ONDEVELOPED WEALTH IN INDIA

AND

STATE REPRODUCTIVE WORKS.

THE INDIAN PROBLEM SOLUTO.

NDEVELOPED WEALTH IN INDIA

AND

STATE REPRODUCTIVE WORKS.

WAYS TO PREVENT FAMINES, AND ADVANCE. THE MATERIAL PROGRESS OF INDIA:

VIRTUE, SPALDING, AND CO., 100 IVY LANE, PATERNOSTER BOW,

1876

LONDON:
PRINTED BY VIETUE AND CO.
CITY BOAD.

PREFACE.

No subject can be more important than the material progress and the happiness of two hundred and fifty millions of people under the English rule in India. No single person, however high his abilities may be, can do full justice to it, as it divides itself into so many important branches. Therefore each branch of the subject is treated by those most competent to deal with it. In this manner nearly a hundred most eminent authorities have been brought forward to give their evidence in language which cannot be mistaken. But all along it has been kept steadily in mind that every question has its two sides. Unless the two sides are seen, studied, and well balanced, no right conclusion can be arrived at.

We begin our work by taking a rapid glance at the effects of famines that have ravaged India during the last few years. Then we pause to inquire what are the causes of these famines? Can famines be prevented in India? This inquiry takes us to the character of the climate in India, the rainfall, and its connection with agriculture. This connection is so intimate, not only in the interest of agriculture, but also of State revenue from land, and also showing clearly why in almost every district in India, either artificial irrigation or embankments, or some regulation of the waters is required, that special papers are devoted to each subdivision of the subject. At the same time we note, in times gone by, what the Native Governments did according to the knowledge and civilisation which then prevailed in giving India's thirsty land water.

As we proceed onwards with our inquiry, we find famines in India have been actually prevented in districts where works of irrigation and navigation have been constructed. In like manner, instead of a few districts, almost every district in India, in all more than two hundred, and each as large as England, may be treated, and famine actually prevented. We all know prevention is better than cure. But our surprise and astonish-

ment is great when we find that under the English Government in past years, and even up to the present time, the noble and Christian work of preventing famines has made no satisfactory progress. If gone on at all so slowly, so negligently—that for the want of such works, not thousands, but millions of human beings have perished from time to time in mute silence from unnatural deaths; and that agricultural produce, to the extent of millions sterling, had been destroyed, not once, but repeatedly. It is only when such awful calamities prevail, that the attention of Government is drawn to works of irrigation. and the fact to this day is, that more labourers have been employed in famine times on such works, than at any other period. Works of irrigation have been executed, in portions, bit by bit, during the prevalence of famines, as famine relief works, causing a great waste of time, labour, and money. Unfortunately this fact has been entirely lost sight of by some members of Parliament, in discussing the financial effects of irrigation works. In these pages, it is shown on very clear evidence that the returns from irrigation works are satisfactory, much more so than any other public works in India. We approach, then, the main question—the most important of all other questions in relation to the construction of reproductive public works in India.

What has been England's policy in India as regards such public works, and what that policy should be? Speaking in round figures, which will answer for our illustration, we find that the State in India has spent up to the year 1872 £100,000,000 sterling in making 5,500 miles of railway; £10,000,000 in about ten years for providing improved accommodation for 14,000 European troops; £3,000,000 in constructing transport vessels to carry backwarks and forwards troops to India, including an iron floating dock to repair these vessels; £10,000,000 on irrigation works from the time India has been conquered; £10,000,000 in erecting handsome government offices; and various sums, large and small, have been sunk as capital by the State in India, which we leave out, as not important for our illustration.

Now, taking the largest amount of outlay in India, namely, £100,000,000 sterling expended on railways, nearly half of which has been spent in England, for purchasing materials, &c., we naturally inquire what is the financial result of these railways, almost all single lines, main lines too, connecting the

metropolis of India with Bombay, Madras, and Northern India. The result is this, that the most profitable railway in India, the East India Railway, just carned on two exceptional occasions 5 per cent., being the amount of guaranteed interest. Once during the American war, when cotton and other traffic vastly and suddenly increased; the second time during the famine in Bengal in 1874, when Government paid to this railway £850,000 for carrying private grain at half the usual railway charges; when Government itself entered the market, forwarded thousands of tons of food grain, and nobly spent £6.500,000 sterling in saving millions of people from starvation, for the first time in the history of India. This, the East India Railway, the most profitable in India, has a debt of £7,000,000. not including value of land given free by Government, the interest of debt, &c. In fact, there is not one single railway company which does not work its line at a loss of millions sterling. In the course of a few years the aggregate loss in working 5,500 miles of railway, after deducting nett traffic receipts, amounts to £20,000,000 sterling. The fact may appear startling and incredible that half this amount of railway loss, or only £10,000,000 sterling, has been spent on irrigation works for the prevention of famines, from the conquest of India up to the present time. The works on which £10,000,000 have been spent are there—making returns more or less—but the loss of £20,000,000 sterling already paid from India's taxes to guaranteed railway companies is gone clean for ever, to return no more. What makes the case worse, is that round India's neck the British rulers have put a yoke which exacts £2,000,000 sterling every year for enjoying the luxury of railways, not including interest of debt.

