

Nightingale's Short Papers on India

1863

"Observations by Miss Nightingale on the Evidence contained in the Stational Returns." *Report of the Royal Commission on the Sanitary State of the Army in India 1863*. 2 vols. Blue book. Vol.1: 347-70 Reprinted separately as *Observations on the Evidence contained in the Stational Reports submitted to the Royal Commission on the Sanitary State of the Army in India*. By Florence Nightingale. London: Edward Stanford 1863 [9:132-83]

Right Hon Lord Stanley, MP
President of the Royal Commission on the Sanitary State of the Indian Army

21 November 1862

My Lord

In compliance with the request sent to me by the Royal Commission on the Sanitary State of the Army in India, in Mr Baker's letter of 11 October 1861, that I would make on the contents of certain Ms replies to queries addressed to all Indian military stations any observations which might occur to me as bearing on the sanitary condition of cantonments and hospitals, I beg to transmit the following. In doing this, the difficulty of giving what everyone might consider a fair representation of questions of such extent by stating specific cases, has been great. Some will see no importance to health in the facts. Some will think the facts given the exception and not the rule. If there be an exception, i.e., if there be a single station in India with a good system of drainage, water supply and cleansing for itself and its bazaars, with properly planned and constructed barracks and hospitals, provided with what is necessary for occupation and health--a station where the men are not encouraged to drink and where they are provided with rational means for employing their time--to such a station these remarks do not apply. But I have not found it. Everywhere there are grievous sanitary defects which, wherever they exist, can lead only to sickness and loss of life to the degree in which they exist. And let those who doubt whether this representation is true, taken as a whole, look at the stational reports themselves.

In the papers sent me I find an amount of evidence showing the causes of disease in the Indian army, such as perhaps was never before brought together on any similar subject. It is shown in these papers that:

INDIAN STATIONS ARE SUBJECT TO THE DISEASES OF CAMPS

The prevailing diseases at Indian stations are zymotic diseases connected with camps--such as I myself have seen--all of them, cholera, fevers, diarrhoea, dysentery, together with hepatic disease. The main point of the Indian sanitary question is, indeed, camp disease, the causes of which are rendered more intense by climate; and liver disease, occasioned to a great

extent by overeating and overdrinking and sedentary habits, the result of these habits being, as in the former case, intensified by climate.

Stations have been chosen with as little regard to health as camps often have been. Many are in positions which the mere verbal description proves to be unsuitable. Or, at all events, little or nothing appears to have been done to render them suitable. They are low, damp or even wet, often mixed up with unhealthy native towns and bazaars abounding with nuisances.

INDIAN STATIONS PRESENT THE SAME SANITARY DEFECTS AS CAMPS

At all or nearly all the stations the usual causes of camp disease appear to exist. I will give examples of the more important of these as shortly as I can, as they exist at the larger British stations. These are:

- (1) Bad water;
- (2) Bad drainage;
- (3) Filthy bazaars;
- (4) Want of ventilation;
- (5) Surface overcrowding in barrack huts and sick wards.

(1) *Bad Water.* Hyderabad (in Sind) says, "No doubt it (the water) swarms with animal life."

Where tests have been used, the composition of the water reads like a very intricate prescription, containing nearly all the chlorides, sulphates, nitrates and carbonates in the pharmacopoeia, besides silica and large quantities of organic matter (animal and vegetable), which the reports apparently consider nutritive, for few of them but "consider" the water "good" and "wholesome"; e.g., Fort William, Calcutta, says that the water for cooking, drinking, etc., is carried from a tank *filled by surface drainage*, which tank is kept "perfectly clean" and is "generally free" from "surface impurities." Many "city tanks are in a most filthy condition, producing malaria." Sealkote calls its water "decidedly good" while containing a considerable portion of sulphate of lime. Ghazeeপুর calls its water "good and sweet" and says that it "does not seem contaminated by the amount of leaves that necessarily fall into open structures." Chunar says that its water is clear, sweet and inodorous "if allowed to settle before it is drunk." Agra's water is "laxative" and "apt to disagree at first." Dinapore admits that its wells have been poisoned by infiltration from barrack privies. Nussereabad says, "The flavour (of the water) varies according to the quantity of the salts." At Murri the quality is "considered inferior by native visitors, and to cause colic." "Boiling" and filtration through sand and charcoal are necessary to "render it wholesome." At Hazarybaugh tank water, "on standing, copiously deposits" and contains "organic matter in considerable quantity." Its well water for domestic use contains silicic, phosphoric, hydrochloric and carbonic acids. But it is satisfactory to know that "persons *particular* about the quality of their drinking water" can "obtain their supply" from "several

good wells."

At Bangalore, the Ulsoor tank, used for drinking, is the outlet for the whole drainage of a most filthy bazaar (125,000 inhabitants), for that of our cavalry, infantry and horse artillery barracks, and of the greater proportion of the station. The commander-in-chief says, "The disgustingly filthy nature of the source, from which the water used at Bangalore is taken, has been brought to notice scores of times by me within the last 4½ years; but, as usual, nothing has been done to remedy this most crying evil." Even the wells from which drinking water is taken are impure from sewage. They are open and, "when they get dirty, are cleaned."

At Secundurabad, as much as 119 grams of solid matter and, as it would appear, 30 grams of organic matter per gallon are found in some of the well and tank water. (Secundurabad and Pune are almost the only stations which give a chemical analysis.)

At Surat "no one thinks of drinking the camp water." At Asseerghur the same tank is used for drinking and bathing. "For the former the natives slightly clear away the surface." Asseerghur thinks that its water "smells good." The application of chemical science to water supply appears hardly to be in its infancy in India.

The arrangements for raising and distributing water are everywhere, as Bombay presidency remarks, the same as what they might have been "1000 years or more ago." Belgaum has attained the maximum of civilization under this antique system. The water is there "raised in leather skins by bullocks, emptied into "troughs and thence conveyed by water-carriers." At Kirkee "no such a thing as a pump is known"; government pays 617 rupees per (hot) month to water-carriers.

Everywhere "each individual has his bheestie and each regiment its set of bheesties."

(Words convey such an imperfect idea of the actual state of things that I obtained, by the great kindness of an Indian friend, illustrations taken from the life, which I have had cut in wood and transmit with this paper. I have also had woodcuts prepared of barrack and hospital plans from drawings contained in the papers sent me.)

BEGINNING OF WATER PIPE END OF WATER PIPE (Woodcuts)

These water pipes with a will are not always found to answer, for Fort William (which pays them £134 per annum) admits that they sometimes take the water from "nearer and impurer sources." Would it not be better to try water pipes without a will? (The reason usually assigned for employing these human water pipes in barracks is that they are indispensable on field service. But so are tents; and yet nobody proposes to barrack men in tents in time of peace. Barracks are built for peace and ought to be supplied with reasonable and decent conveniences. Why should the bheestie and waterskin be preserved when the tent is abandoned? Let the bheestie be for field service if no better device can be

discovered; but let some civilized method be adopted of supplying barracks, garrisons and towns with this prime element of health and cleanliness. Besides, human labour is daily becoming of higher value in India and it may be actually more expensive to use men as beasts of burden now than to use the appliances of civilization.)

It is singular that, while describing water sources, qualities and modes of distribution which civilized cities have ceased to use, most of the reporters consider the water as good and fit for use. The practical result of this part of the evidence is that safe water supplies are yet to be found both for Indian cities and for British cantonments; and that many sources, as described in the returns, would in England be scouted as infallible causes of cholera in epidemic seasons.

Lavatories. As for all means of cleanliness, bathing, except in a few cases where there are plunge baths, seems to mean washing the face or throwing water over the body, for where there are lavatories there are no or few fittings; where there are fittings there is no water.

At Lucknow a small canal runs along the bath room from which the bathers draw the water and throw it over themselves, being prevented by iron bars across from "lying at full length in it and soiling the whole supply." The bath at Meerut is a long shallow tank "in which the man can lie down and bathe."

Madras and Wellington are literally the only stations where anything like lavatories and baths, with proper laying on of water and proper draining it off, is known, either in barrack or hospital. But at St Thomas' Mount and at many other stations, each lavatory is a tub filled by a bheestie, in which all the men wash, there being no basins.

Figure 1 gives a plan, elevation and section of a lavatory at Aden, which affords rather a favourable specimen of the kind of accommodation provided. It will be observed that all the refuse water is conveyed into a built cess-pit, 8 feet deep, from which it is expected to "make away with itself" as it best can. Why cannot civilized basins be provided for men to wash in and the foul water be properly drained away?

Figure 1

LAVATORY IN ADEN Plan

Washing and bathing in barracks and hospitals will have to be conducted on quite a different scale from the present in India if health and cleanliness are aimed at. If the facilities for washing were as great as those for drink, our Indian army would be the cleanest body of men in the world.

(2) *Bad Drainage.* This may be rendered no drainage whatever, in any sense in which we understand drainage. The reports speak of cess-pits as if they were dressing rooms. As at Nusseerabad and Kolhapur, "a small cess-pit is attached to each bathing room, urinal or privy" and "to each married man's quarter there is a bathing room with cess-pit."

At the capital of the Bombay presidency, where civilization has introduced a "main drain" two feet square with a "flat bottom," this "main drain" is a "great nuisance" and the "stench at times scarcely to be endured." At Fort George, in Bombay, the "latrines are not drained except into an open ditch which is always in a foul state."

Indeed, Bombay would gladly say, as the London woman said when asked to point out the drains, in the days when London drainage was in a similar state, "No, thank God, sir, we have none of them foul stinking things here."

At Madras (Fort St George) the drainage hitherto is stated to be worse than useless. The main drain of the town is 80 yards distant from the European fort; the effluvia from it very offensive. The arrangements at the native lines, as described in the reports, are simply abominable. The old privies in Fort St George are "as bad as they well could be."

At Bellary, a large station, there is no drainage except the fall of the ground.

At Secundurabad (Trimulgherry) there is no drainage of any kind. The fluid refuse evaporates or sinks into the subsoil. A nullah which intersects the cantonment stinks. The extent of the cantonment is so enormous that it is said "to preclude any general surface draining," a statement which, if true, would amount to this, that the occupation of ground by human beings must inevitably lead to disease, a statement as applicable, or rather much more applicable to the area of London than to that of Secundurabad, and yet London is drained both on the surface and below it.

Everywhere the system of "drainage" is that "cess-pits" are "emptied" when "filled" or "when necessary," and their contents carried away by hand, as at Deesa and Belgaum. Generally they are close to the buildings.

At Hyderabad, in Sind, in the native lines, the contents of the cess-pits are "thrown about in close vicinity to the cess-pits." "Anything edible is immediately picked up by birds or dogs." There is "great room for reform" in the native latrines, the cleansing of which consists mainly in the liquid "sinking into the subsoil, so that the earth is thoroughly saturated and a *noisome odour pervades* the atmosphere." And yet it is added that the sanitary condition of the station is, "in every respect, satisfactory."

At Neemuch the "drainage of privies and urinals is only on the surface."

Often, as at Aden, it is expressly stated that it (viz., "all drainage") is "allowed to sink into the subsoil" which (at Aden) we are told is so useful as to "absorb the contents." The arrangement for enabling it to do this is shown in Figure 1. Figures 2 and 3 represent the usual construction of latrines. In Figure 2 the contents are intended to be swept up and removed daily by hand--a noisome and dangerous process, especially during

epidemics. Figure 3 shows the cesspool system of "cleansing," which means saturating the subsoil with filth and endangering all the wells in the neighbourhood.

At Neemuch, which has attained the high pitch of civilization of building latrines for its bazaar, the "latrines are too close to the houses and are not used at present *for lack of a proper establishment to keep them clean.*" Therefore the people at Neemuch do like their neighbours in this respect, a proceeding which it is impossible to describe farther. At Asseerghur a similar abomination appears to be practised on an "open space of ground near the main guard and parade," which is "always offensive" and "ready to nurture epidemic disease."

Figure 2

LATRINE IN PUNE Plan Section

Figure 3

INFANTRY BARRACKS LATRINE IN BELGAUM Plan Section

At Asseerghur the "construction of sewers and drains has not as yet been considered." They "consider," on the contrary, that the sewage "will probably be removed by hand." "The refuse, in all cases, is thrown over the fort wall." "One of the tanks" is called "unsavoury."

Almost everywhere it is said, as at Nusseerabad, Kirkee and Pune and Dinapore, all of them large and important stations, "barracks and hospitals" are "only wet" or "damp" during the "rainy months," as if it were a proof of great and unusual precaution in construction which builds buildings to be dry in dry weather.

At Fort William it is stated that the fluid refuse is swept away by garrison sweepers and water carriers with the *aid of a fire engine*; that much of it evaporates; that the outlet is a foul ditch. Dinapore also boasts of a foul ditch, often very offensive. At Poonamallee the "foul ditch" surrounds the fort and encloses the hospital; and "all fluid refuse sinks into the subsoil where it falls."

At Kanpur is the singular statement that the drains are "not intended" for draining cookhouses, privies, etc. Here, as elsewhere, the drainage is effected *by hand*; that is, everything that will not evaporate or sink into the ground is carried away to a distance in pails, skins or carts, and emptied out.

INDIAN DRAINAGE (~~wood~~ cut)

At Meerut the cesspools are cleansed "by opening the tops and drawing out the fluid in buckets." It is said, "They seldom require cleansing." We may infer from this what a condition of saturation the subsoil must be in!

