eminent Bengal Engineers, of bringing a canal from Rajmahal on the Ganges to Calcutta, which would have been perhaps the greatest boon ever conferred on any country in the world, by any public work! (The project has been again recommended, within the last few years, by Sir Arthur Cotton).

At length came the crisis of Indian Railway history in 1852. For several years before this, the Company's Government had been so incessantly and effectively attacked in various quarters for its neglect of public works, that when the time for the renewal of the Charter drew near, it was at length seized with a panic on the subject, and felt it necessary to promise something *eblouissant*, which should dazzle the public and

Parliament, and blind them to the gravity of the charges against it on this score.

Accordingly, in the autumn of 1852, a few months before the Charter discussions began, the late Lord Dalhousie, who was the incarnation of Company's Government, issued his famous Railway Minute, on which the present system is founded, recommending that very "triangulation of India with railways," already described, which had been too bad even for the ostrich digestion of 1845!

Very different was the fate of the project when recommended by Lord Dalhousie, and backed by the Company's Government, the Cabinet, the Old Indians, and vultures from the city, who smelt the carcass afar off.

Lord Dalhousie's policy was not then seen by the light of the Sepoy Mutiny, the Torture Report, the Public Works Loan swindle, the two millions deficit in the Punjab,* Mr. Halliday's Police Report, and sundry other revelations which have since opened men's eyes to the character of his administration; in 1853 he was a great authority, and his word passed current for the value of a scheme for "triangulating India with rail-ways."

In vain, at the time and for years afterwards, did Sir Arthur Cotton and one or two of his school write and speak to demonstrate that this project "had nothing sound in it, either morally or financially," any more than it was judged to have in 1845; and that it not only was a bar to present expenditure on works that were really required by the people, but would raise up colossal monied interests, dreading the competition of

* See Lord Canning's Financial Resolution of November 11th, 1861.

really useful works, impelled by self-defence to oppose their construction, and powerful enough to oppose it with success.

Sir Arthur Cotton and his party proposed that, since it must take a long time to construct railways, or any sort of first-class communications in India, to open the country first, as fast as it could be done, by such rough-and-ready, make-shift modes of conveyance as could be laid down very rapidly and cheaply, and yet were found by experience in Madras to save three-fourths of the cost of carriage (just as contractors find it answer to throw down light temporary tramways during the execution of great works in England), and then to develop those irrigation works, and cheap-carrying inland navigations, which were infinitely more necessary to India than lines of high speed railway.

Unfortunately, at that period there were popular fallacies about railways in this country, which prevented our arguments from making a due impression : fallacies scarcely yet dispelled by the crucial test of declining dividends.

These were, that railways could carry any amount of goods ; and carry them with profit, at almost nominal rates of freight ; that time was money in the carriage of goods ; and that water communications were an " inferior means of transit " compared with railways, which were " the more modern and scientific " means of communication.

This last delusion was so far excusable, that in this island men had not seen a first-class inland navigation ; and although told that they might see it on the Hudson, and elsewhere in America, they could not, without seeing, believe in a mode of communication which conveyed goods and passengers, luxuriously and profitably,

at the rate of 20 miles an hour, for a tenth part of the cost by railways. And they forgot that even round our own coasts, and much more to distant countries, only the incomparable cheapness of water carriage permitted the transport of millions of tons of goods, which would be absolutely prohibited by the cost of any sort of land carriage.

The next fallacy, that it is the rule, instead of being the exception to the rule, that time is money in the transport of goods, was disproved by Sir Arthur Cotton's calculation of the value of an increased speed of 10 or 11 miles an hour, the assumed gain by railways, not to those valuable manufactures which are but a fraction of the goods carried, but to the bulk of commodities, such as grain, minerals, raw produce, and cheap goods, on which, this increase of speed would cause no appreciable difference in their price: he compared it to the gain from sending corn to market in a gentleman's carriage. Indeed, the fact that, where there is the keenest railway competition against good inland navigations, and where there is the greatest loss of time by the latter mode of conveyance, the Ohio river and Erie canal, which are closed by frost for several months in the year, carry from six to twelve times as much tonnage as the railways, is the most effective disproof of the fallacy that time is money, in this case.