Now of all other questions relating to reproductive public works in India, this policy of making railways in a poor country requires careful reconsideration from all points of view. It is a matter of deep regret that it has not received any attention in Parliament up to this time.

Does India want railways or irrigation works? Can railways provide water for India's land, when that land is thirsty and hard baked, or provide drainage for preventing floods? Can railways produce food grains and other agricultural produce, as it is created by water from irrigation works? Can the State Land Revenue be doubled by railways as it is and can be by irrigation works? Can famines be prevented in India

to any extent to be compared with irrigation works? The answer to all these questions must be in the negative. What certainly railways can do and have done is to carry produce and passengers at twenty miles an hour. But happily we can make large irrigation canals at a very slight additional expense navigable, and even adapted for steam navigation, complete with drainage works to prevent floods, and to provide irrigation.

Combined irrigation and navigation canals have been made and can be made in India at a third or a fourth of the cost of making railways, and produce and passengers carried on water at half the railway charges or even less, as is now done on. some Madras Delta works. Canals will just suit India's requirements in every respect, for the present and many years to come, and moreover will pay financially and leave no burden on Indian taxpayers, or increase India's debt. In England, very narrow canals were made for navigation before the introduction of steam. We see so much of the éclat of railways, are carried forward by express trains at forty miles an hour to long distances, that we are carried away altogether and believe railways are adapted for all countries. This is a mistake, and the more we study the subject the more clearly we see the mistake. From the peculiarity of the climate in India, irrigation works can create wealth in India, with all the advantages which follow the creation of wealth. In a poor country, like India, railways are a complete luxury. When she grows tolerably rich, which must take many years if we do our duty. then let us give her railways. To construct railways in her present state is, as some one put it, giving a beggar a carriage to ride, or, as a secretary to Government stated, it is giving India a stone when she cries for bread. That this is actually the case may be inferred from the fact, not mentioned in railway reports, that the short State railway lines of Comravatte and Khangam are worked during the cotton season only for a few months, when cotton is sent down to the coast. and entirely shut up for the remainder of the year for want of traffic in goods or passengers.

If such is the case in the very heart of the country, and if the present nett loss for working the main lines amounts to £344 per mile, or £2,000,000 sterling per annum, how much that loss, i.e., the burden on Indian taxpayers, will be increased by the State railways now proposed and taken in hand by the Government! The State railways are military railways, consisting chiefly of the Punjab, Northern, and Indus Valley State railways, constructed with the object to prevent a supposed invasion of India by the Russians. The loss in working these military railways would be enormous—much more than the present loss per mile in working the main lines.

In and out of Parliament our statesmen who rule over India have repeatedly declared their resolution and their policy not to expend any borrowed money on works not likely to pay interest on the amount borrowed. Yet the Government is doing exactly the reverse; it is constructing military railways from loans, which railways the Government itself declares cannot be worked with any profit, but at a certain loss. What faith can we put in our statesmen who say one thing and do another? From those who rule over India we at least have a right to expect honesty of purpose and sincerity.

The English policy as regards reproductive works in India, though it lies at the root of all our financial difficulties in India, has hardly been discussed in Parliament yet. Some M.P.s have spoken strongly against the Public Works Department in course of the debates on the annual Indian Budget. No one will deny that the department requires a thorough reform, but, at the same time, we must not forget it is a mere machine to carry out a policy framed and sanctioned by the Secretaries of State and Governor-Generals in council.

In making railways in India our rulers have increased India's debt, and made a fatal mistake. Let us pause. Let us not persist in a policy which must increase taxation, and increase the public debt. Before we construct such costly State railways to put a stop to a supposed Russian invasian of India, let us first of all do our very best, in all good faith and sincerity, to remove India's poverty. Let us first of all use our means, our knowledge, and our power to develop her resources, to increase her material prosperity, to be just and generous to the people, and to give them their due share in the government of that empire. Let us base the foundation of our rule in India in making her teeming population happy and contented. Let us carry out the spirit of the Queen's proclamation, and the solemn promises given therein, and not trample them down under our feet. A disaffected population is a discredit, and a source of weakness. not an honour or strength, to our rule in India.

LONDON, October, 1874.

OUR AUTHORITIES.