Agra employs all the powers of nature, and none of its own, to get rid of its "fluid refuse": evaporation, sinking into subsoil, etc. Nature, however, is dilatory, which renders "raised paths necessary between the barracks." The water from the lavatories is collected in an open cesspool from which it is *spread over the ground*. The hospital cess-pits are deep wells,

never cleaned. It is "tried to keep them sweet by lime, but in vain" (probably).

At Umballa the surface water "disappears with tolerable rapidity."

Mean Meer, the new station for Lahore, has no drains about the barracks. The water lies for hours. The lavatory cesspools sometimes overflow, saturate the ground and taint the atmosphere.

These cesspools, as in Figure 3, were intended for saturating the ground with foul matter, and out of the same ground the well water is taken.

Is not the whole history here of the late frightful cholera at Lahore?

And why cannot the refuse, which does so much mischief by remaining, be used to do good and raise any amount of vegetables in soldiers' gardens?

Ferozepore tells the same story of no sewerage or drainage. Also at Ferozepore the lavatories are brick and mortar floors, "adapted for receiving and draining off the water into the subsoil outside, so that the men may freely bathe themselves!" There is no bath except the aforesaid floor. So at Peshawar and Sealkote is the same want of all sewerage or drainage.

At Berhampore, with its square mile of cantonment, only one cart is allowed to remove the contents of the privies to "holes a mile from barracks." The vicinity abounds in jheels and foul ditches with putrid water.

Allahabad, one of our largest and most important stations, in one of the worst positions, as if that position were not unhealthy enough by itself, trusts to nature again, has no drainage nor sewerage, and leaves its surface water to "evaporate," "percolate" and "run off."

Banaras follows in the train. At Rangoon the drainage is supposed to run up-hill. For we are told that all sewerage and drainage are merely "trenches made without reference to slope."

Landour, which is a hill station, has every house damp for three months in the year. Yet their "spacious lavatory with brass basins" is not much used "from the scanty supply of water in the dry season."

It is evidently quite possible to locate the whole army on hill stations and leave it more unhealthy than on the plains.

Nynee Täl, also a hill station, lets all its fluid refuse flow down to plains below.

It is impossible to pursue this subject further. There are such much worse things in the stational reports than what I have chosen to give that I must say to those who call my "bonnet ugly," "There are much uglier bonnets to be had."

The system of water supply and drainage in India may be briefly defined as follows: they draw water from a well, not knowing whence it comes, and if there be any means to drain off water it is into a cess-pit or into long, open, pervious drains, not knowing whither it goes. Where this is not done, all the

fluid refuse is collected in open cess-pits and carried away by hand labour or carts. Or else it is allowed to dispose of itself in the air or earth as best it can.

BHEESTIE

(woodcut)

MEHTER

(woodcut)

THESE TWO OFFICIALS REPRESENT THE SYSTEM OF WATER SUPPLY AND DRAINAGE IN INDIA FOR
GARRISONS AND TOWNS

Drainage, in the sense in which we have found it necessary for health in this colder climate, is by no means considered necessary for health in the hot climate of India; for, as in the case of the water supply, most of the reporters consider *no drainage* a sufficient guarantee for health.

(3) *Filthy Bazaars*. It is almost impossible to describe these. But one description will do for all. Except where the two Lawrences [Henry in Oudh, John in the Punjab] have been--there one can always recognize their traces--the bazaars are simply in the first savage stage of social savage life.

No regular system of drainage, no public latrines, or if there are any, no sufficient establishment to keep them clean, no regular laying out of houses, overcrowding, bad ventilation, bad water supply, filth, foul ditches, stagnant water, jungle and nuisances, this is the account of all. The country round some is stated to be "one immense privy."

At Neemuch, the bazaar superintendent maintains "strict supervision" and "punishes the inhabitants," although the latrines cannot be used. The native houses are all more or less dirty, with dung-heaps close to them. The "disagreeable emanations" from the bazaar are felt in barracks.

In Dinapore some streets were impassable dunghills "last year" "until cleared." The elephant sheds and all the south of the station in a state disgraceful to any cantonment. The drains, deep holes of festering mud. No latrines, although "the population is as thick as can be"; until lately, only one filth cart, now three. At a neighbouring village the dead are buried within the huts.

At Agra it is a proof of "respectability" to have cesspools. The inhabitants (152,000) generally "resort to the fields."

English works, treating of sanitary improvement, insert sections of the bad drainage arrangements. But none contains such an illustration as this of how a woman is made to supply the place of a drain tile.

At Berhampore "nothing can be worse than the sanitary condition of bazaars." The native houses are dirty in the extreme. Dung heaps or deep holes full of stagnant water, the common cess-pit of the houses, are close to them. The nuisance is felt even at barracks. The "conservancy" establishment is quite unequal to its work.

FEMALE SWEEPER (woodcut)

At Muttra the bazaar is an accumulation of huts without order. "Drainage bad; ventilation worse; water supply execrable."

"All the wells brackish, from nitre," the earth being contaminated with all sorts of impurities. Latrines "hardly known." "In short, the bazaar is a mass of filth."

At one hill station, Nynee Täl, where *men are sent for their health (!) the stench is at times overpowering*, from both bazaars being in a filthy and crowded state, no proper drainage or latrines, no means of preserving cleanliness, which causes nuisance even in the barracks. At another, Darjeeling, among other defects, the native villages, writes the medical officer, "are the most filthy" he has "ever entered, and it is quite sickening to walk through them."

At Jubbulpore, where every hut is crowded, where there are no latrines, there cleanliness is almost impossible, the same causes produce the same results.

At Cannanore the native houses have dung-heaps and cess-pits within the compounds. Owing to the want of latrines, the "filth and indecency" are described to be what it is impossible to repeat. The dead are buried within the compounds of houses.

At Trichinopoly the water supply is bad, scanty and brackish. The bazaar is said to be "clean," while the open cess-pits are described as an "intolerable nuisance," when the wind blows over them. The native houses are ruinous and not ventilated. Levelling, filling up, pulling down deserted huts, etc., is urgently required but not done.

Those who think I have given anecdotes and not fair illustration, I refer again to the stational reports for further and fouler evidence.

These instances are enough to illustrate the subject. Bazaars are the real hot-beds of disease and require sweeping reforms as much as or even more than the stations.

Native regimental bazaars, from which the soldiers procure supplies, are within military limits and as much under military control as the ground on which the barracks stand, and *ought* to be kept in as good a sanitary state as the barracks will be when thoroughly improved.

(4) *Want of Ventilation*. The reports generally say, ventilation good, if barracks not overcrowded. But as the barracks are almost always overcrowded, we must conclude ventilation is bad.

Or they say, ventilation sufficient, because doors are kept open during day, which is as much as to say, ventilation is sufficient because it is not.

At Kirkee there can scarcely be said to be *any* ventilation in barracks. There are pigeon holes in the roof, but during the rains, when ventilation is most wanted, these have to be covered with tarpaulin. At Pune the weather side has to be "dammed up" during the monsoon. At Bombay it is said that ventilation is generally sufficient; "at least there are no complaints" although "improvement is imperative."

At Kamptee the ventilation is described as "most faulty and

deficient" although there are three openings in the roof of each barrack. The windows are unglazed. At Ramandroog, a hill station, the doors are venetianed in the upper half, "a great disadvantage in wet weather." Half glass doors are required. At Bellary there are no windows. The doors are half venetian, half panel. At Trichinopoly, one of the very hot stations, the old artillery barrack is stifled by having only doors.

At Dinapore, where the ventilation is entirely by doors and skylights, "which latter, however, do not open," one may safely say, ventilation not sufficient when doors are shut (at night). In the "permanent hospital" at Dinapore, placed so that the "wind does not blow across" it, the ventilation is only "sufficient" when the doors are open.

At Allahabad the doors have to be closed in high winds, dust storms, etc.; and the ventilation, although there are roof ventilators and small windows over the doors, is generally insufficient. The hospitals of Allahabad, although they "face the wind," have "in most instances no windows except openings over the doors and in the roof." And the ventilation is pronounced to be "very defective," especially when the doors have to be closed.

So at Dum Dum.

At Agra ventilation is said to be sufficient, provided the verandahs are not occupied for sleeping. But the verandahs are occupied for sleeping.

At Landour, where sick men are sent to get well, there is overcrowding and bad ventilation. There is no roof ventilation.

At Nynnee Täl the air is said to be "pure" inside the huts, which means that they are always full of "smoke."

The cooling by tatties, i.e., air passing through damp vegetable matter, often tends to produce ague.

External ventilation is often also bad, not giving the barracks the benefit of the prevailing winds, as at Dinapore, Allahabad and Berhampore. This is a point of primary importance in India. At Muttur, although there is abundant ridge ventilation the entire length, it is insufficient at night simply because the barrack is in a position which the wind cannot reach.

At Allahabad one-third of the station is below the level of the river.

Generally, very little attention appears to have been paid to independent ventilation as a cardinal point of barrack construction. Doors and windows have been trusted to; yet they are so placed that men are often exposed in bed to hurtful draughts and, if shut, the fresh air is also shut out. Sometimes there is no glass in the windows and when these are shut there is darkness as well as foul air.

A knowledge of the proper application of sanitary appliances to building in India appears to be as yet in its infancy.

(5) *Surface Overcrowding.* The structure of Indian barracks varies much. But in one thing they almost all agree, viz., in

crowding the men upon the floor.

Figure 4 represents a plan and section of a hut room at Deesa, no less than 200 feet long, intended for 80 men, at 1116 cubic feet per man. It is well constructed for ventilation and is altogether one of the best plans in India. But for its 80 men, which is just four times too many for any room, it allows less than 59 square feet per man. *Figure 4*

EUROPEAN BARRACK AT DEESA

Plan

Section on A.B.

Even in the most recent barrack plans there is the same defect.

Figure 5 gives a plan, elevation and section of the new barrack, either erected or about to be erected, at Mhow. The elevation shows a magnificent and costly structure. But it is on two floors; it has double verandahs, the inner ones occupied by beds, so that there are four rows of beds and 53 feet between the opposite windows; the ventilation of the whole interior is interrupted in a rather ingenious way by cross walls and the men have 65 square feet of space each.

Figure 5

INFANTRY BARRACK AT MHOW Plan & Elevation

But even this is not the worst. At Fort William, the Dalhousie barracks, which are said to be "perfect," have six rows of beds between the opposite windows, 216 beds by regulation in each room and three floors of such rooms. While it is added "900 men" (300 men per room) "are generally accommodated in the barrack without inconvenient overcrowding." What is *convenient* "overcrowding"?

The cubic space generally looks large in India but, the height of the rooms being enormous, often greater than their width, the superficial area is comparatively small. At Kanpur the barrack rooms are from 25 to 30 feet high. The superficial area for 1000 men in 10 rooms is only 41 square feet per man, for 140 men in two rooms 61 square feet per man, and for 240 men in two rooms 88 square feet.

Also, the cubic space presupposes the inner verandahs not to be occupied. But in some places, as at Kanpur, they are invariably occupied from influx of troops beyond the accommodation; there are then four rows of beds between opposite windows.

In all the five barracks of Fort William the man put their cots in the verandahs in hot weather. Perhaps the wisest thing they can do.

At Dinapore again are two of these enormous barrack rooms (827 feet long, for 308 men). The superficial area in these rooms is 94 square feet per man. But one may safely say that 120 would be barely enough under such circumstances. Madras has two stories, of one room each, for 1030 men, the upper of which rooms is stated in the return as nearly 2125 feet long (probably the

longest room in the world), for more than 600 men, and the other, 1483 feet. The superficial area per man is only between 60 and 70 feet in these overgrown monsters of barrack rooms. Secundurabad has 10 rooms, for 104 men each, with only from 40 to 60 square feet per man. At Poonamallee there are two long rooms, with 300 men in each, of which the space given by the dimensions is so incredibly small (112 cubic feet and $8\frac{1}{2}$ square feet per man) that it is scarcely possible to believe them given correctly. The verandah, it is said, is frequently used as sleeping quarters. (No wonder!)

At Meerut, for upwards of 4000 men, the superficial area is only from 52 to 79 square feet per man, and the verandahs are occasionally used for sleeping on sudden influx of troops.

At Agra it is the same. So at Jullundur.

There is one barrack at Fort Govindghur, at Umritsar, in the Punjab, a plan and elevation of which are given at Figure 6, which is a perfect nest of rooms one within the other and has an open verandah besides. The elevation looks promising enough; but the inside, with its double

Figure 6

INFANTRY BARRACK AT FORT GOVINDGHUR (UMRITSAR) Plan
Elevation

defences of windows and doors against the outer air, is about the last place to put seventy men in. The distance between the opposite windows is 86 feet. The superficial area in this case (better than in the other instances, but more than counterbalanced by the extraordinary construction) appears to be about 85 square feet per man.

The men are far too crowded in their Indian barracks. In almost every case there are too many men in the rooms for health. The floors in most barracks are merely the ground bricked over, or they are of stone or of a kind of plaster.

At some stations the floors are of earth, varnished over periodically with *cow dung*! A practice borrowed from the natives. Like Mahomet and the mountain, if men won't go to the dunghill the dunghill, it appears, comes to them.

To sum up: it is not economical for government to make the soldiers as uncivilized as possible. Nature sends in her bill--a bill which always has to be paid--and at a pretty high rate of interest too.

INTEMPERANCE

There is a good deal of intemperance among soldiers everywhere, but I very much doubt whether the same amount of tippling ever goes on in the British army in this country as appears to be encouraged by the canteen system in India.