Another fallacy, that railways could carry with profit at almost nominal rates of charge, was the less excusable, that statistics had then been published by the American and Continental Governments, corroborated by the experience of owners of private lines in England, showing that, even at slow speeds, railways could not carry heavy goods with profit at less than about a

penny a ton a mile; and therefore could not approach the cheapness of good navigation, nor enable mankind to dispense with it in developing the commerce of continental countries, where the average distances travelled were four or five times as great as in England.

The last fallacy I have noticed was that railways could carry any amount of goods. But it was soon found out that unless all trains run at uniform slow speeds, the fast trains overtake goods at such a rate, that in spite of any number of sidings, in spite of every device of skilful management, such as keeping miles of goods trains to start at night, &c., it was impossible to prevent choking, with fearful collisions, or running goods trains at ruinous speeds, so that practically the limit of a first-class railway's carrying power is reached by a mere fraction of the traffic that can pass over an inferior water line, such as the Thames at London. And yet the East Indian Railway people assumed that they could transfer the growing traffic of the Ganges, said to be now three million tons, on to their line to Calcutta! (or rather their "line to "Howrah;" for the station is separated by a broad and deep river from Calcutta).

Such fallacies as these about railways, being prevalent in England when the "triangulation" scheme was adopted, naturally biassed the public against our opposition to it; and the debate turned almost wholly on communications, not on hydraulic works. The public certainly thought we were right on the latter point, though they did not follow out this opinion to its logical conclusion; but as they did not then see that we were equally right on the former one (and the manufacturing districts are now suffering for it), our

opponents could safely sneer at "Colonel Cotton's estimates," and pooh-pooh our arguments.

As these sneers at "Cotton's estimates" still continue, and have their effect upon ignorant people, I think it worth while to pause here for a moment to inquire what ground there is for them. There are two sorts of estimates by Sir Arthur Cotton, which are open to criticism. The first are for works constructed by him, where he is charged with having exceeded his estimates; the second, for works proposed in his writings, especially in his book. In the first case it is admitted that he has exceeded his estimates; but there are few people who have not made the same mistake in the course of their lives. The India Government and the Railway people live in glasshouses, and ought not to begin throwing stones on this ground; and the Madras Public Works Commissioners, who formally examined this charge in 1852, not only vindicated the above specific cases of excess, but passed a high eulogium on the soundness of Sir A. Cotton's general calculations, and the astonishing success of his operations in consequence. In the second case, the estimates in his book were revised by a number of scientific men before publication, and they are almost always calculations from exact data, verified by long and wide experience.

It is opportune here to consider one of these calculations, founded on the most scanty data of all, viz., his estimate of "the loss to the country for want of cheap communications." He reckoned this seven years ago at thirty millions sterling a year, half in actual payments from increased cost of carriage, and half in preventing the growth or sale of produce. This calculation was not disputed at the time; it was, as I have said, carefully revised by others before publication;

and I believe it was intentionally below the mark. For instance, we are all now hoping on very strong grounds, that India will in a few years export as valuable a cotton crop as the United States did ; if so, or if it reaches only 75 per cent. of the American crop, here will be thirty millions sterling in cotton alone, to say nothing of other staples, which India has hitherto been prevented from growing and selling, solely by the want of cheap communications! I believe the loss seven years ago was far more than Sir A. Cotton's estimate of thirty millions a year ; but even assuming it was less, assuming that it was only twenty millions a year, surely his conclusion from it was right, that we ought to stop such a loss at once, by the first means that came to hand, rather than let it go on for years, while we were slowly constructing the most costly and perfect means of communication we could think of ;—as in the case of a man bleeding to death from an injury, the first thing would be to stop the bleeding, and then set about a radical cure of his injury. But the Government thought differently ; they decided that the annual loss should go on until they could stop it by “triangulating India with railways.” Let us see if this could stop it?