Col. B. Smith, R.E., Special Commissioner. SIR GRORGE CAMPBELL, Special Commissioner. COLONEL W. R. MORTON, R.E., Special Commissioner. H. L. Dampier, Esq., Special Commissioner. Hon. R. S. Ellis, C.B., Chief Secretary, M.G. JAMES GRDDES, Esq., B.C.S., Collector and Magistrate. Col. C. Brooks, Political Agent, Rajpootana. Du. W. W. Hunter, LL.D., Director of Statistics. MR. FORDES, Special Correspondent, Daily News. COL. C. W. GRANT, Bombay Engineers. COL. W. H. GREATHED, R.E., I.D., Chief N.W.P. COL. SYKES, M.P. Col. F. H. Rundall, R.E., Chief, Irrigation Department. W. G. McIvor, Superintendent, Government Plantations. G. I. Stmon, author of "Rain," &c. ARTHUR JACOB, B.A., Executive Engineer. Dr. Hove, a Polish savant, 1787. RIVETT-CARNAC, Cotton Commissioner. LIBUT.-Col. Tyurell, Executive Engineer. LIBUT. C. C. SCOTT-MONCRIBER, R.E., I.D.I. JAVERILAL UMIABRUNKER, ESQ. Chisholm Anstry, late M.P., &c. LIEUT.-COL. GREENWAY, author of " Farming in India." Dr. Fornes Watson, Reporter, India Products. MR. ASHBURNER, C.S.I., ICC., &c. E. C. Buck, Esq., Settlement Officer. Majon F. Connerr, B.S.C., author, &c. Mr. W. R. Robertson, Superintendent, Government Farms. MR. A. BORRADAILE, Collector, &c. Mr. Bourbilon, Government Secretary. CHARLES W. McMUIR, Esq. C. A. ELLIOTT, Esq., Settlement Officer. Sir W. Dennison, R.E., Governor, Madras. Lord William Bentinck, Governor-General. Long Mayo, Governor-General, SIR A. GRANT, Director, Public Instruction. SIR GRORGE BALFOUR, M.P., Special Commissioner.

SIR ARTHUR COTTON, R.E., K.C.S.I. MR. R. A. DALYELL, Chief Secretary. Sir Robert Montgomery, Governor, Punjab. Mr. Morris, Commissioner, C.P. SIR C. WINGPIELD (late M.P.), Commissioner, Oude. SIR A. P. PRAYRE, Commissioner, Burmah. SIR R. STRACHEY, R.E., Secretary P.W.D. LORD LAWRENCE, Governor-General. THE DUKE OF ARGYLL, Secretary of State, India. Mr. T. Logra, C.E., late of the Ganges Canal. LORD DERBY, late Secretary of State. India. Sir B. Frere, Member, India Council. Mr. R. H. Elliott, coffee planter, Mysore. Mr. J. B. SMITH, M.P., Stockport. Mr. Danvers, Government Director, Indian Railways. Col. Chesney, R.E., Principal, N.E. College. A. S. Ayrton, Esq., late M.P., Chairman P.S.C. Mr. FAWCETT, M.P. SIR S. NORTHCOTE, late Secretary of State for India. Mr. J. Dickinson, East Indian Association. SIR R. TEMPLE, K.C.S.I., Indian Finance Minister. SIR C. Wood, late Secretary of State for India. Mr. S. Laine, M.P., late Finance Minister, India, Mr. W. N. Massey, M.P., late Finance Minister. Mr. R. Knight, Secretary, B.G. Mr. Grant Duff, Under-Secretary of State for India. Mr. Andrew Casselo, Member, India Council. Dadanhai Naoroji, Dewan, Baroda. SIR W. MANSFIELD, Member, Calcutta Council. Col. J. G. Medley, R.E., Principal, R. College. Mr. W. T. Blandford, Geological Survey. Mr. T. W. H. Hughes, Geological Survey. Mr. Fryer, Mining Geologist. Dr. Oldham, Superintendent, Geological Department. Blue-books, English and Indian papers, &c.

CONTENTS.

Social, Financial, and Political	Eppi	ICT8	OP	FAME	NEB IN	L	(DIA
	_						PAGE
Famine in North-Western Provinces	in l	360~	81 .	٠	•	٠	1
Famino in Bengal and Orissa in 1866	1	•		•		•	اک
The cost of floods in Orissa .			•			٠	20
Drought in the Cotton Districts of D	harw	ar		,	•		23
Famino in Rajpootana in 1868-69							27
Famine aspects in Bengal in 1874		. *					33
1878-74 and 1769-70							37
Extracts from Daily News correspond	lence			•			44
						•	
AGRICULTURE ANI	Ini	ngy,	TION	ı .			
The rainfall in India							48
Old native works of irrigution .							62
Cost and profit from tank-irrigation		,	٠				71
Irrigation and agriculture in India							84
Yield of produce from dry and wet !	anda				,		89
Causes of low agricultural production							98
Improvement of Indian agriculture	_						111
Successful results of English implam	enta			Ċ		_	116
Unfulfilled Government promises	.,	•	•	•	•	Ť	124
Bad condition of the cultivators .	•	•	•	•	•	•	129
Agricultural education	•	•	•	•	•	•	13
Want of complete according to static	ه. سدلس	•	•	•	•	• •	144

CONTENTS.