A soldier in India may buy at the canteen no less than a gallon of spirits in 20 days or he may have a quart of strong beer every day and one or two drams of rum or arrack. It is easy to see what must be the effect of this on health in such a climate.

The gist of the stational returns amounts to this:

Men all "temperate." The maximum daily allowance per man is three quarts porter or two drams spirits *and* one quart porter, or one dram spirits and two quarts porter. This as at Mhow, the largest of our stations in the Bombay presidency. Agra too issues to each man per diem, during the "cold season," 2 drams of rum *and* one quart of beer. But "no more than" two drams spirits, or "one quart (32 ounces) porter and one dram (3 ounces) spirits" per man per diem is the common allowance.

Sale of spirits "strictly forbidden" in bazaar to soldiers; every man can nevertheless get as much as he likes in bazaar, *besides* the above quantity. For, as might be expected, it is practically impossible to encourage and restrict an evil at the same time. Government sells the licence to sell drink in the bazaar and orders the men not to profit by it. The present law is like lighting a fire and charging it not to burn anything.

"No confirmed drunkards"; cases admitted into hospital directly from intemperance, numerous; *indirectly*, innumerable.

Average of habitual drunkards in some European regiments not less than 15 percent.

At Fort William seven trials for habitual drunkenness in 8th Regiment in three months; in the 5th Fusiliers admissions into hospital *indirectly* for intemperance, 17 in 100; *directly*, 2 in 100. Spirits, it is said by more than one report, are the curse of the European soldier in India; also, that the evil effect of spirit drinking was manifest during the last field service. In seven regiments in Madras in 1849 the percentage among different classes was (roughly) as follows:

	<i>Punished</i>	<i>Admitted</i>	<i>Died</i>	
	-----	-----		-----
				-
Teetotallers ---	23½	131	1.2	
Temperate ---	58½	141½	2.3	
Intemperate ---	171	215	4.5	

Again, it is said (Hazarybaugh), "soldiers as a body temperate," *and* one third of disease and one half of crime produced directly or indirectly by drink.

The long-cherished idea as to the necessity of spirits for the British soldier is, it is stated, thoroughly exploded. A man who drinks tea or coffee will do more work than a dram drinker, though considered sober. And why? Because we now know that tea and coffee prevent waste of the system under exertion; while spirits afford no more than temporary stimulus followed by exhaustion or collapse, both of which conditions are powerful predisposing causes of disease, especially in an exhausting climate. It is an error to sell spirits in canteens to prevent men obtaining worse spirits in bazaars. It creates craving, to be satisfied elsewhere. Again and again it is said that selling rum in canteens is an unmitigated curse to a regiment, destructive alike to health and discipline; that it will be a "happy day"

when nothing but beer, light wines, coffee, tea, lemonade, etc., are to be sold. Colonel Greathed, than whom we have no better authority, says that he "should wish beyond everything to see the practice of supplying spirits in canteens abolished."

In one year (1859), at Allahabad, there were thirty-six cases of delirium tremens, of which five were fatal. At Umritsar one-sixth of the admissions are directly, and one half indirectly, from drink. Its effect is "injurious to the last degree." At Chunar, though the men are "mostly temperate," yet, on a ten years' average, *one man in three* (!) was admitted into hospital directly from drink, besides those indirectly, out of the admissions. The deaths were just twice, the crimes just ten times as many among the intemperate as among the temperate.

It is a comfort to hear that at Secundurabad the "average number of confirmed drunkards varies." But twenty-five out of twenty-six cases admitted into hospital indirectly from drink (Secundurabad's statement) is really too bad. Though when it is added that in this large station, occupied by nearly 3000 men, there is so little for them to do that they "go out in search of liquor," it is the less surprising. And the immense amount of epidemic dysentery that sweeps over the place occasionally, under such a system, is still less surprising.

At Bangalore, one of the largest of our Madras stations, where numerous acute attacks of disease are brought on by the quantity of spirits drunk, notwithstanding its fine, healthy, temperate climate, 3000 feet above the sea, it is stated that probably "not three men out of five go to bed perfectly sober," and when pay is issued not two in five. That, of one-year soldiers, 1% is a drunkard; after two years, 2%; and so the proportion increases with length of residence, owing to their "idle, listless, objectless lives." In India temperance is the exception and intemperance the rule. "But government is to blame." It "bids them drink freely" and when the habit is confirmed "denounces them as a disgrace to their country." "The habitual daily two drams ruin the health and habits of the soldier who thinks that as long as he takes only what government allow him, he cannot go wrong." The taste for spirits, it is said, is "not easily acquired by young soldiers." "The habit of spirits is maintained by their authorized use."

The temperate men, it is stated, all drink occasionally; impossible to say how much spirit is sold in the bazaars. At present the collectors encourage the sale as much as they can for the sake of the revenue. Under no circumstances, except extraordinary fatigue, almost all agree, should any drink but beer, tea or coffee be allowed, and the loss of revenue should be otherwise compensated for. Acquiring a taste for spirits should be discouraged in men by every means. It should be absolutely interdicted on the passage out, and malt liquor given instead with good food, good water and good accommodation. For want of these, about 10% of the recruits arriving from England at Karachi

have in certain years suffered from scurvy.

"All spirit drinking is injurious to health." "Nine tenths of all the crime is caused by it." "It is directly or indirectly the root of all evil in the army." Such is the testimony borne in these reports.

In Burma, when malt liquor could be had, health always improved. A marked change for the worse took place when spirit was issued instead. Where beer was introduced, the "tremulous, yellow-skinned, emaciated" spirit drinker was rarely met with.

Madras presidency says that "health, efficiency and discipline would be materially improved by tea and coffee in preference to spirits and malt liquor," "as has been proved when neither spirits nor malt liquor could be had."

Barrackpore says that, if spirits were abolished and dietary improved, the mortality among our men would be "extraordinarily diminished." Fatal cases (in sickness) mostly occur among intemperate men.

There is hardly a difference of opinion as to the necessity of abolishing the use of spirits in the Indian army. Men would be blind, indeed, to the most glaring facts who would justify its continuance. The only plea on the other side in the reports is a very old one, which has been used to justify other vices besides dram drinking, viz., that "if we do not give spirits in the canteen, which we all believe to be bad for health and discipline, the men will get worse spirits in the bazaar." Thus the men are killed by liver disease on canteen spirits to save them from being killed by liver disease on bazaar spirits, government in either case benefiting pecuniarily, as is supposed, by the transaction. May there not be some middle course whereby the men may be killed by neither bazaar nor canteen spirits?

DIET *Excess of Food*

It appears extraordinary to give the soldier the same amount and quality of diet in all seasons, in tropical as in temperate climates. And yet every day the soldier has 1 lb. animal food, 1 lb. bread, 1 lb. vegetables, 4 ounces rice, tea or coffee, and sugar, besides his spirits and beer and any amount of extra animal food he may buy for breakfast and tea. Of all countries India is the one where men cannot be dieted the whole year round by the same rule without mischief. But only a few enlightened men appear to have any idea of what effect this extraordinary system of dietetics has on the soldier's health.

Surely we have sufficient knowledge of dietetics to be able nowadays to vary our diet to suit climates and seasons, and to know that we cannot eat everything everywhere. Sir John Lawrence says, in his evidence, that government "might try to induce the men, by varying the ration with reference to hot or cold weather, to take more to vegetable diet."

The means of cooking are of the rudest order--a small square outhouse, sometimes without a chimney, often far from clean, is the regimental kitchen. As for boilers and ovens, considered

indispensable at home, there are none. A few holes to put the fire in, and moveable utensils to hold over them, are all that India thinks it wants. There is of course no water laid on and no drainage. Here as elsewhere is the inevitable cess-pit and sometimes there are two.

Figure 7 is a plan of a double kitchen at Hazarybaugh. Figure 8 is a by no means bad example at Belgaum. Both show the total want of civilized appliances. And although the cooking is not often complained of by the stations, there is very good authority for stating that the food is imperfectly cooked or served up in a way which destroys the digestive organs and leads to the use of stimulants to promote digestion.

Figure 7

COOK-HOUSE IN HAZARYBAUGH Plan

Figure 8

ARTILLERY COOK-HOUSE IN BELGAUM Plan Elevation

WANT OF OCCUPATION AND EXERCISE

To understand the influence of this system of dieting and drinking, it must be remembered that, except morning and evening parades, and the man's turn on duty, he has nothing in the world to do. He can neither amuse himself, take exercise nor turn his time to profit for himself, for there are no means of doing any of these things. All the spare time people usually give to active occupations he spends lounging in his hot barrack room, most of it on his bed.

The following graphic woodcut of the manner in which a soldier spends his day is from a drawing kindly sent me by an Indian officer of rank [Colonel Young]. (See next page)

India actually reverses the ordinary human day, for the men spend eighteen hours of the twenty-four in or on their beds, and six hours only up or out. Indeed, Kamptee says that "for many months of the year the men are confined to barracks for twenty out of twenty-four hours." And your imagination must fancy 100 to 600 men or more packed into the same room for eating and sleeping away these twenty hours.

This is an account of a soldier's day:

bed till daybreak;

drill for an hour;

breakfast, served to him by native servants;

bed;

dinner, served to him by native servants;

bed;

tea, served to him by native servants;

drink;

bed; and *da capo*.

So that the Briton exactly spends his spare time between eating, drinking, lounging or sleeping; and he eats meat always twice and sometimes three times a day.

All his meals are condensed into the hot hours of the day. And just when he wants one most, viz., *before* he goes out to his

early morning work, he does not get it. Why not give him hot coffee before morning parade and beer, if he must have it, at dinner and at night? Not one report except Tonghoo but prays for the abolition of all this dram drinking; and it is said that the *abstinent* man is more enduring of fatigue and less obnoxious to disease than even the *temperate*

DAILY MEANS OF OCCUPATION AND AMUSEMENT IN INDIA

men. Spirits, it is said, should never be offered for sale, as men are induced to take spirits who never would if they were not so "handy." Trichinopoly says that the sale of spirits should be abolished in canteens, bazaars and within a circle of ten miles round barracks.

If the men had employment, recreation, good tea, coffee, milk, more variety of food and of cooking, spirit drinking might be abolished. A good hot cup of coffee is the best stimulant for a soldier. As it is, the old soldiers often take a dram before morning parade and nobody can prevent them.

The following piece of information is curious (the scene lies in the Madras presidency), viz., that "the canteen funds" (the profits derived out of the soldiers' drunkenness) "are insufficient to provide amusements to keep the men from drinking." Also that where there is no library there are "plenty of books which can be read till 8 P.M. when all lights are put out." Berhampore has a library and reading-room, but "neither lighted at night."

That want of occupation, leading to drink, lays the seeds of disease among the troops is acknowledged. "Alcohol and unrefreshing day sleep," says Bangalore, "contribute to engender disease and accelerate mental and physical decay." Ahmadnagar says that, for one man occupied in a barrack there are six idle. Also, that when men are actively engaged in the field in hot weather, there is little sickness or epidemic disease among them. So unaccustomed is the soldier to ordinary exertion that, as might be expected, the short parades are talked of as injurious, as if they were long harassing marches; while, curiously enough, it is admitted that the soldier is never better than when he is exposed to the harass and fatigue of field service.

Kolhapur and Belgaum say that, the more varied and agreeable a soldier's occupations, the better his health; that the troops require means of occupation and amusement to keep them out of the bazaars.

All the sensible reporters say that too much stress cannot be laid on the importance of using the utmost exertion to provide legitimate amusement and occupation for the men--workshops, shelter for athletic games, etc. We must always remember that, in hot weather, the men, save those who can read, "have positively nothing to do." Employment on public works "would be a great boon"; "the work would be as cheaply done as now; it would occupy the soldier and he would feel he was doing good." Savings banks

would answer, "if workshops for trades were established." The usual account from a station is, no library, nor reading nor day room, no club, no garden, no workshops, no theatre, no gymnasia, no means of instruction or recreation whatever, no skittle grounds, or if there are any, not covered, no sufficient shade for exercise. And the men are generally confined to barracks from 8 A.M. to 5 P.M. in hot weather.

Kanpur actually orders the men to be confined to barracks for 10½ hours a day in hot weather; but the order "is often disobeyed." At Chunar there is no restriction as to exposure to the sun. The "men go about at all times and, except when under the influence of liquor, do not appear to suffer from exposure." Yet Chunar's mean temperature is 65° in December and 92° in June, its sun temperature as high as 120° in June. And yet the men do not "suffer from exposure."

Agra, Ferozepore and Umballa say that a large covered building for gymnastics, workshops, games, with a library, reading and coffee room, a theatre and plunge baths, "would draw many men from their cots where they idle and sleep all day." And Peshawar recommends that this building should be separate from barracks.

Dinapore recommends a farm yard to employ the men: an excellent idea.

Mean Meer (Lahore) suggests photography, modelling and drawing as occupations for the men.

Sealkote (1200 men) and Ghazeeport (850 men) may be offered as examples of the two opposite types of rational occupation and idleness.

Sealkote, indeed, is the only station, except Rangoon, which has anything like completeness. It has ball courts and skittle grounds. It has schools and regimental libraries. It has a well-lighted reading room with chess, backgammon, dominoes and sixteen newspapers, etc. It has a soldiers' garden with seeds and tools provided by government, who grant prizes for the best cultivation (soldiers' gardens, when they exist at all, are elsewhere worked by natives). It has armourers', saddlers', tailors', shoemakers' and one watchmaker's shops. It has theatres; it has cricket and regimental clubs; it has football and it is particularly fond of quoits. The savings bank of one of its regiments has £8000. It has sufficient shade for exercise. Yet Sealkote does not think it has done enough. And while other stations, whose men "lie in their cots all day," seem unaware that anything else is desirable, Sealkote wishes that "workshops for every trade" were instituted, as they might be, and "strongly recommends" a gymnasium. It is noteworthy that the health of the troops at Sealkote seems to require but little amendment and that no complaint is made of its climate.