I think it quite practicable to explain Sir Arthur Cotton's principles without any estimate at all, and I will therefore now endeavour to answer the separate questions involved in the general one of “communications,” such as, “what is opening a country?” what are the objects of it? how is it to be done most quickly, cheaply, and effectually? without a single estimate, except those which the reader cannot help making for himself—to begin at the beginning:—

What is opening a country? Is the making a hundred miles of first-class railway through a roadless

country, opening that country? It is more like trying to bleed a frozen body, before the blood has begun to circulate. Evidently the first thing to open a hundred miles through any country, is to make as many thousands of miles of communication as will enable the people to move about and exchange their products, and arts, and ideas, on the square of that line; otherwise, without a previous free circulation on all sides of it, there can be nothing for the line to open. This was done in England, before we began our railways. It has been done in two districts of India, which are therefore the most flourishing of all. In Tanjore there are a thousand miles of tolerable communication. In the Godavery delta there is a perfect network of roads and canals; and the results are marvellous; the exports are raised from between £50,000 and £60,000 to nearly £500,000 a year, and the wealth of the people has risen in proportion; the revenue is now 40 per cent. higher, and will be cent. per cent. as soon as the irrigation rates are fairly assessed; and all this because people are enabled to grow 4 or 5 times as much by irrigation, and then to sell it by really cheap communication. For instance, by charging only one-tenth of the rate which the Government Consulting Engineer reported did not pay on the railway, a Navigation Company in this delta have been making dividends of from 30 to 55 per cent., although their charge, the $\frac{1}{8}$ of a penny, is admitted to be a great deal more than it ought to be, and will be eventually. The expense of doing all this has not equalled the cost of 25 miles of Indian railway, and I ask the reader to compare the effect, if he can discover any, of 25 miles of Indian railway in any district, with the above effect of 1000 or 2000 miles of cheap carriage in the Godavery delta, and make his

own estimate of which is the best mode of opening a country.

But again, what is opening a country, with such distances as we have to deal with in India? How is raw produce to be carried 500 or a 1000 miles? For instance, wheat is from 30s. to £2 a ton in the interior; rice is £3 a ton on the coast; the great bulk of commodities may be worth about £2 a ton; their price is often quadrupled by 500 miles of carriage; how can they be exchanged under such circumstances? Of course they are not exchanged at all, as a rule. Even in the case of such a necessary of life, especially to a people living on vegetable diet, as salt; a ton of salt, costing the Government 10s. at the pans, and sold by Government for £2 10s., is often as much as £16 in Berar! The cost of carriage prohibits its consumption. Such a valuable article as cotton is almost stopped by it; a ton of cotton, worth at 2d. a lb. £18 10s. in Berar, is raised by cost of carriage to £35 or £40 at the coast; and so with other things. How are we to open commerce at such distances?

It can only be done in India as it has been done elsewhere, where similar distances had to be traversed; as for instance in America, where food and other produce is often carried 1500 miles with a good profit, which rots on the ground in India, because it cannot reach a market 200 miles off.

A very impartial authority on America, Mr. Russell,* tells us that such a "high-priced article" as cotton will bear, what other produce will not bear, the cost of being conveyed by waggons 150 miles, "*to be put on board the river steamers*;" and he describes as follows,

* "North America: its Agriculture and Climate," page 292.

“the facilities for transporting the cotton crop from the interior to the coast towns.” The larger rivers in the Southern States draining the Atlantic slope, are navigable by steamers from their mouths to the granitic formation, which is distant from the coast from 100 to 150 miles in a straight line. Those rivers also which flow into the Gulf of Mexico are navigable by steamers for the greater part of their course. On the Alabama 500 miles, and on the Mississippi and its tributaries no less than 25,000 miles are navigable by steamers.” He tells us elsewhere that there are 1500 of these steamers on the Mississippi and its tributaries alone.*

Now, would it not seem something like insanity to propose to substitute for this navigation a line of railway, starting not at New Orleans but on the opposite side of the river, running some hundred miles up the banks of the Mississippi, crossing its great tributaries at their embouchures, and charging for freight, even then apparently without profit, ten times as much as ordinary water rates? Yet this is the plan which the Government has preferred for “opening the valley of the Ganges!” and the reader may estimate its chance of success, without any help from Sir Arthur Cotton.