PRINCIPAL IBRIGATION	Wo	RKS I	n In	DIA.			
New of the West of the State of							PAGE
North-west, Punjab, Madras	•	•		•	•	٠	149
Government neglect pointed out by G	rover	nmen	t om	cers	•	•	161
The protective influence of canals	•	•	•	•	•	٠	169
IRRIGATION AND LA	AND	Rryr	NUE.				
			21 11 111				
Area culturable, but not cultivated	•	•	•	•		•	182
Wet lands yield treble revenue than d	-	inds	•	•	•	•	184
Land revenue due to canal irrigation		•				٠	188
Discussions before the P.S. Committee	9						195
The question of water-rates .		•	•		• *		200
CANALS OR R.	AILW.	ays P					
Canals or railways?							208
Financial result of railways .							221
Financial result of canals			.*				223
Controversy between Colonel Chesney	and	Sir 4	A. Co	tton			226
Examination of Sir A. Cotton, K.C.S.							236
The march of Government to bankrup		•					246
•							
ESTIMATES AND PLAN	NS 01	е Сфі	als.				
Combined irrigation and navigation or	ลทสไส	l.			٠		252
Cost of making canals navigable		•	•	•	•	•	267
AAAA AN TICHTHING PERSONS MINE LEGICAL	•	•	•	•	•	•	W V
SOCIAL AND POLITICAL E	PPEC	TS OI	CAN	IALS.			
Social and political effects of canals		_	_				273
/ 					-		279
Irrigation statesmanship						•	289
Irrigation statesmanship, Government				•	•	•	289
Lirigation statesmanship, Secretaries				•	•	•	295
Lord Lawrence's statesmenshin				•	•	•	297

Capital, Labour,	AND	Engin	Bens	FOR	Wo	RKS.	
Capital for reproductive work	8.						300
Where loans should be raised	F .						307
Labour for reproductive work	8.						315
Building materials in India					. *		321
Engineers for reproductive we	orks						325
Yow public works should be p							337
COAL A	ND I	вом М	INING	.			
Government neglect ,							340
Iron ores and iron industry							346
Estimate, colliery plant and in	ron w	orks					355
•							
THE MATERIA	al P	коопа	N OF	Indi.	A.		
Importance of manufactures i	n Inc	lia .					357
Estimates of cotton, silk, and	jute :	factoric	NB .		,		361
Estimates of sugar, paper, and	l oth	er milla	١.				377
Cost of factory buildings in In	ndia					`.	381
Appendix: Memorial, Manch	ester	C. of C	Comun	erce			389
Reply by Lord Se							390
Note on Cotton M	Ianu	iac tur ei	rs				392

CONTENTS.

xv

APPENDIX.

MEMORIAL OF THE MANORESTER CHAMBER OF COMMERCE.

That a fiscal duty of 3½ per cent. on yarn, and 5 per cent. on cloth, is now levied in India on the importation of British cotton manufactures, assessed on tariff rates fixed many years ago, when values ruled much higher than they do now.

That the tex is now found to be absolutely prohibitory to the trade

in yarn and cloth of the coarse and low-priced sorts.

That a protected trade in cotton manufacture is now consequently springing up in British India, and an unsound commerce is being fostered in that country which will, sconer or later, cause embarrassment and distress to the native capitalists and workmen.

The protective duty stimulates the erection of cotton factories in India. It defeats the primary object of the tax as a source of revenue,

by encouraging the production of goods in India.

That the said duties are increasing the cost to the native population—or at least to the poorest of the people—of their articles of clothing, and thereby interfering with the health, comfort, and general well-being of the Queen's Indian subjects.

DEPUTATION FROM MANCHESTER TO THE SECRETARY OF STATE FOR INDIA. ...

The Marquis of Salisbury received a deputation from the Manchester Chamber of Commerce, who waited for the purpose of submitting reasons for the abolition of the duties imposed on cotton

goods imported to India.