Rangoon has a ball court and skittle grounds; schools, three libraries and day rooms; soldiers' gardens; shops for trades; two theatres. But Rangoon says it requires lofty open sheds for

gymnasia and that government should afford every aid in establishing good coffee rooms, *independent of canteens*, all amusements to be as near as possible, all canteens to be as far as possible from the coffee rooms.

Now take Ghazeepore. Its whole means of occupation, instruction and recreation are one ball court and two skittle grounds. Its whole shade consists of the verandahs, under water during the rains. "Almost everything has yet to be done."

The large station of Allahabad (with accommodation for upwards of 4000 men) is almost as ill off. Tonghoo, the only station which considers the quantity of spirits drawn as "conducive to health," and the amount of "sickness, mortality and crime occasioned by intemperance" as "trifling," has, as might be expected from this statement, absolutely no means of occupation and amusement for its men, and few of instruction. It appears to consider drinking and illness the normal state of things. At Bangalore (1700 men) "day rooms, soldiers' clubs, workshops, theatre, gymnasia and gardens are things unheard of." The "regimental library has no attraction for men who read with difficulty." This is the place where, as soon as "the noonday gun announces that the canteen is open, a rush is made for the raw spirit dram"; where "the canteen and the cot divide the hours unoccupied by the daily routine of petty duties." What else can be expected? There is, of course, plenty of liver complaint here.

But amusements are not all that is required. In conformity with all reason and experience, Sir Charles Trevelyan observes that, however necessary and useful chess and backgammon, ball courts and skittle grounds, and even books and newspapers may be, they only furnish some present diversion and do not supply any strong pervading motive, such as induces men to submit to sacrifices and to make persistent exertions in other lines of life. This motive is to be found only in the hope of rising to a higher and better position. He advocates a system by which every soldier who conducts himself well and cultivates himself so as to acquire a knowledge of the native languages and other necessary attainments, should be able to look forward to promotion as a matter of course, either in the army or in the commissariat, ordnance or other military departments, or in the department of public works or police. The British soldier in India would then feel himself engaged in the serious business of life, at least as much as any of his countrymen of the same class at home. The army would take its tone from the active influential portion of the men. The amusements of various kinds provided for the soldiers would be more appreciated and would have a more wholesome effect, because they would take their proper place in subordination to higher interests.

This is no theory. It was actually carried out by Sir C. Trevelyan at Madras. Men were first selected by competitive examination within the regiment. There was a second examination at Madras and the result was the obtaining "of twenty men who

were the pick of the whole army for the administrative service of the government in the civil and military departments."

One element essential to placing soldiers in positions of civil usefulness is, of course, their learning the language of the country, necessarily part of that voluntary education which they must have for competitive examination. Teaching the native languages in regimental schools would at once provide the men with interesting occupation and the prospect of future advantage. The War Office has already sent to all European regiments in the Madras presidency a cheap edition of the New Testament and Psalms with a Clavis in Hindustani, in furtherance of this object.

Sir C. Trevelyan would also encourage trades and handicrafts to the full extent consistent with the means of profitably disposing of the produce. And this is the more necessary because all are not equal to the intellectual acquirements to which the previous remarks refer.

All officers who give an opinion on the subject concur in recommending workshops.

Dum Dum, in the total absence of all means for occupying the men, opens a small museum with lectures, to which the men crowd, showing "that soldiers are ready to avail themselves of any means of rational amusement in the evening in preference to spending all their time in the canteen."

Muttra again has no means of instruction, occupation or amusement whatever, except a soldiers' garden for which there are no tools, although indented for a year ago. Carpentry, saddlery and coopers' work are in great demand and would benefit the men, as regards health, morals and finance.

Lucknow is building everything that is required, except workshops. Rawalpindi has nothing but schools. Barrackpore petitions for five courts, a theatre, gymnasia, swimming baths, public reading of good biographies, travels and novels; for trades, such as clothing, accoutrements, barrack furniture, watch making, printing, paper making, baking. It says that savings banks should be connected with workshops.

Darjeeling has a hospital reading room and reader: a very good plan. But for its men out of hospital, at a hill station where the rains fall incessantly for five months, there are no means under cover provided and the men are pent up in barrack rooms to the great injury of their health. Darjeeling says, "there should be restaurants where men could get coffee, tea, newspapers, magazines, and *mix with men of other regiments* instead of the discomfort of the everlasting barrack room."

Hazarybaugh has a government library, *not* lighted at night, a temperance reading room, well lighted, with upwards of 200 members (out of 1080 men, for which number the station has accommodation) and, although it has armourers', shoemakers' and tailors' shops, it strongly recommends further means of occupation and amusement "as the long days of the Indian hot weather hang heavily on the soldiers' hands."

This part of the subject is by no means exhausted but these examples and illustrations are quite sufficient to show the small amount, indeed, of physiological knowledge which has been practically applied to the British army in India.

Suppose anyone wanted to try the effect of full diet, tippling and want of exercise, in a hot climate, on the health of men in the prime of life, the Indian army method would be the process to adopt, in the certain expectation that every man exposed to it will be damaged in health.

While all this scientific "turkey stuffing" is practised, the men are carefully kept in barracks and not allowed to exercise themselves. And everybody seems to believe that the way of making diseased livers in geese for Strasbourg pies is the best way of keeping men's livers sound and of making efficient healthy soldiers for India. Wherever the régime is otherwise, as in the case of cavalry and artillery, who have some exercise, or where an enlightened officer allows his men to go shooting, there is, of course, improved health. But nobody learns the lesson.

People seem to consider that health is a natural production of India, instead of being the result of rational management. At the same time everybody says that India is "so unhealthy." Under this system of diet, regimen, drink and idleness, it is indeed to be expected that cases sent to the hospital will be much more numerous, much more severe and much less amenable to treatment and management than under a sensible system.

HOSPITALS

The Indian hospitals, though planned on simple principles, admitting of admirable details, are, as a rule, exceedingly bad as regards points considered essential to health and administration, even in this country. What would be, e.g., thought in this country of a hospital without a water closet or bath or means of personal cleanliness? Such a hospital would be considered as a mere makeshift till accommodation fitter for recovery could be provided.

The "means of ablution" in Indian hospitals are often "a tin pot with which the sick pour the water over themselves." Or, as at Bombay, they "take water to bathe themselves from a trough." Elsewhere they have "one tub, one basin, to one hundred men." The means of washing, as at Ramandroog, a convalescent station, are "two shallow earthenware pie dishes" "on a form in a room" ("very chilly in damp" weather), "adjoining where the night stools are."

At Rangoon the "bathing accommodation" is "hitherto nothing but a tub of water, without basin, soap or towel."

There may be a bath room. But "all apparatus is entirely wanting." The sick "can always, if they please, get a skinful of water thrown over them by the water carriers," as at Hazarybaugh.

One may safely say that when the sick are able to bathe in India, it is a sufficient test of their being able to leave

hospital, as has indeed been discovered to be the case at some home stations.

At Nynee Täl the sick bathe in the lake. Darjeeling says, "In fact the inducements to remain dirty are, especially in the case of sickly men, greater than those to be clean."

There does not appear to be a single well-placed orderlies' or nurses' room in any of the hospitals from which the sick can be seen at all times and where the nurses themselves can be inspected. The surgeon's and "nurses'" quarters are sometimes three-quarters of a mile or a mile off, so that they (the medical and nursing attendants) are represented as spending their whole day in going backwards and forwards on the road.

The hospital is generally surrounded by a "high prison-like wall." At Ghazeepore it is said "of course all the buildings generally are most unsuitable for hospital purposes." Proper ventilation is represented, as at Baroda, as "next to impossible." At Kolhapur the rain beats in through the cowls and "makes the wards so damp that charcoal has to be used to dry them." The water for drinking may be brought, as at Bangalore, from a tank which receives the whole sewage of the cantonment and which "just now is not very clean," from which "hundreds of bullock loads of impure matter are removed year after year when the tank is low and the smell from it most offensive." Or the water may be brought (cholera also being brought with it) from wells into which the said tank drains. The drainage may be by an open ditch into the tank, whence the hospital derives its water. Or the water supply may, perhaps, have to be carried from half a mile off or even from two miles off, as at Madras. But "no improvement is required in this respect." (!) The privies are everywhere either "highly offensive" or "not more offensive than the best of such places usually are in this country." Or the privies are "without seats" and are "kept pure by burning salt in them." "Arrangements admit of improvement."

Scarcely ever is there any provision of separate wards for convalescents; although, in a country whose scourge is dysentery, to leave men convalescent from dysentery in the same place and under the same circumstances as those suffering from dysentery is just to ensure as far as possible their *not* convalescing. The same may be said of fever and of bowel diseases generally. Convalescents pass their whole twenty-four hours in bed, except during their time of exercise (*where* they have means of exercise) on elephants, in sick carts or dollies. They have not even a room to take their meals in but eat their food upon their knees, sitting on their beds, "possibly with dying men around"; or they are sent to barracks and put on barrack rations and "marched out under a non-commissioned officer morning and evening for exercise."

Where there is no guard house the "men on guard occupy a corner of the hospital verandah where they eat, drink and smoke at their discretion." No hospitals have dining rooms, although

all ought to have them because of the pest of flies in India. Not one has a day room for men who can leave their beds.

The "sanitary state" is generally represented as "good" although at the same time we are told as in certain cases that the hospital is "unfit for accommodation of European patients"; or that "epidemic disease has appeared in it"; that "sores become erysipelatous"; that, as at Bangalore, "one of the flags" in the floor being removed, "the smell from the opening was so offensive that" the surgeon was "obliged to run"; that "gangrene and phagedaena have appeared when the hospital was crowded"; that the "privy is a nuisance to one ward"; that the "cesspools are always more or less offensive"; or that the "out-houses are in a very dirty and unwashed condition." At Muttra the contents of the latrines are "carted away every morning for combustion in one of the many brick kilns which surround the station and help to poison the air." At Madras the "sanitary state" is called "good" and the commander-in-chief himself adds, "if the vile stinking river Cooum were not under the very noses of the patients." Both cholera and gangrene have appeared at times in the hospital. The latrines are placed to windward "unfortunately"; "tubs only are used." The privy is washed daily and charcoal "burned in it." It is called "not offensive," the commander-in-chief again adding, "a year ago it was odiously offensive."

No wonder that it is stated, as at Bangalore, that "sick men are reluctant to come into hospital from barracks" and that the medical officer does not want "convalescent wards" because he finds it better to send his convalescents to barracks, where they recover faster.

From some hospitals the "impurities" are removed by hand carriage to thirty yards from the hospital. In another, the privy is said to be a "disgrace to the nineteenth century." One wonders to what century it would be a credit.

At most hospitals the bedsteads are of wood instead of iron and the men break them to pieces in their "efforts to expel the vermin." As at Ramandroog, where men are sent for their health, "the building swarms with bugs." And so of every barrack and hospital where these wooden bedsteads are used. One surgeon complains of the serious injury to his sick occasioned by want of sleep from vermin. The bedding is of hemp or straw, instead of hair, which latter it ought always to be in hospitals and which is now the regulation in all queen's hospitals. It appears from several reports that sheets are not provided except for dysentery and fever: and certainly in no hospital deserving the name should the inspector-general feel himself called on to recommend that "a good mattress, a blanket, sheets and pillow cases should be provided for every bed," as does the excellent inspector-general of the Madras presidency.

Figures 9 and 11 are illustrations of the smaller class of regimental (British) hospitals. Figure 9 shows the simpler form of construction, a single large ward partially enclosed by other

rooms for sick, all communicating and having a common ventilation, the arrangement good and simple up to a certain point, and then marred in the details. There are privies in place of water-closets, with covered passages, to conduct foul air to the sick in certain states of the wind. Bangalore gives a reason for "the covered way to the latrines" which we never should have thought of. It is a "covered place for exercise."

Figure 9

HORSE ARTILLERY HOSPITAL IN BANGALORE

Section on A. B.

It will be seen that the hospital is entirely destitute of proper ward offices.

Figure 10 shows the privy arrangements in plan and section. There is no drainage; the contents are carried away by hand.

Figure 10

EUROPEAN INFANTRY HOSPITAL PRIVY IN BELGAUM Plan Section

Figure 11 shows a somewhat better construction of hospital but there is the same defect in detail.

Figure 11

ARTILLERY HOSPITAL IN BELGAUM Plan Elevation

Either plan might answer for temporary camp purposes, in default of better, but that is all.

Indian hospitals generally, so far as all conveniences and comforts are concerned, appear to be simply camp hospitals; good, because the best possible for field service, but by no means good or the best possible for permanent stations.

There is no instance, except at Wellington, where the hospital, if on one floor, as is usual, is raised from the ground with any current of air beneath. These hospitals are stated, as at Bangalore, to be "always damp in wet weather." And often the floor is merely the ground bricked over. Rangoon and Tonghoo live like the beavers and raise their barracks and hospitals on piles, with free passage for air underneath. The consequence is that in those jungly swamps they are more healthy than at most other Indian stations where the men sleep close to the ground.

As at Allahabad, Barrackpore, Dinapore, Meerut, Karachi and Secundurabad, vast wards of from 100 to 150 beds, and even up to more than 200 beds, exactly the same as the barrack rooms, are in use.