In the same way, though I will not stop to describe them, the Northern States of America are opened by magnificent lines of cheap navigation, where the distances are too great for land carriage; and as equal facilities are given by nature for opening India, and the most expensive of all the water lines opened in Southern India have not cost more than £700 a mile, and light tramways and roads about half as much, Sir Arthur

* “North America : its Agriculture and Climate,” page 253.

Cotton recommended the opening all India by a network of communications, like that whose effect I have described in the Godavery delta, instead of spending more money than he wanted for the purpose, in "tri-angulating India" with 2,900 miles of railway.

But perhaps he little knew the combination of interests he had to fight against! The cabal of Old Indians, railway men, and city men, carried the Parliamentary majority, and the majority carried the Minister for India. The Government decided against Sir Arthur Cotton, and the Government is absolute. There is one thing, however, which even an absolute Government cannot do; it can make the Natives pay for railways at the point of the bayonet; it can keep on saying that doubling their loss will make it a gain; but it cannot make the people believe it! After all, the people know best what they want most, and what they will pay most for; and as the *vox populi* must speak out at last in the profits of our speculations for them, let us see what are the profits on our different classes of works in India.

1st. IRRIGATION WORKS.—The profit of these was finally established by the famous Madras Report of 1852, signed, among others, by that very Colonel Balfour, whose name stands now on a pinnacle of reputation, for the extraordinary energy and ability with which he has carried out the scheme of military retrenchment, so as to save many millions a year. This Report, proving that the average profit of irrigation works on a large scale, in the different districts of Madras, was already 70 per cent., and continually increasing, quite settled the point at that time in public opinion, as I have already observed. It has been said since, that irrigation works in Northern India have not

paid their expenses. If true, this would only prove either that there was some vice in their construction, or that they were unfinished; but I do not understand how it can be true, when Colonel Baird Smith has just reported that they are estimated to pay 50 per cent., and given detailed proofs of their great profit. When the question was again raised in Madras, six years after the Report of 1852, the Government formally declared that "the returns from irrigation works are *"always considerable, and often immense;"* and added, that "a judicious expenditure" upon them, was a better way than "any scheme of retrenchment or reduction," to make the finances flourish. (See Despatch of May 15th, 1858).

2nd. COMMON ROADS.—The profits of a "judicious expenditure"* on these have also been very great; in fact, almost the entire value of the Government monopoly of land, salt, &c., has been created in some districts by new roads. But it is not easy to specify these profits, as it has been as much a part of the old India policy to suppress such proofs of the value of public works, as it has been a part of our long struggle against that policy, and is so to this hour, to get a systematic publication of these accounts. However, I gave some evidence of the profits of roads in my letters to the *Times*, on "the Cotton and Roads of Western India," in 1850 and 1851; and I have known instances where the whole cost of constructing a road was repaid to Government in a few years, though I cannot now spare time to exhume them from the mass of reports

* Because the expenditure has often been most injudicious. The Government has made roads for military purposes, without the least reference to the wants of the people, which of course are a loss. It made roads down the two sides of the Carnatic, which are literally crossed by the commerce of the country at right angles; because, as in America, the produce always takes the shortest cut to water carriage.

and letters in which they are buried. The Madras Report of 1852, above mentioned, cited one case in which roads in Malabar had repaid their cost to the Government three times over, during the fifteen years since they were first begun; and other such cases are to be found in the records of Indian administration.