Mr. Lord said—The first mills in India for the manufacture of cotton goods were built in 1854, in which year two mills were erected in the island of Bombay. In 1873 there were at work in Bombay 15 mills, and they produced that year 29,000,000 lbs. of yarn and cloth; in Mofussil five mills, of small size, and he would put their production at 1,700,000 lbs. There were now nearly erected twelve new mills in the island of Bombay and in Mofussil, which together would probably produce another million. His brother, who lived at Bombay, had sent him a list containing details of the dividends of several of the best mills, which had been just declared, and they ran from 15 to 20 per cent. In India they used exclusively Surat cotton,

while the English manufacturers used only one-fourth of it; the mixing must be very much more costly, so they must compete with Indian manufacturers at a disadvantage. At present about £2,000,000 sterling worth of goods was produced in India by steam power, and the mills now being erected would make that £3,000,000. The English spinner and manufacturer had of course to lose that trade, but he still retained a trade equal to about £15,000,000 per annum. The tendency at present was to draw away capital and labour from the culture of the land. It would be a great benefit to the poor and heavily taxed population of India to be relieved from an impost of 5 per cent. on their clothing. He trusted the arguments that he had adduced would receive the earnest attention of his Lordship, with a view to the abolition of the impost, and so enabling the English manufacturer to compete on equal terms with the producer in India, both being fellow-subjects of the queen.

Mr. Ross submitted figures to show that a spinner buying Surat cotton in Liverpool, or through an agent in Bombay, and sending his yarn there, would be at a disadvantage, as compared with a Bombay

spinner, equal to 26.10 on the selling value in Bombay.

REPLY BY LORD SALISBURY.

The principles of free trade had been accepted for a very considerable time. As to the effect of the tax as a protective duty, he was very sceptical as to this duty having much effect in nourishing competition.

The import of cotton goods was steadily increasing. The return for 1872-3 was 17,234,000 lbs.; so the importation of cotton goods into

India could not be said to show signs of falling off.

They had heard that 25 per cent. was the handicap under which they ran this race. That was the disadvantage against which they had to contend. In India there was the raw material and the labour, which was cheaper, and as regarded all delicate manipulations of the hand more skilful. There appeared to be nothing wanting except the coal and the capital. Well, he had just received papers which showed that the great coalfield which was close to the cotton might be calculated to yield 17,000,000 of tons at a depth of between 170 and 200 feet from the surface. If that was found to be correct, there would be nothing but capital wanted to establish flourishing manufactories. He thought, therefore, that they must admit the possibility of a stiff competition for the supply of the Indian market.

It was hardly fair to the Indian Government to lay upon its financial policy the burden of those disadvantages which really came from

a natural state of things.

The Government did not look upon this as a permanent source of their revenue. They would be very glad if they could get rid of it. He did not say that it stood first on the list for reform, because there were international custom-houses which sinned more largely and flagrantly against economical laws than even protective duties; but they were anxious, whenever their financial position should enable them to do so, to see this duty disappear.—(Extracts from Manchester Guardian, 5th November, 1874.)

SIZE IN MANCHESTER CLOTH.

(Report of the Directors of the Manchester Chamber of Commerce.)

That the excessive sizing of cloth, for the object of producing weight and cheapness, is dangerous, and considerably increases the risk of the generation of mildew.

That the artificial introduction of moisture into the yarn of cloth, for the purpose of increasing weight, during the processes and stages of manufacture, or after manufacture, or the deliberate moistening of the cloth by means of damp storage, tends to create mildew, and must be condemned. . . . It has undoubtedly increased in magnitude and become more serious in character of late years, and the chief causes have been intense competition and the demand for low-priced goods.

Signed by the mombers of the Committee, Chamber of Commerce, Manchester, April 21, 1873—Hugh Mason, president; John Slagg, Jun., director; George Lord, director; Sam. Mendel, J. Nicol Floming, Joseph Thompson, J. Garnett, Adam Dugdale, Richard

Bolton (R. Holroyd and Co.), and Peter Spence.

DISCUSSION AT THE EAST INDIA ASSOCIATION.

Mr. C. Meenacshaya said—To ask India to do without protection, and to onter into open competition with England, was just like asking

a child to stand up and fight with a grown-up man.

The arguments generally advanced against a protective duty are reducible to two: First, that a protective system compols the poorer population to pay a larger sum for their clothing than otherwise would be the case. Secondly, that it is an artificial propping up of an industry which will fall to the ground when the support is removed, leaving it weaker than before. As regards the first difficulty, the difference in price would be of so slight a character that it would be of little importance when we consider the future advantage which will accrue to the nation when its manufactures have been fully developed. Then, as a mercantile matter, we must consider the enormous amount of swindling which goes on now in the way of "filling in" the Manchester cloths, and how, under this disguise, what filmsy material is sent to the natives of India; so that, if even twice as much were paid for strong native cloth, it would be a real gain.

As regards the second objection, it was certain that there must be some nursing of industry in order to induce a strong and healthy growth. Were India an independent country, and the political connection between England and India non-existent, who could doubt that a wise and segacious ruler in India would encourage by every means, artificial or natural, the establishment of native industries?