The wards can never be said to be light or airy; "as a general rule, hospitals are badly lighted and gloomy"; doors are more common than windows. And these doors, when closed, leave the ward, if not absolutely dark, yet absolutely dismal and close. Indeed a dark ward must always be a close ward. Or "light enters from a couple of panes in the doors near the top and when closed darkness is almost complete." There is in Indian hospitals hardly a room light enough to perform a surgical operation. And operations, it is stated, have to be performed in verandahs.

The inner verandahs are generally used for sick wherever more room is wanted: the outer ones sometimes cut up for lavatories, destroying what ventilation there is.

The superficial area per bed is almost invariably too small and the wards almost as invariably too high; the result to the sick being that, with an apparently sufficient cubic space, the surface overcrowding is excessive. One of the worst examples of this is the recently constructed hospital at Trimulgherry (Secundurabad) which consists of three wards, two of which contain no fewer than 229 beds each; the wards are 42 ft. high and afford 1001 cubic feet per bed, but the surface area per bed is only 24 square feet. This surface overcrowding is greater than I have ever seen it in the smallest or the largest temporary war hospitals. Such facts strike one very forcibly in connexion with the high mortality among sick entering these and similar hospitals.

All the defects of barracks re-appear and with worse consequences in the hospitals: viz., bad water supply, bad ventilation, no drainage (Ferozepore says, "drainage not necessary"), offensive latrines, so offensive indeed that the patients have sometimes to leave a particular ward, no means of bathing and hardly any of cleanliness. There are besides, however, two grave defects not felt in barracks but peculiar and fatal to hospitals.

These are the cooking and the attendance. It is in several reports complained that under the present system the cooks (natives or Portuguese) are nothing but "miserable pretenders" because the pay is so small; that the kitchens are no better than, but just the same as the barracks kitchens. They are often small open sheds without chimneys, the smoke finding its way out as it can, and with but few utensils; sometimes the food is prepared on the ground. "But we are accustomed to this in India." It is added that though common food is tolerably well prepared, there is nothing whatever than can be called sick cookery, nothing whatever to tempt the appetite or spare the digestion of the sick man whom the hospital is for.

In hospitals at home, trained cooks of the army hospital corps are now in charge of the cooking under the direction of the purveyor, who is responsible that the diets are properly cooked. In India the chief quality in native cooks appears to be the "pursuit of cooking under difficulties"; their ingenuity in bringing about an *apparently* good result, in a rude and often bad way, is frequently admired by the reporters, as if the end of cooking were "to make a pair of old boots look like a beefsteak."

In England where the grass-fed meat is so much better than in India, it is found necessary to put the purveying of meat for hospitals under the charge of the purveyor for the sake of always obtaining the best quality. There does not appear to be any provision of this kind in India, where all is under the commissariat.

As to the attendants, they are just the same as would be supplied to idle healthy men. Quantity, it would seem, is supposed to supply quality. In serious cases a "waiting man" is supplied "from the battalion who is relieved daily." That is, he goes on guard for 24 hours, as in the guard room, so in the sick room. It appears that mounting guard in the sick room is disliked and the guard sometimes neglects his patient.

As to supposing that any nursing is required, the thing is totally out of the question. There are neither trained orderlies nor female nurses.

A matron is sometimes "sanctioned" but "only for a complete battalion." If there are fewer sick they must do without. Every severe case, as has been stated, is allowed to have its comrade to itself in from the ranks, i.e., the case which requires the best nursing is to have the worst nurse. Something more is needed to make a nurse, as well as a surgeon, than mere kindness. Wherever the above comrade-practice is found, we know beforehand that there can be no nursing, no discipline in that hospital and any amount of drink.

There is generally one hospital sergeant and a "plentiful supply of ward coolies." The hospital sergeant is for discipline and under him are seventy-nine coolies and bheesties in cold weather, 240 in hot weather. This for an European corps. The general impression, as regards the native attendants, is that they are in some sense kind but "as a rule very inattentive," and when there is any pressure of sick they are "lazy" and "apathetic," and the sick, it need hardly be said, neglected and "averse to be waited on by them." When at a hill station, as Landour, the hospital serjeant is taken at random from the sick men themselves, sent up for convalescence, it is needless to point out the consequences. This grievance has been repeatedly represented, but in vain.

(And here comes in again the difficulty of difference in language. Our men dislike and despise the natives and are regarded by them in return more as wild beasts than fellow creatures. The native, however, makes much more effort to learn the Briton's language than does the Briton to learn the native's. It is difficult to give an idea of the evil effects of the gross ignorance of all that relates to the country in the ranks of our army in India. The commonest attempt at conversation gives rise to feelings of impatience and irritation, too often followed by personal ill-treatment. Where the Briton is sick, it is of course worse.

To enable our soldiers to hold ordinary intercourse with the people among whom their lot is cast, is the first element of an useful and happy life for them in India. Every soldier should be required to learn something of the native language. And a somewhat higher voluntary standard should be fixed, the inducement to attain which should be: 1. A specific pecuniary reward. 2. Eligibility for employment in the various departments

of the public service.)

Nynsee Täl has one hospital sergeant, one barber, one orderly, for its attendance.

Lady Canning introduced female nurses at Allahabad, who are mentioned (in the stational return of Allahabad) as being a great comfort to the sick. Wherever there are general hospitals there should be female nurses, but only under the organization laid down by the Medical Regulations of October 1859. It is a great mistake to put down a few women among a parcel of men (orderlies and patients) without exactly defining the women's duties and place.

Lastly there appears nowhere in India to be provided any means of drying hospital linen, even during the rains. It is often complained that the washing is very bad and that the native washermen tear the linen, and at one cavalry hospital this keeps two tailors constantly employed in repairing the rents and injuries; for native washing is done by beating the linen against large flat stones or wooden boards.

If the British military hospitals are such, what must be said of those for our native troops? Here the patients "diet themselves."

As regards construction, where native hospitals have been specially built, they resemble the smaller class of British hospital. One of the most complete of these is shown in Figure 12. There are wards within wards, completely enclosed by other rooms, of which, although there are plenty, not one is suited for ward offices.

Figure 12

KURNOOL FORT HOSPITAL (NATIVE)

Plan

Section on A. B.

Elevation

Cook-room

Section of Cookroom

Privy

Section of
Privy

Figure 13 exhibits hospital construction reduced to the most extreme state of simplicity. It consists of a single ward with a few square holes on opposite sides, apparently without any glass. No ventilation and no ward offices whatever. But there is a dispensary and store room exactly where they ought not to be.

Figure 13

NATIVE INFANTRY HOSPITAL IN KULLADGHEE Plan Section on A.

Elevation

But it must not be supposed that native hospitals are all as good as these. They are generally nothing but a shed, perhaps a "gun shed" or a "cattle shed," as at Kolhapur, converted into a hospital, where the sick receive nothing but medicine. The patients cook their own diets, eating and drinking what they please. Or when too ill to cook for themselves, an orderly friend is detailed for the purpose. There are no conveniences; sometimes the sick go home to wash or bathe themselves in a tank. Such are the "ward offices usually provided for these establishments." In

one native infantry hospital at Secundurabad it is stated that hospital gangrene frequently occurs from overcrowding, from the cachectic state of the patients, *owing to the unhealthy character of their lines*, and from a cesspool in the hospital enclosure, which last is, however, being remedied.

At Rangoon it is stated that the privies, for native regiments, are built of matting "which is most objectionable as allowing the escape of noxious effluvia." Is it then desired to keep the "noxious effluvia" in?

It is supposed that "caste" prejudices are such as to prevent native hospitals being properly built and supplied with requisites for sick. But this has to be proved by giving natives a properly constructed and provided hospital. There are plenty of "caste prejudices" in this country against good hospital construction; but good hospital construction advances nevertheless.

At Ludhiana one native doctor, one cooly, one water carrier, one sweeper are the attendants "sufficient for the ordinary wants of the sick." The present arrangements for the female hospital are said to be "sufficient" (which means *none*) (Ludhiana is now a native station).

HILL STATIONS

Sir Ranald Martin wisely and strongly urges that the whole subject of hill stations should undergo a thorough revision for the purpose of deciding whether a portion of the army could not be always taking its turn as a reserve on the hills, thus to preserve its stamina.

Children too might be reared as well on the hills as at home. One of the native chiefs going over the Lawrence asylum (of five hundred children) at Sunnawur, said to Sir John Lawrence that they looked like lion's cubs.

It strikes one, however, that it would not be safe to depend for improvement of the health of troops solely on occupying hill stations, with such an overwhelming amount of evidence as to the bad sanitary state of the stations on the plains and even of not a few of the hill stations themselves, such as Darjeeling, Landour, Nynee Täl.

"At some hill stations there is malarious fever; others predispose to diarrhoea." The barracks and hospitals at Kussowlie and Sabathu are defective both in plan and in structure. At Mount Aboo they are "bad barracks," built in a "malarious gully," and the men return suffering from intermittent fever and from scorbutic disease, the result of want of vegetables. Will it be credited that, at one of the two hill stations of the Madras presidency, the privies are built on the edge of the hill in order that the natural slope may save us all the trouble of sewerage, the lavatories the same, which are emptied by "upsetting the tubs" down the hill; and that, at the other, with more than nine hundred men, the barrack square was an immense swamp for want of drainage. Low fever, from March to May, from

which the men have suffered who were sent there for health, is attributed to this as if it were a meteorological observation. This refers to Wellington on the Neilgherries. Indeed the Neilgherry stations, the best in India, are in great danger of being permanently injured by sanitary neglects.

In fact, all that the hill station evidence proves is that healthy men, put under healthy conditions, will remain healthy, and *vice versa*.

Hill stations, it is said, are highly favourable to troops arriving *in health*, if lodged in good barracks; are unfavourable in some states of disease. Dry, spacious, well-ventilated barracks, in well-chosen positions, drained, supplied with wholesome water and out of the way of nuisance and malaria, have been the great want of hill stations. And want of fresh vegetables and of pure water has produced much mischief. In the rains, the water is often loaded with "rotten vegetable matter causing diarrhoea." (Is this supposed to supplement the want of vegetables?)

High authorities advocate sending certain invalids to sea-side sanitariums.

Hospitals at hill stations appear to be very much on a par with hospitals at plain stations, as far as can be learnt from Figure 14 which represents the hospital at Darjeeling used for sick of the depôt. The arrangement is much that of a field hospital with fire-places to suit the climate. At this hospital an open privy was placed in one corner of the verandah, which compelled the sick to evacuate the ward and it took five years' writing to get it removed.

Figure 14

JULLA PUHAR HOSPITAL IN DARJEELING

Hill climates, judiciously used, would no doubt be of great value. But they are by no means all that is required for the salvation of the Indian army. This must be brought about by sanitary measures everywhere, of which hill stations, if kept in a good sanitary condition (but not if kept in a bad condition) are one. This is the unquestionable result of the evidence.

When our troops went into a notoriously unhealthy district in China, they were not placed on hill stations. They were properly managed and their sanitary condition provided for; and they had no larger proportion of "constantly sick" than the troops at home.

NATIVE LINES

Native troops have no barrack accommodation, no doubt a most excellent thing for their health. They have hutting money (very little) and make their own huts which are so badly built as to ensure thorough ventilation, being often indeed only open sheds in compartments. But little or no pains are taken to make them put up these huts in any regular order; they are crowded, or rather huddled, together and without drainage of any kind. They are always damp and the men always sleep in malaria. When they

have families the huts are too small because the hutting money is too small.

Native troops have no rations and stint themselves of proper food in order to hoard their pay. They are almost invariably temperate and have little or no liver disease, whilst the British troops are decimated with it. So far as can be learned from disease statistics, native troops are far more moral than British.

Except schools, no means whatever of instruction, occupation or amusement are provided for them. They are, in fact, stipendiaries receiving a day's pay for a day's work with their uniform, but they are not what we should understand by troops provided for by the State.

With regard to every appliance of civilized life the tale is even more absolutely *nil* than for British troops. There is absolutely no drainage or sewerage, no latrines. And the descriptions of what the surrounding country and bazaars are in consequence are absolutely impossible to repeat. There are no lavatories nor baths. There are no kitchens. There is no sanitary police.

At Mangalore, one of the best of the native stations, "surface cleansing has hitherto been performed solely by the heavy rains." At Quillon, another, there is (as usual) no drainage but ruinous buildings, harbouring the dead carcasses of animals and "on one occasion, of an old woman."

The water supply is of course as bad as, or worse than at European stations. At Kherwarrah, in Bengal, the water "has not unfrequently a filthy taste and disagreeable organic smell."

The degree to which native troops almost everywhere suffer from guinea worm would alone tell us what the water is. At the same Kherwarrah, one in every six has suffered (for seventeen years) from guinea worm.

There is no "conservancy" establishment of cleanliness. At this same large station of Kherwarrah "this is left very much to the jackal, vulture and carrion crow" (beyond the lines). There are patrols to prevent nuisances "except in specified localities." The lines are kept clean but the "sweepings are deposited thirty yards to windward."

The most ordinary sanitary precautions are not taken. "Every family has its own cesspool; dung heaps close to every hut," also holes for ordure. Animals are slaughtered to windward. The offal is thrown to dogs, jackals and vultures. During the rains the stench from the offal, the increasing accumulation of years, is sometimes dreadful.