3rd. INLAND NAVIGATIONS.—The profits of these are so mixed up with those from irrigation works, that it is difficult to distinguish between them; and with the exception of the Nuddea rivers and coast canals, which are merely short links between long ocean back-waters, the whole cost of navigable channels has generally been defrayed by the profits of irrigation. But the profits of water carriage, *per se*, may be measured by the dividends of some of the carriers; *e.g.*, the dividends of the Ganges Navigation Company have been from 50 to 80 per cent.; those of the Ganges Canal Company have been 30 per cent.; those of the Rajahmundry Transit Company have been 55 per cent; and last, not least, those of the East Indian Railway Company's Steamboats have been 100 per cent., as stated by the Chairman, Mr. Crawford, at the Railway Meeting of October 28th, 1858.

4th. RAILWAYS.—The profits of railways appear to be any amount of I.O.U.'s, but no money down. Taking the latest official Government statement as my authority, viz., Mr. Danver's Report of 1861, the only professedly remunerative section of Indian railway was shown to pay 5 per cent. (the guaranteed interest); and I will confine my remarks to this section, partly to save space, and partly because it will afterwards be evident what utterly hopeless concerns the Madras and Bombay lines are, which don't even pay half so well as this first section of the East India Railway—from Calcutta to

Cynthia. This section of 166 miles was shown to pay 5 per cent., because the annual interest of the estimated cost, £16,000 a mile, was £132,800, and the so-called net profits of the year ending June 30, 1861, were £133,251, leaving a balance of £451 to pay debts to Government, depreciation, &c.

The first remark I have to make on this statement, is with regard to the estimated cost. So far back as the year 1854, I stated publicly, giving all the data for my assertion, that the first 120 miles of this section had cost fully £20,000 a mile; nevertheless the railway estimate of £12,000 a mile, was adhered to so late as Mr. Danvers' Report of 1860, and was only given up in his last year's Report, where he tells us that "calculations have hitherto been made on the assumption that the cost would be about £12,000 a mile, but it is now estimated that it will be upwards of £16,000" (para. 50).

The next thing to be noticed is, that although Mr. Danvers exhibited a profit on the above section of 5 per cent., he admitted (para. 42) that there was a falling off in the mileage receipts of 12 per cent., which he "accounted for by the additional length of line which has been opened" (para. 41). He stated the same fact still more strongly with regard to the Bombay and Madras lines. Of the "Great Indian Peninsular," he said, "The receipts per mile will, as a matter of course, show a falling off as additional lengths are open in districts more remote from the Presidency" (para 44); and of the Madras line he said: "The receipts per mile naturally fell off on the further extension of the line." I quite believe all this, but then, if the profits are only 5 per cent. at first, on the most paying bit of railway in India, on the first section from the great, wealthy,

populous, commercial capital of Calcutta, and if the mileage receipts "naturally fall off" 12 per cent. on a mere extension of this line 24 miles, from 142 to 166 miles, what is likely to be the falling off when the line is carried 600 miles further into the country? What are likely to be the profits when the "triangulation scheme" is complete, and 2,900 miles of such railway are constructed? If there is only 5 per cent. profit at first, will the receipts pay even the working expenses at last? Is it not to be apprehended that we shall eventually come back to the opinion of 1845, that the scheme was "simply a laughable absurdity;" and that it "had nothing sound in it, either morally or financially?"

But, thirdly and lastly, the above profit of 5 per cent. is calculated simply on the estimated cost of construction; leaving wholly out of sight two items of the account, which make all the difference in the world to the result. In the first place, the Railway Companies are bound by their contracts to repay all the guaranteed interest to the Government, with simple interest thereupon; and therefore the balance of this debt must be added to the capital on which they have to pay interest. In the second place, as no allowance is made now for heavy repairs, and renewals, replacement of rolling stock, &c., in a word for "depreciation," the cost of which on the American lines is 3 per cent. on the average, and must be at least 2 per cent. on the Indian lines; this amount must also be either added to capital, or provided for by current receipts. But these two items change the 5 per cent. profit into $2\frac{1}{2}$ per cent. loss. To make this clear at a glance, I annex the following statements of account, and request the reader's attention to them. (See Appendix.)