Mr. Dickinson said—Hardly any one in these days would deny that the development of manufacturing industries was an effectual method of sustaining a population, and of creating national wealth. It did not follow that a country should entirely depend on manufactures; it might depend partly on manufactures and partly on agriculture; but, at any rate, the former formed one of the great resources of a progressive country. Now in India it was a fact, which seemed to have

been forgotten, that many important manufactures formerly were carried on with success; and some of these were even exported to England. Such things as Madras sheetings were well-known articles of commerce, and the way in which those industries was destroyed was by a most cruel system in the English manufacturers' interest. By means of duties at the ports and duties in transit, the native manufactures were utterly crushed out.

It was clear to his mind that a slight protective duty would turn the scale in favour of the Indian manufacturer; and by showing a profit on native manufactures, capital would be induced to flow into India not alone from Manchester, but from all parts of the world.

Protective duties would give native manufactures a start, and that once done, they would soon be able to go on without external assistance, for the people had great natural aptitude, the raw materials for their labour were on the spot, and, under proper training, native

ingenuity might be trusted for the rest.

Mr. Ellictt (coffee planter, Mysore) stated that India, with all her people thrust on the soil for their sole means of support, is exactly in the position that Ireland was before the famine—that while the leaders of these impoverished masses have no share of political power, they have caught from us the spirit of inquiry—that the people are so poor that, from sheer want of adequate purchasing power, they are liable to famine—that, with the exception of lands irrigated by muddy river water, the people of India, in consequence of the small manuring facilities at their command, are not living on the interest, but on the capital of the soil. These are facts. . . .

Not only have the capabilities of the country for mill-work been already proved by the success of the existing mills, but we are able to point to spots where cotton and water-power can be found within easy reach of each other. Imagine British trade and manufactures—English manufactures with English capital—firmly planted on that vast central peninsula, and is it not evident to any one that we should then command the Eastern as completely as we now do the Western hemisphere? How often has Manchester capital and energy sought a wider field! Here at last, if we could only educate her into seeing it, it lies clearly before her.

Compel your Manchester men to send some of their capital and younger sons to India, to do there what younger sons have done in our numerous colonies; by the simple process of imposing a gradually increasing import duty on Manchester goods, with the distinctly declared intention of raising it ultimately to a prohibitive tariff, to the end that India may not only be turned into a manufacturing country for itself, but, in a great measure, for all Asia and Eastern.

Africa.

NOTE ON COTTON MANUFACTURES.

The consumption of raw cotton at present in Great Britain is 63,000 bales per week; about 33,000 American, 15,000 East Indian, and 17,000 of other countries.

The proportion of consumption in Great Britain is 48 per cent.; on the Continent, 32; in the United States, 20; total, 100 per cent.

The number of spindles in Great Britain is about 40 millions; on the Continent, 20 millions.

The consumption per spindle of cotton in Great Britain is 33 lbs.; on the Continent, 43 lbs. per annum.

The export of piece-goods in 1873 was, from Great Britain-

To India 112 million yards.

Yarn . . 214 million lbs.

In Great Britain, in 1873-

		1,246 п	ıillion	lba.
		168	1)	"
		1,077	91	25
	٠	215		11
		689		
		173		,,
		1.077		**
• • • • • • • • • • • • • • • • • • • •			168 1,077 216 689 173	1,077 ", 216 ", 689 ", 173 ",

The value of production was-

Yarn exported						£16,000,000.
Goods exported			•			68,000,000.
Home consump	tio	n			•	20,000,000.
Total value .						104,000,000.
	*	٠			*	45,000,000.
Leaving profit,	W	age	18,	хc.		<i>5</i> 9,000,000.

-(From Ellison and Co.'s Liverpool Circular for 1873.)

TRANSIT DUTY ON SUGAR IN INDIA.

Rate of duty on unrefined and refined sugar, per maund, passing from one British province to another—

Your.	Refined.	Unrefined.
1844-60	f 8 annas	3 annas.
	8 as. and I rupee	3 as. and 6 annas.
1801-70	1 rupee	6 amnas.

AMOUNT OF TRANSIT DUTY COLLECTED ON SUGAR

At the Ports of Dhuggar, Bundee, Dhassa, and Gurhi-Harsoo-

Year.			Refined, Ra.	Unrefined. Rs.	Total. '
1865-66	•		1,11,036	2,05,097	3,16,132
1866-67			96,779	1,81,720	2,78,500
1867-68		,	1,13,680	1,84,624	2,98,304
1868-69			76,052	1,72,836	2,48,888
	Total		3,97,547	7,44,278	11,41,826
			(Signed)	W. W. Wr Collecto	ught, or of Customs

Dethi, 13th April, 1869.

A FINANCE MINISTER'S MISTAKE.

(Examination of Mr. Massey, M.P., late Finance Minister for India, 16th July, 1872, before the Parliamentary Select Committee on East India Finance.)

Question 8786.—Sir D. Wedderburn: With regard to those transit duties of which we were speaking, is it not the case that there is a transit duty on sugar passing from Upper India, into Rajpootana; I mean that we impose one?