The native population is "decidedly unhealthy" from jungle, swampy ground, cramped, damp dwellings (which shelter sheep, goats and cattle as well as men), bad food and water, neglected cesspools, middens, exuviae of men and animals, absence of drainage, opium eating, etc. What wonder if native troops suffer from quotidian, tertian, quartan, remittent and typhoid fevers

(which alone constitute two fifths of the sickness and cause one fourth of the deaths in some places), from acute and chronic dysentery, from sporadic and epidemic cholera, from simple and confluent smallpox and from acute and chronic rheumatism.

The intelligent medical officer of Kherwarrah imparts a very important secret as to the unhealthiness of Indian stations when he says that none of them have had "fair play" (not even such large British stations as Dum Dum, Barrackpore and Dinapore), owing to the "utter disregard of the commonest sanitary precautions."

At Cochin, in the Madras presidency, the water is unfit for use from privy infiltration. Drinking water is brought daily 18 miles. One tank is used for bathing and drinking. The sanitary condition of the bazaar is "as bad as it can possibly be." "Cleanliness is unknown." There is "no drainage." The "streets are used as privies without hindrance." No regulation for cleanliness is

attempted. The old rampart was converted into a ditch, now used as a public privy. Every odd corner is "in the most disgusting condition." Rajeote, in the Bombay presidency, might give similar instances of more or less neglect. But it is needless to follow this subject further. Everywhere there is the same ignoring of natural laws and the same penalties of disease and death.

The hospitals, again, combine all the disadvantages of civilization without any of its advantages. In one place the hospital was so overcrowded that for two years "gangrenous and spreading sores" were "frequent." (Labuan says that its hospital is much larger than "the strength is entitled to" but that "frequently the number of patients far exceeds the number of beds" and the "extra" sick (60 in a strength of 161!) "have slept on the floor between each bed and some in the verandahs.") Another hospital was so much out of repair that "it would before long be a ruin" (the best thing that could happen to it). If there is a privy it is a "small room with no place in which the excrement can go to be cleared away." If there is a lavatory or bath, it is "two tubs out of repair" (does that mean that they cannot hold water?). If there is a kitchen, as at Mercara, it is under the same shed as a privy and cannot be used for the stench. Indeed the medical officer proposes that it should be turned into a privy. The sick generally cook under the nearest tree and, if unable to do so, a comrade cooks for them under the tree. Linen is washed and dried by caste comrades or by the patients when not too ill. Each patient brings in his own bedding; generally his own bedstead. "Each patient defers bathing according to custom till he is cured, when he retires to the nearest well, draws water and undergoes the bath of cure," i.e., when he no longer wants it. Every report begs for a bath room.

The general construction of native hospitals has been described under the head of "Hospitals."

NATIVE TOWNS

The description given of the native towns is astonishing. Can it be possible that such a state of things exists after all these years of possession and unlimited authority?

So far as one can judge from the evidence, the sanitary state of entire large cities is as bad as, if not much worse than, was the state of the worst parts of our worst towns before there was any sanitary knowledge in the modern world at all. What, for instance, is to be thought of the following?

At Bangalore, a station 3000 feet above the sea, with the climate of a hill station indeed and quite as healthy as any in Europe where we have 1700 men, we have allowed to grow up within our cantonment a native population of half a quarter of a million without any of the arrangements of civilization whatever. Houses, tanneries and slaughterhouses are crowded together without any plan. There are no public necessities. The natives resort to open spaces. The Ulsoor tank, which may be said to be the receptacle of the sewage of the whole place, including our barracks and hospitals, is used for drinking. In dry seasons the tank itself is a great nuisance. Even the wells are poisoned "owing to the amount of filth percolating into them from bad drainage." There is a dirt heap at almost every door. In the better houses where latrines exist, they are wells sunk in the ground within the house, which are closed up when filled and others opened. The filth from the cow-houses flows into open drains. There are no arrangements for stabling the bazaar horses, which with other domestic animals are kept *in the houses*. This bazaar is all close to our own barracks; and it is said that now nothing short of removal of the one or the other will remedy the evil. There is nothing, therefore, to astonish us in the fact that, in this, one of the healthiest stations and climates in the world, the mortality of our European soldiers should have been 129 per 1000 (including cholera) in one year. (Dr Macpherson's Report on Madras presidency, 27 December 1860.)

In Hyderabad, not far from our largest Madras station (Secundurabad) all the promoters of zymotic diseases are at work and cholera, smallpox, diarrhoea and dysentery are, it is stated, the most common of these.

But the capital of the Madras presidency is, perhaps, the most astounding. Its river Koom is a Styx of most offensive effluvia. The air in Black Town and Triplecane is "loaded with mephitic effluvia at night." The atmosphere around Perambore and Vepery is "perfectly poisoned."

At Kamptee, with its 70,000 souls, "all filth is thrown into pits in the streets (!) of the cantonment." The poorer houses are huddled together without order on ground intersected by nullahs, making the houses difficult of access. The cess-pits, "where accessible," are cleansed every 24 hours. The next information is curious. "Persons committing nuisances are closely watched and taken up daily." At Jaulnah there are no dung-heaps nor cess-pits "outside at least."

The native population around Fort William, Calcutta, is peculiarly unhealthy; fevers of all kinds, cholera and fatal diarrhoea are "remarkably prevalent." The causes are "bad overcrowding," "bad drainage," foul drains, rank jungle, stagnant water, bad unwholesome drinking water, filth.

At Ahmadnagar it is acknowledged that almost every epidemic in the cantonment has its origin in the crowded, ill-ventilated and dirty village of Bhinga (of 3000 souls). The town itself of Ahmadnagar, with its 36,000 people *and no latrines*, uses "the very boundary of our camp" for this purpose and "the smell of ordure is very perceptible." At Pune, where is a city of 80,000 people, three quarters of a mile off, a bazaar of 27,000 quite close, a village (Wanowrie) 100 yards from officers' lines, where cholera first arose, there is the same story about "no latrines," "conservancy" establishment far too small for the daily removal of filth, and nuisance experienced in barracks from this cause. Belgaum says of its bazaar that there is "no want of cleanliness" *and* "that the public privies and cesspools are at times very offensive." The town, with 18,000 people, is between the fort and the camp. It affects the general health of our station from its "bad conservancy." But, again, we are told there is "no want of cleanliness!"

At Kolhapur "one sweeper is maintained by government" (for the bazaar), who collects the filth and throws it into a nullah, 400 yards from camp, which is also the public necessary; "two peons" prevent nuisance being committed in camp "from 4 to 10 A.M. daily." At Bombay, with a town of from 400,000 to 600,000 souls, there is a municipal commission with sanitary powers and the result of its practical labours is as follows: Native houses generally in a filthy condition; much ordure within precincts of buildings where it has been accumulating *for years*; native town proverbially unhealthy; nuisance from wind blowing over it, experienced in Fort George and town barracks; washermen's tanks particularly obnoxious; site of slaughter-house as bad as can well be; sea breeze cut off by bazaars, etc.

Dung heaps are a "never failing condition of native life in India." At Baroda the military hospital is close to a nullah used as a "necessary" by the natives and as a "receptacle for the filth of the whole station." When cholera occurred, the hospital had to be evacuated. And yet it is added, with great *naïveté*, "the sanitary recommendations of the medical officers are always attended to."

At Dinapore the native towns are "disgracefully filthy" with "holes near all native houses." At Kanpur there is overcrowding and want of ventilation with all manner of filth.

At Peshawar the streets are dirty, the houses densely crowded and ill-ventilated. The population suffers from a "severe and fatal" typhoid remittent fever, which rises to an "epidemic" in certain districts, also from epidemic smallpox, etc. At Ghazepore, in the latter months

of 1859, there was a "fearful" fatality from "fever" due to a total want of sanitary arrangements.

At Berhampur there seems to be scarcely any epidemic which the native population has not. Among the causes, "holes full of stagnant foul water, close to almost every house, forming the usual cesspool of the neighbourhood." Utter neglect of ventilation and of all sanitary measures.

At Hazarybaugh cholera and smallpox are the "most common and fatal epidemics."

Only the presentable flowers are here. The stational reports are a garden to which those who doubt the truth of this representation, taken as a whole, and think it merely true as to particular facts, are again referred.

The stational reports generally state the native populations to be "healthy" or "remarkably healthy," and then give a list of every disease that flesh, *under defective civilization*, is heir to, to which they are subject endemically or epidemically. What must be the state of health of the natives when "unhealthy"?

One remark or rather inference, viz., native "caste" prejudices appear to have been made the excuse for European laziness, as far as regards our sanitary and hospital neglects of the natives. Recent railroad experience is a striking proof that "caste," in their minds, is no bar to inter-communication in arrangements tending to their benefit.

Sir C. Trevelyan justly says that a good sanitary state of the military force cannot be secured without making similar arrangements for the populations settled in and around the military cantonments; that sanitary reform must be generally introduced into India for the civil as well as the military portion of the community; that now is the time, for not only has the subject been worked out by actual experiment in England, but the improved financial stage of India, the increased influx of Europeans, especially of engineers and mechanics, and the powers of local legislation lately conferred upon the subordinate governments, have given facilities which never existed before. The sanitary arrangements for towns will be conducted by municipal bodies, for the creation of which there is already a very good act of the Government of India.

The mere passing of such an act presupposes the impotence of "caste" prejudices; and nobody who understands the relation of bazaars and native town to garrisons and cantonments can fail to see that the sanitary improvement of the Indian army involves the sanitary improvement and the advance of civilization in India, a work before which "caste" prejudices and many other prejudices will have to give way.

ABSOLUTE PERFECTION OF CAUSES OF DISEASE

Our experience at home as to the results of sanitary improvement on the health of the army affords every reason to expect a very great improvement in the health of the Indian army if proper sanitary measures be carried out. And it would require very

strong evidence indeed to convince the people of this country that the epidemics which have devastated India arise from any other causes than those which the stational returns and the evidence prove to exist in what one may call a state of absolute perfection in the Indian towns, but which have been removed with entire success in this country.

SOLDIERS' WIVES

"Leave to marry" in the British army means that those only who marry with consent of the commanding officer have a claim to quarters in barracks. The proportion of quarters allowed by regulation at home is six married men per company of 100, in addition to married sergeants. When going to India, twelve married couples per 100 men, together with a proportionate increase of wives of serjeants, are allowed to go with the regiment, a number which high authorities consider too small. There is a general opinion that the proportion of married people allowed to go to India should be raised. The question is mainly one of sea transport and barrack accommodation, neither of which would be very costly as compared with the benefits to health and discipline which all agree would result from increasing the number of married men, always the steadiest, most temperate and best behaved in the regiment.

Throughout India, however, there is better provision of "married quarters" generally than on home stations. At most places there are reported as "sufficient," at some "insufficient," at others "very bad" and at a few there are none. Where they are insufficient or non-existent, the "married quarters" are men's barrack-rooms or huts, divided off by curtains or partitions. Only at a few places are married people placed in barrack rooms with unmarried soldiers, still this practice does exist. One of the consequences of "allowing" marriage in the army is certainly that decent healthy quarters should be "allowed" too. No time should be lost, for this is especially necessary in India.

In the matter of soldiers' wives there are two instances of striking contrasts (each happened during the Mutiny); one, the destruction by dysentery of sixty-four wives and 166 children of British soldiers at Dum Dum; the other, a request made to and complied with by Sir John Lawrence from an officer of a native regiment of guides regarding the native wives. "Mind you look after these women carefully and do not let them be in distress; several of their husbands, men of rank, have been killed." The request was loyally fulfilled and as loyally appreciated by the man.

At Dum Dum 554 women and 770 children were crowded together without care or supervision, and the proportion which fell victims to intemperance, immorality, filth and foul air was more than six times, in either case, the ordinary mortality of women and children in Bengal. The fathers and husbands were fighting or dead in our battles. This massacre killed as many as it is

supposed fell by the hands of the mutineers.

It is singular that in no one part of the Dum Dum report does the slightest allusion occur to this tragedy, making one think that it cannot be an isolated case. And it appears to have arisen solely from the absence of any regulation as to the care of soldiers' wives and children in the husbands' and fathers' absence. Families go to India and as long as the regiment remains fixed things may go on pretty well, provided there are decent separate quarters and a careful kindly commanding officer. But send the regiment on active service and there is no way of caring for the families. They take their chance under circumstances where they *cannot* help themselves. Or they are all huddled together, as at Dum Dum, with this result that, while the husbands were punishing the murderers of English women and children in the upper provinces, their own wives and children were being destroyed in vast numbers for want of care. Why? Could it not be made a necessary part of army arrangements to appoint a "picked" married officer to act as guardian over these women and children, to see to their comfort and conduct, to their being properly lodged and cared for? The manner of providing for them out of their husbands' pay is a matter of detail easily settled. If only anyone will take the trouble to do it the thing can be done. But more than this, it should be made matter of regulation throughout the whole service. There should be personal responsibility somewhere. At Dum Dum nobody was held responsible and nobody was punished for the result. If one-tenth of the calamity had happened in England, there would have been coroners' inquests over and over again, and public opinion, if not law, would have punished some one. At Dum Dum the inquiry took place after the destruction of human life had been going on for months.

Sir John Lawrence expresses forcibly his practical opinion that there should be a "system," treating the "men as so many children," in binding them to "remit" money for their families, but also providing guardianship for those families when the "regiment is going on service" and so averting the "terrible results" of "abandoning the wives." Why cannot what was done for the Sikhs by Sir John Lawrence be done by regulation and on system for our own country people?

There are shocking illustrations of how soldiers' wives and children fare when the men are on foreign service and how a man does not become a better soldier for knowing that his country does not care for his wife and children while he is risking his life for his country. To the extent to which marriage is allowed in the army should all its necessary consequences be acted out.