Such, then, are the enterprizes into which a Government may be forced by a compact Parliamentary interest, when the majority of the House are indifferent to the subject!

I have shown that other Public Works pay high profits, "often immense," in the words of the Madras Government, and that high-speed railways pay none at all; yet Government has made an incredibly bad bargain, as I shall proceed to show, to establish these railways; and neglected, even discouraged, all the paying works, whose profits might compensate for the loss on the railways!

To show what a bad bargain the Government has made with the Railway Companies, I need only refer to three features of the agreement between the parties, viz., the guarantee, the rate of exchange, and the power given to the Companies to make the Government pay them twice over for their investment.

First, although the guaranteed interest is not nominally a dividend, but liable in terms for any loss in the working expenses, it is evident that by indefinitely extending the capital account, and using the whole power of the Government to prevent competition with the railways, to force traffic upon them, and to accommodate their requirements in every way, which is done, and will be done, until the spell is broken in the House of Commons, any loss in the working expenses may be disguised, so as to make the guarantee virtually a dividend for the whole time of their lease. That the Railway Companies confide in the strength of their Parliamentary and official interest for securing this result, is evident from that recklessness of undertaking, and costliness of management, which the consulting engineer of the Government of India denounced re-

cently, as a proof that the guarantee system was "a sham system of apparently independent action, by which the whole pecuniary responsibility was in fact thrown on the Government." This responsibility, as long as the Railway and Old Indian cabal dominates the House of Commons, will not only involve turning the guarantee into a dividend, but injuring all the other interests of the people of India and England, to mask the loss in working the railways.

With regard to the rate of exchange the facts are these: by a juggle in the accounts, arbitrarily fixing the rate of exchange above the real rate, and pretending that the Railway Companies mean to pay back the difference from *their profits*, the Government actually give these Railway Companies a bonus of £9 for every £100 they remit to India. In this way the Government has already made them a present, out of the pockets of Native tax-payers, of more than all the money spent on the Godavery delta, and in spite of a protest by Mr. Laing, and the outcries of the Indian press, this abominable cheat goes on.

With regard to the power given to the Companies to make the Government pay them twice over for their investment, a fraud against which the Supreme Government protested in vain when the contract was made, and for which all the responsibility rests with the Home Government, the case is this: Not only have the Railway Companies, rent free, the usual lease of 99 years; not only has the Government made them a present of their land (sometimes at a heavy cost—it had to pay £300,000 for four miles in the island of Bombay alone); not only has the Government guaranteed them an interest of 5 per cent., or one-fourth more than that given by continental Governments, in similar cases,

but it actually allows them to wait till within a few months of the time when their lease will expire, and the property will belong of right to the Government, and then summon the Government to repay them the whole of the money they have expended upon it! What does the reader think of this little arrangement? It far excels that of "the unjust steward." He only said, "take thy bill and write down fifty;" the Government says, "Take thy bill and write down, *"my lord owes thee fifty!"* Of a truth, it is woe to the people, when the Government has to make friends with "the Mammon of unrighteousness" in the House of Commons.

Nevertheless, as I have before explained, the Government is but a *prête-nom*; the real doer is the House of Commons. When the House chooses to have "no conscience in its corporate capacity," no Government can afford to have a conscience either. When the House chooses to perpetrate a job (horrid word!) no Minister can refuse to permit it. But perhaps the majority of the House has hitherto only heard one side of the question. It has heard the railway men and their allies, representing a tangible English interest; it has not heard the distant millions of Hindostan, speaking through one or two opposition voices. I believe the scene will change when the House finds that three or four millions of the most intelligent working men in England have a direct interest in this question. Our operatives are no myth, whatever the Natives of India may be. Our Chancellor of the Exchequer will object to buying a few Railway and old Indian votes, at the cost of millions of revenue. I do not believe that the House of Commons intended to ruin our manufacturing districts, by depriving them of raw produce, and good