Answer. - We impose no transit duties whatever, that I am aware of.

—(Minutes of Evidence, vol. ii., p. 474.)

OPINION OF THE GOVERNMENT OF INDIA.

(Despatch, April, 1870.)

If such a Department of Agriculture had existed, we doubt whether the export duties which we now levy on some of the main staples of agricultural produce, and even on articles of Indian manufacture, could have been imposed or maintained. If such a department had existed, it could never have tolerated the continuance of duties such as those which are still levied on sugar exported from the North-Western Provinces across the inland customs line. These duties are transit duties of the worst description, levied on one of the most important articles of the agricultural produce of Northern India.

DEPARTMENT OF AGRICULTURE, AMERICA.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established at the seat of government of the United States a Department of Agriculture, the general designs and duties of which shall be to acquire and to diffuse among the people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of that word, and to procure, propagate, and distribute among the people new and valuable seeds and plants.

Sec. 2. And be it further enacted, That there shall be appointed by the President, by and with the advice and consent of the Senate, a "Commissioner of Agriculture," who shall be the chief executive officer of the Department of Agriculture, and who shall receive for his compensation a salary of three thousand dollars per annum.

Sec. 3. And he it further enacted, That it shall be the duty of the Commissioner of Agriculture to acquire and preserve in his department all information concerning agriculture which he can obtain by means of books and correspondence, and by practical and scientific experiments (accurate records of which experiments shall be kept in his office), by the collection of statistics, and by any other appropriate means within his power; to collect, as he may be able, new and valuable seeds and plants; to test, by cultivation, the value of such of them as may require such tests; to propagate such as may be worthy of propagation, and to distribute them among agriculturists. He

shall direct and superintend the expenditure of all money approprinted by Congress to the department, and render accounts thereof, and also of all money heretofore appropriated for agriculture and

remaining unexpended.

Sec. 4. And be it further enacted that the Commissioner of Agriculture shall appoint a chief clerk, with a salary of two thousand dollars, who in all cases during the necessary absence of the Commissioner, or when the said principal office shall become vacant, shall perform the duties of commissioner, and he shall appoint such other employée as Congress may from time to time provide, including chemists, botanists, entomologists, and other persons skilled in the natural sciences pertaining to agriculture. And the said commissioner, and every other person to be appointed in the said department, shall, before he enters upon the duties of his office or appointment, make path or affirmation truly and faithfully to execute the trust committed to him. And the said commissioner and the chief clerk shall also, before entering upon their duties, severally give bonds with sureties to the Treasurer of the United States, the former in the sum of ten thousand dollars, and the latter in the sum of five thousand dollars, conditional, to render a true and faithful account to him or his successor in office, quarter-yearly accounts of all moneys which shall be by them received by virtue of the said office, with sureties to be approved as sufficient by the Solicitor of the Treasury : which bonds shall be filed in the office of the First Comptroller of the Treasury, to be by him put in suit upon any breach of the conditions thereof.

May 15, 1862.

THE END.

THE

EAST INDIA ASSOCIATION

FOR THE

PROMOTION OF ALL PUBLIC INTERESTS OF INDIA,

20, GREAT GEORGE STREET, LONDON, S.W.

Annual Subscription, including Journal (delivered free of Postage) £1 5 0
Life Subscription ditto ditto 14 0 0
Annual Subscription (including Journal) in India 18 Rupecs 8 Annas
Life Subscription ditto ditto 150 Rupecs.

No Entrance-fees.

The Council trust that Members will exert their influence to increase the number of Subscribers, and otherwise assist in promoting the important object for which the Association has been established.

Although some of the Princes and other Natives of Western India have of late accorded to the Association a liberal pecuniary support, yet its income falls considerably short of that necessary to place it on a permanent footing, and increase its sphere of usefulness.

It is hoped, therefore, that Members will individually aid the Council in this respect, by means of donations, presents of books for the increase of the Library, &c.

Resident Members are furnished with Blank Tickets of Admission to the Lectures for the use of their friends.

Indian, English, and Vornacular Newspapers are received and filed in the Reading-room of the Association, in addition to the leading Italy Papers of the Metropolis, and several Weeklies.

The use of the Reading-room and Library is free to Members, who can also have their letters addressed there.

The Secretary will be happy to forward Application Papers, Rules, &c., or give any other information desired.

HOW TO DEVELOPE

PRODUCTIVE INDUSTRY IN INDIA

AND THE EAST.

MILLS AND FACTORIES

POR

GINNING, SPINNING, AND WEAVING COTTON; JUTE AND SILK MANU-FACTURES; BLEACHING, DYEING, AND CALICO PRINTING WORKS; SUGAR, PAPER, OIL, AND OIL-GAS MANUFACTURES; IRON AND TIMBER WORKSHOPS; CORN-MILLS, ETC., ETC.