But so far from this being done, the principle everywhere has been the reverse. Even as regards illness, in some notorious instances soldiers' wives have expressed (and justly) the strongest indignation that government took more care of prostitutes in illness than it did of honest wives; the

government will pay to cure the prostitute to go on with her horrid trade which destroys their husbands, and will not pay to cure the wives and children or to make the married quarters more comfortable; and it is true, although not applicable to India, where there are female hospitals.

Some of these hospitals, as at Karachi and Deesa, Lucknow, Raneegunge and Ferozepur, appear to be very complete with female attendants. In the Madras presidency they are too often, as at Bangalore, Trichinopoly and Kamptee, merely men's wards appropriated to women and justly stated to be "objectionable in every way." Elsewhere they are rather bare. Indeed, as at Baroda, Kirkee, Pune, Darjeeling, the sick women and children "have to be attended at their own quarters," either because "there is no matron" or because the "ward is too small," or etc. Curiously enough, it is generally stated that the "present arrangement is conducive to comfort." What arrangement? Of having no matron? While it is added that a lying-in ward and a matron are "much wanted." At Darjeeling the women and children are treated in their own quarters which "would be satisfactory enough if the married quarters were not so dark and damp as they are." Sometimes it is said that "the arrangements are quite equal to those for the men."

The construction of these hospitals appears to be the same as that of small regimental hospitals.

The following plan and section of a female hospital at Mean Meer (Figure 15) (one of the most recently built in India) shows that they require quite as much structural improvement. It is a nest of rooms within rooms; and the same may be said of it that one of our engineers said of the Pacha's new fort on the Dardanelles, that "he would be much safer outside of it."

Figure 15

FEMALE HOSPITAL AT MEAN MEER Plan Section on C.D.

But whatever defects there may be in the hospital accommodation for soldiers' wives and families in India, at least prostitution is not encouraged and its immorality systematically palliated by lock hospitals on any large scale, although recent attempts have been made to extend them. Lock hospitals, alas! exist--exist, I mean, and are advocated and supported on the principle of restoring the vicious to go on with their vice, the only institution I am aware of for this purpose. (Prisons and lock hospitals in England at least aspire to reclaim the vicious.) And lock hospitals and police regulation are, alas! sometimes recommended, just as if they could do any good. At Secundurabad, it is said, a lock hospital has been long in existence with these "excellent results," viz., that 20% of admissions into (military) hospital are from the disease engendered by vice, which is five times as much as exists among the native troops. On the other hand, the enlightened medical officer at Karachi has entered a striking protest against the present lock hospitals and has shown how utterly incompatible at

once they are with morality and how utterly useless in practice. Indeed common sense is the same as moral sense in these as in other things. As in the kindred vice of drunkenness, government licenses in order to control vice and the soldier is more drunken than before.

Lately in one of our own largest seaport towns--and I understand it is not the only place where such a measure is contemplated--I was consulted as to the structure of a hospital where government was going to pay for fifteen and for ten beds for fallen women for the army and for the navy. These are called the "War Office prostitutes" and the "Admiralty prostitutes." The title is just and therefore the less agreeable. In this same town a hospital for soldiers' wives only lately exists, although it had been long corresponded about, although several women had been confined in barrack rooms, several had had fever in consequence and one, at least, upon testimony of the army medical officer, had died from it, as well as children.

With two or at most three exceptions, there is no accommodation for sick women and children at any home station. As regards army prostitution, there is, as I have said, the same helplessness as with army drunkenness. It is apparently never considered that they are both parts of the same vice and that, so far as human agency is concerned, they both spring from the same causes.

India has its licensed "lāl bazaars" [brothels] and its licensed spirit selling. And both are encouraged to the utmost by leaving the men utterly without rational employment for their time. The "lāl bazaar" and the canteen both send men into hospital in abundance. While, instead of confronting both evils with the strong arm and providing men with useful occupations and manly amusements, Government sets up lock hospitals under its authority and makes ineffectual attempts to stop drunkenness by keeping the supply of drink, as far as it can, in its own hands, and so encouraging the evil by its own authority. The authority of government is avouched for both evils. So long as this is the case, they will extend and flourish and the tax payers in India and England will have to bear the cost.

STATISTICS

All that can be said under this head is that the statistical abstracts of sickness and mortality for the European troops of the Indian army afford no data of sufficient accuracy to enable us to judge of the sanitary state of the troops, while they are defective in some most important data required for estimating the exact sanitary condition of the stations. Practically, these statistics are very much in the same condition as were those for Queen's troops before recent improvements were introduced. The facts may be in existence, but there are no means of rendering them easily accessible. The question of mortality and efficiency is one of even greater importance now than it was formerly, seeing that the whole British army must pass through India in the

course of its service.

The only way to keep a proper check over the sanitary condition of stations is to lay their sickness and mortality statistics annually before Parliament. This can be easily done by adopting the new statistical methods and forms at present in use for queen's troops at home and on foreign service. These should be introduced over the whole of India and the results published every year, together with those of the army at home.

SANITARY SERVICE

In times past there has been no proper sanitary service in India. No doubt there has been more or less of cleanliness; because wherever Englishmen go they attend to this in one way or other. Otherwise there is just the same neglect of civilized appliances, of water supply, drainage, etc., as used to exist in unimproved towns at home, notwithstanding repeated representations made by Sir Ranald Martin and by other enlightened professional men. In India, as at home, no good will be done unless it be made some competent person's express business to look to these things.

Even with our habits of self-government, it has been found necessary for the central government to step in and assist local progress. It is certainly of far greater importance for the Government of India to do so, seeing that there is no local self-government at all.

There is, it is true, a kind of local sanitary government at the seats of the three presidencies, the result of whose labours has hitherto been that no one of those three large and populous cities has as yet arrived at the degree of civilization in their sanitary arrangements at which the worst parts of our worst towns had arrived, before sanitary reform sprung up in England at all. Bombay, it is true, has a better water supply; but it has no drainage. Calcutta is being drained; but it has no water supply. Two of the seats of government have thus each one half of a sanitary improvement, which halves ought never to be separated. Madras has neither. As to barracks and cantonments, it is quite evident that both sanitary medical officer and sanitary engineer need to "be abroad."

I am, my Lord,
your faithful servant
Florence Nightingale

1864

"How People may Live and not Die in India." A paper read at the Edinburgh, October 1863, *Transactions of the National Association for the Promotion of Social Science*. London: Longmans [January] 1864 [9:184-94]

A meeting of the Social Science Association is surely the place to discuss one of the most important of social questions, viz., how the British race is to hold possession of India and to bestow upon its vast populations the benefit of a higher

civilization.

The first part of the question is for the present the most important. For if it be impossible to keep possession of the country, there is an end of the problem.

The Royal Commission on the Sanitary State of the Army in India, whose two folio volumes of report and appendix constitute a new social starting point for Indian civilization, has shown that, unless the health of British troops in India can be improved, and the enormous death rate reduced, this country will never be able to hold India with a British army. (It is a pity that by mistake the complete report and evidence of this Commission, in two folio volumes, was not presented to Parliament, not distributed, not sold at the Parliamentary Depôts. This Report, unlike other reports, was based on two kinds of evidence: 1. The usual oral evidence of witnesses; 2. Reports from every station in India, in answer to printed questions sent out, the answers being signed by the commanding officer, the engineer officer and the medical officer of each station. It was truly said that such a complete picture of the life in India, both British and native, is contained in no other book in existence.)

The time has not yet arrived for the pressure of the death rate it discloses to be fully experienced because the present large army is comparatively new to the country. But unless active measures are taken by the India Government and by the military authorities to give effect to the recommendations of the Commission, it is unhappily certain that the mortality will increase with the length of service. And then will be felt the difficulty stated by Sir Alexander Tulloch, viz., of filling up the ranks of those, prematurely slain by preventible disease, from the recruiting depôts at home. Few men have had so much experience in this department of the Service. And he tells us that he very much doubts whether an army of seventy thousand men can be kept up in India with the present death rate.

In former times, when the company's troops bore but a small proportion to the resources (in men) of this country, the death rate was not so much felt. The small army was swept away; and its place supplied, as often as necessary, from the recruiting offices at home. But now that a large proportion of the whole British army is stationed in India, the question whether we shall hold or lose India will depend very much on the steps taken to protect it from disease.

The statement that the average death rate of troops serving in India was no less than 69 per 1000 per annum took the country by surprise. The accuracy of the average could not be denied because the statement was made on the authority of Sir Alexander Tulloch and confirmed by a separate inquiry made with the help of the Registrar-General's Office, at the request of the Commission.

But it was endeavoured to explain away the obvious result of the figures by showing that the average was not constant; that,

in certain years and groups of years, the death rate was much greater than in others; that the mortality in the years of excess was due to wars or other causes; that peace, and not sanitary measures, was therefore the remedy. In short, that the statement of a death rate averaging 69 per 1000 per annum was not a fair representation of the case.

To this there is the simple reply that, during this present century, there has been an average loss, from death alone, of 69 men out of every 1000 per annum--it matters not how the mortality has been distributed; that there is every reason to believe that, if things go on as they have done in this present century, we shall go on losing our troops at the rate of 30, 50, 70, 90, 100 and upwards, per 1000. And all the arithmetic in the world cannot conceal the fact that the law, by which men perish in India under existing sanitary negligence, is 69 per 1000 per annum; this death rate is in fact understated for it says nothing of the invalids sent home from India who die at sea or within a short time of their arrival at home; nor of the loss to service by destroyed health; nor of the mutiny years. It takes into account only those who die in India and in the ordinary course of service.

Few people have an idea of what a death rate of 69 per 1000 represents--the amount of inefficiency from sickness--of invaliding. Assuming the strength of the Indian army at 73,000 British troops, and taking the death rate at present alone, without the sickness and invaliding, such an army, with this present death rate, will lose, on an average of years, an entire brigade of 5,037 men per annum. It may lose, some years, half that number. But in other years, it will lose two such brigades. And where are we to find 10,000 recruits to fill up the gap of deaths of a single unhealthy year?

It is said that the death rates of the war-years being the highest (not from wounds), peace, and not sanitary measures, is the remedy. As well might it be said that the British army, having nearly perished before Sevastopol, not from wounds but from want of every supply of civilized life, peace, and not the supply of the wants of civilized life, was the remedy.

The royal commission has shown that, if the death rate were reduced to even 20 per 1000 per annum (which is too high), i.e., double that of home stations since these stations were improved, to India would be saved a tax equal to £1000 sterling per diem; and this represents the mere cost of replacing the men cut off by excess of premature and preventible mortality.

1. Unofficial people are everywhere asking the question, how this great death rate has arisen, how it happens that one of the most civilized and healthy nations in the world no sooner lands the pick of its working population in tropical climates (for similar losses occur in all tropical climates among us) than they begin to die at this enormous rate.

I am afraid the reply must be that British civilization is

insular and local and that it takes small account of how the world goes on out of its own island. There is a certain aptitude amongst other nations which enables them to adapt themselves, more or less, to foreign climates and countries. But wherever you place your Briton, you may feel quite satisfied that he will care nothing about climates.

If he has been a large eater and a hard drinker at home, ten to one he will be, to say the least of it, as large an eater and as hard a drinker in the burning plains of Hindustan. Enlist an Irish or a Scotch labourer who has done many a hard day's work, almost entirely on farinaceous or vegetable diet, with an occasional dose of whiskey, place him at some Indian station where the thermometer ranges at between 90° and 100° and he will make no difficulty in disposing of three or four times the quantity of animal food he ever ate under the hardest labour during winters at home, if indeed he ever ate any at all.

Now the ordinary system of dieting British soldiers in India is more adapted to a cold climate than that of out-door farm servants doing work in England.

More than this, the occasional dram at home is commuted, by regulation, in India into a permission to drink two drams, i.e., 6 ounces of raw spirits every day. And be it remembered that, at the same time, the men have little or nothing to do. The craving for spirits, induced by this regulation-habit of tippling, leads to increase of drunkenness, so that, what with overeating, overdrinking, total idleness and vice springing directly from these, the British soldier in India has small chance indeed of coping with the climate, so-called. The regulation allowance of raw spirit which a man may obtain at the canteen is no less than 18½ gallons per annum, which is, I believe, three times the amount per individual which has raised Scotland, in the estimation of economists, to the rank of being the most spirit-consuming nation in Europe. Of late years, malt liquor has been partly substituted for spirits. But up to the present time every man, if he thinks fit, may draw his 18½ gallons a year of spirits, besides what he gets surreptitiously at the bazaar. (Tippling is unfortunately not confined to common soldiers. Officers also use spirits, generally brandy with water or with soda-water. It relieves exhaustion for the time at the expense of the constitution and is a prime agent in sending officers to the hills to recover their health, and home on sick furlough. The practice is at some stations called "pegging," alluding to putting pegs in one's coffin. Is not this practice of "pegging" one reason why officers are less healthy in India than civilians?)

So much for intemperance. But not to this alone, nor to this mainly, nor to this and its kindred vice together, is to be laid the soldier mortality in India.

The diseases from which the soldier mainly suffers there are miasmatic: now intemperance never produced miasmatic diseases

yet. They are foul-air diseases and foul-water diseases: fevers, dysenteries and so on. But intemperance may cause liver disease and it may put the man into a state of health which prevents him from resisting miasmatic causes.