WITH

ESTIMATES AND PLANS OF FACTORIES.

EDITED BY P. R. COLA,

LATE SOLE PROPRIETOR OF THE ARKWRIGHT COTTON MILLS, BOMBAY.

Ellustrated with more than One Mundred Coodcuts.

LONDON: VIRTUE & CO.

CALCUTTA: BARHAM HILL & CO. MADRAS: G. HIGGENBOTHAM.
BOMBAY: BYRAMJEE FURDOONJEE & CO.

MOOLTAN: DEDARHOY MANEKJEE.

1807.

OPINIONS OF THE LONDON PRESS.

From the " Daily Telegraph."

"How to Develope Productive Industry in India," edited by P. R. Cola, and illustrated by numerous and excellent woodcuts, is a book not to get from a circulating library, but to buy, study, and then possess for future reference. . . . It gives a complete account of the past and present position of the East in regard to manufactures, and brings forward trustworthy data for judging what may be its future, if modern enterprise and capital can only be induced to try fresh fields and pastures now.

From the " Engineering."

This is a volume advocating the extension of European modes of manufacture to India and other countries of the East, and containing plans and estimates of factories . . . The day, we believe, will come when factories of the kind Mr. Cola describes will take wide root in India; and it would be a miscrable and unworthy policy in us to discourage their establishment. . . Mr. Cola hus performed a useful service by affording so much information about the cost and arrangements of so small factories suited for such a country as India; and such details will be specially usoful to those who meditate the establishment of factories in that country. . . .

From the " London Mechanics' Magazine."

Mr. Cola in all cases has adapted his plans of mills and factories to the peculiar requirements of the country, and has based his estimates in many instances upon actual invoices, whilst in others his information comes from the manufacturing districts. . . . But what he does profess to do, and what he really does in a most efficient manner, is to give capitalists, commercial men, and manufacturers an excellent industrial guide-book, applicable, not only to India and the East, but to other countries. The general reader, too, will find much to interest him in the introductory chapter, by which each section is preceded. . . . We hope his book will be as successful in developing the productive industry of India as he has been in showing how it may be accomplished.

From the " Home News,"

"How to Dovelope Productive Industry in India and the East." This is a large subject, but it is treated in a large spirit, in a work just published and edited by Mr. P. R. Cola, who was lately the sole proprietor of the Arkwright Cotton Mills, at Bombay. . . . He shows the practicability of all such undertakings. . . . Unlike most other writers on these subjects, Mr. Cola furnishes plans and estimates of the cost for the several descriptions of works. . . Great praise is due to the care and industry which has collected and collated these materials.

From the " Illustrated London News."

There can be no question about the importance of the subject treated of in this volume, or about the fitness of the editor, if experience be

any test of fitness, for the task he has undertaken. . . . The information collected from various sources could not have been gathered together without considerable trouble.

OPINIONS OF THE INDIAN PRESS.

From the " Bombay Builder."

This work brings within the compass of a single volume much important information on a variety of subjects connected with reproductive commercial industry. . . . If any man can be found who should do for agriculture what Mr. Cola has endeavoured to do for manufacture, he would deserve well of the people of India. Passing, however, to the immediate object of Mr. Cola's book, we offer the author our hearty congratulations on what he has achieved. His has been a work of vast labour: to obtain, compile, arrange, and set forth the various manufacturing processes described in the book has been by no means an easy task. . . He has succeeded very admirably in his undertaking. As a preliminary work of reference for those who may desire to establish steam factories in India for the purpose of manufacture, the book will be found a useful guide.

From the " Friend of India."

The question of the development of productive industry in India has been often discussed, but beyond this discussion little progress has been made. . . . This exhaustive work by Mr. P. R. Cola does justice to the question. . . . He goes fully and systematically into the various branches of industry, and discusses every point connected with each. He takes a very hopeful view of the industrial future of the East, and by a judicious arrangement of facts and statistics commands attention and deference to his pleas. . . .

From the " Indian Mirror."

There breathes in the whole work a spirit of good feeling and a real interest in the cause of India and the East. No pains have been spared to render it a work of as much practical utility as is possible in so short a compass, so as to prove, as the author himself says, "a useful industrial hand-book.". It is believed and earnestly hoped that the remarks on the facilities and advantages of introducing improved machinery in some of the manufactures for articles of daily and extensive consumption, as set forth in the work under notice, will not be lost upon our wealthy countrymen.

From the " Native Opinion."

Our system of education talks learnedly of awakening "an intellectual and vital soul in the nation;" but we may well question the utility and value of the so-called awakening when we find it taking no cognisance whatever of the development of the material resources of the country. . . The book is written in a neat, business-like style, and is entirely free from attempts at essay writing.