2. What are these causes? We have not far to look.

The Briton leaves his national civilization behind him and brings his personal vices with him. At home there have been great improvements everywhere in agricultural and in town drainage, and in providing plentiful and pure water supplies. There is nothing of the kind in India. There is no drainage either in town or in country. There is not a single station drained. If such a state of things existed at home, we should know that we have fevers, cholera and epidemics to expect. But hitherto only a few enlightened people have expected anything of the kind from these same causes in India (although they are always happening).

As regards water, there is certainly not a single barrack in India which is supplied, in our sense of the term, at all. There are neither water-pipes nor drain-pipes. Water is to be had from tanks into which all the filth on the neighbouring surface may at any time be washed by the rains; or from shallow wells dug in unwholesome or doubtful soil. So simple a piece of mechanism as a pump is unknown. Water is drawn in skins, carried in skins on the backs of men or bullocks, and poured into any sort of vessels in the barracks for use. The quantity of water is utterly insufficient for health. And as to the quality, the less said about that, the better. There is no reason to hope that any station has what in this country would be called a pure water supply. And at some it is to be feared that, when men drink water, they drink cholera with it.

The construction of barracks, where men have to pass their whole period of service, is another illustration of how completely home civilization is reversed in India. All our best soldiers have been brought up in country cottages. And when in barracks at home, there are rarely more than from twelve to twenty men in a room. But as soon as the soldier comes to India he is put into a room with 100 or 300 and, in one case, with as many as 600 men. Just when the principle of sub-division into a number of detached barracks becomes of, literally, vital importance, the proceeding is reversed. And the men are crowded together under circumstances certain, even in England, to destroy their health.

To take another illustration. Out home British population is about the most active in the world. In fact we in this country consider exercise and health inseparable; but as soon as the same men go to India, they are shut up all day in their hot, close barrack-rooms, where they also eat and sleep; they are not allowed to take exercise; all their meals are eaten in the hottest part of the day and served to them by native servants; and they lie on their beds idle and partly sleeping till sunset! "Unrefreshing day-sleep" is indeed alleged as one of the causes

for the soldier's ill-health in India--the soldier, the type of endurance and activity, who now becomes the type of sloth!

3. The Indian social state of the British soldier is not only the reverse of the social state of the soldier at home, and of the class from which he is taken, but there is a great exaggeration in the wrong direction. Yet people are surprised that British soldiers die in India; and they lay the whole blame on the climate.

It is natural to us to seek a scapegoat for every neglect and climate has been made to play this part ever since we set foot in India. Sir Charles Napier says, "that every evil from which British troops have suffered has been laid at its door." "The effects of man's imprudence are attributed to climate; if a man gets drunk, the sun has given him a headache, and so on." In regard to Delhi, he says: "Every garden, if not kept clean, becomes a morass; weeds flourish, filth runs riot and the grandest city in India has the name of being insalubrious, although there is nothing evil about it that does not appear to be of man's own creation."

One most important result of the inquiry of the royal commission has been to destroy this bugbear. They have reduced "climate" to its proper dimensions and influence, and they have shown that, just as hot, moist weather at home calls people to account for sanitary neglects and acts of intemperance, so does the climate of India call to account the same people there. There is not a shadow of proof that India was created to be the grave of the British race. The evidence, on the contrary, is rather in the other direction and shows that all that the climate requires <id = e> is that men shall adapt their social habits and customs to it; as indeed they must do to the requirements of every other climate under heaven.

This necessity includes all the recommendations made by the royal commission for improving the health and reducing to one-sixth the death rate of the British army in India. They all amount to this: You have in India such and such a climate; if you wish to keep your health in it:

Be moderate in eating and drinking; eat very little animal food, let your diet be chiefly farinaceous and vegetable.

Spirits are a poison, to be used only (like other poisons) for any good purpose, under medical advice.

Use beer or light wine, but sparingly.

Drink coffee or tea.

Clothe yourself lightly to suit the climate, wearing thin flannel always next the skin.

Take plenty of exercise and use prudence and common sense as to the times of it.

So far for personal habits. But a man cannot drain and sewer his own city, nor lay a water supply on to his own station, nor build his own barracks. What follows pertains to government:

Let it be the first care to have a plentiful supply of pure

water laid on for every purpose.

Drain all dwellings.

Have no cess-pits.

Attend rigidly to cleansing, not only to surface cleansing.

Never build in a wet hollow nor on a sludgy river-bank, which would be avoided by sensible people even at home.

Never crowd large numbers into the same room.

Build separate barrack-rooms, instead of large barracks.

Place these so that the air plays freely round them.

Raise them above the ground with a current of air beneath.

Do these things and the climate may be let to take care of itself.

But if we would make India about as healthy as England, only somewhat hotter, let us have improved agriculture and agricultural drainage.

If all these improvements were carried out, the normal death rate of the British soldier would be not 69 per 1000, but 10 per 1000, say the commissioners.

But it is not for the soldier alone we speak. The report has a much deeper meaning and intent than this: it aims at nothing less than to bring the appliances of a higher civilization to the natives of India. Such revelations are made, especially in the reports from the stations, with regard to the sanitary condition of these, as to be almost incredible. Everywhere the people are suffering from epidemic diseases; fevers, dysenteries, cholera: constant epidemics we may call them, and constant high death rates <id = bc> (how high can never be known, because there is no registration).

The plague and pestilence is the ordinary state of things. The extraordinary is when these sweep over large tracts, gathering strength in their course, to pass over gigantic mountain ranges and to spread their ravages over Western Asia and Europe. And all this might be saved!

We know the causes of epidemic outbreaks here. Take the worst condition of the worst and most neglected town district at home; and this is, to say the least of it, much better than the normal condition of nearly the whole surface of every city and town in India.

Not one city or town is drained. Domestic filth round the people's houses is beyond description. Water supply is from wells or tanks, in ground saturated with filth. No domestic conveniences. Every spare plot of ground is therefore in a condition defying us to mention it farther.

Rains of the rainy season wash the filth of the past dry season into the wells and tanks. The air in, and for some distance round, native towns is as foul as sewer air. (At Madras a wall has actually been built to keep this from the British towns.) No sanitary administration. No sanitary police.

Here then we have, upon a gigantic scale, the very conditions which invariably precede epidemics at home. India is

the focus of epidemics. Had India not been such, cholera might never have been. Even now, the Sunderbunds, where every sanitary evil is to be found in its perfection, are nursing a form of plague increasing yearly in intensity, covering a larger area and drawing slowly round the capital of India itself. Are we to learn our lesson in time?

Some say: What have we to do with the natives or their habits? Other find an excuse for doing nothing in the questions arising out of caste. But caste has not interfered with railways. The people of themselves have no power to prevent or remove these evils, which now stand as an impassable barrier against all progress. Government is everything in India.

The time has gone past when India was considered a mere appanage of British commerce. In holding India, we must be able to show the moral right of our tenure. Much is being done, no doubt, to improve the country: by railways, canals and means of communication; to improve the people: by education, including under this work, European literature and science.

But what at home can be done in education, if we neglect physical laws? How does education progress here without means of cleanliness, of decency or health? The school lessons of a month are sapped in an hour. If the people are left a prey to epidemics and to immoral agencies in their homes, it is not much good sending them to school. Where should we be now with all our schools if London were like Calcutta, Madras or Bombay?--the three seats of government in India. The next great work then is sanitary reform in India. There is not a town which does not want:

Water supply,
Draining,
Paving,
Cleansing,
Healthy plans for arranging and construction buildings,
Together with agricultural drainage and improved cultivation
all round.

These things the people cannot do for themselves. <id = be> But the India government can do them. And in order to do them, three health departments (one for each of the presidencies) have been recommended by the royal commission together with a home commission to help these departments in bringing the appliances of a better civilization to India.

The work is urgent. Every day it is left undone adds its quota of inefficiency to the British Army and its thousands of deaths to the native population. Danger is common to European and to native. Many of the best men this country ever had have fallen victims to the same causes of disease which have decimated the population of Hindustan. And so it will be till the India Government has fulfilled its vast responsibility towards those great multitudes who are no longer strangers and foreigners, but as much the subjects of our beloved Queen as any one of us.

The real, the main point in the report of the royal commission is this:

Look to the state of your stations first, then look to the hills for help. Your stations and cities are in a condition which, in the finest temperate climate in Europe, would be and have been the cause of the Great Plague, of half the population being swept off by disease. And on the other hand, no climate in the world, certainly not that of India, could kill us if we did not kill ourselves by our neglects. We complain of the climate when the wonder is that there is one of us left, under a sky which certainly intensifies causes of disease: so much so indeed that, one would have thought, it might set men to work to remove these causes and twice as vigorously as in a temperate climate, instead of not at all. But no: our cities are not those of civilized men.

It cannot now be said, as Burke did: "England has built no bridges, made no high roads, cut no navigations." But in all that regards the social improvement of cities, still it must be said, as he did (how many years ago?): "Were we driven out of India this day, nothing would remain to tell that it had been possessed, during the inglorious period of our dominion, by anything better than the ourang-outang or the tiger."

For how much is it better now? Bring your cities and stations within the pale of civilization. As they are, they are the life destroyers, not the climate. The hills, those very climates to which you look for succour, are becoming so pestiferous from your neglects that they bear out this indictment. They cry to you as we do: reform your stations, thence comes the deadly influence.

The question is no less a one than this: How to create a public health department for India, how to bring a higher civilization into India. What a work, what a noble task for a government--no "inglorious period of our dominion" that, but a most glorious one! That would be creating India anew. For God places His own power, His own life-giving laws in the hands of man. He permits man to create mankind by those laws, even as He permits man to destroy mankind by neglect of those laws.

POSTSCRIPT

Since this paper was read, the lower death rate of troops new to the country has actually been put forward as a proof that India is becoming healthy, and the 69 per 1000 is an old antiquated average! But more than this, the diminution of mortality arising from the short duration of service is ascribed to improvements carried out at Indian stations since the royal commissioners began their inquiry. The leading authorities on the subject ascribe the main causes of disease to want of drainage, bad sites, bad water badly distributed, wretched sanitary condition of native bazaars and towns, bad barrack and bad hospital construction, surface over-crowding from want of barrack accommodation, want of occupation for the men, intemperance in

eating and drinking, want of proper barrack and hospital conveniences; it is difficult to see how India could have been freed from these causes of disease in three short years, which is about the average time since the stational reports were signed.

That something may have been done in the way of cleansing, ventilation, ablution arrangements, means of recreation, is possible. But as to ventilation, it may almost be said that it is better to keep the foul air out than to let it in, at least at certain stations of which we have reports up to nearly the latest date from India.

As to cleansing we have the report of a government commission on the last cholera, dated 21 July 1862 which tells us that, at a large station where cholera was fatal, the filth from the latrines was thrown down at places 100 yards from the barracks; that dead animals and every kind of refuse are accumulated in the same place without burial; that, before the cholera appeared, there were abominable cesspools poisoning the whole atmosphere; that neglect of the commonest principles of sanitary science favoured the epidemic; that the filth from the native latrines was used for feeding sheep! that, for all this, the local military authorities had not neglected "conservancy in any unusual degree," the reporters state; and that, bad as they considered it, the station was kept in much better order than many that they had visited.

We have also two printed documents of the public works department, dated Calcutta, 26 June and 9 September 1863 proving that the capital of India was in a much worse state than appeared from the stational report sent to the royal commission in June 1860.

1865

"Copy of Remarks of the Barrack and Hospital Improvement Commission on a Report by Dr Leith on the General Sanitary Condition of the Bombay Army," Parliamentary Papers, No. 329, 1865 [9:402-29]

EAST INDIA (BOMBAY ARMY)

RETURN to an Address of the Honourable The House of Commons dated 22 May 1865; for,

"COPY of REMARKS of the BARRACK and HOSPITAL IMPROVEMENT COMMISSION on a REPORT by Dr Leith on the General SANITARY CONDITION of the BOMBAY ARMY."

War Office

26 May 1865

HARTINGTON

REMARKS of the BARRACK and HOSPITAL IMPROVEMENT COMMISSION on a REPORT by Dr Leith on the General SANITARY CONDITION of the BOMBAY ARMY

As this Report has been submitted to us by the Secretary of State for India, we deem it necessary to make a few remarks on certain portions of it:

1. Dr Leith's Report appears to have been drawn up in

consequence of an instruction from the Bombay Government, the object of which, as stated in paragraph 4, is, that the Report might point out "how far the improvements of late years, and the elimination of exceptional data, modify the conclusions of the Royal Commission as to the General Sanitary Condition of the Bombay Army."

2. In directing such an inquiry, there has been apparently some misunderstanding regarding the nature of the Report of the Royal Commission, and the objects it was intended to fulfil.

That Report does not deal specially with the sanitary condition of Bombay Presidency. It discusses, generally, the sanitary question as regards the whole of India. And the conclusions arrived at are those following on a very general inquiry as to the sanitary condition of stations occupied by British and Native troops, and of groups of population in their vicinity. The conclusions were founded on the evidence of witnesses, and on answers to questions sent to all the leading stations. But neither the evidence nor the replies can be said to give a complete account of the sanitary condition of any one station.

The object of the inquiry was simply to enable the Commission to obtain a knowledge of the great leading facts of the case, so as to recommend general principles for future guidance, leaving their conclusions, together with the evidence on which they are founded, to be used by the authorities in India as a basis on which to rest a searching investigation on the spot, to be conducted by competent sanitary and engineering officers, in order that the real sanitary condition of every station might be reported on in detail, and suitable works devised for removing cause injurious to health which might be discovered.

This having been the object of the Report of the Royal Commission, it will be seen that the course directed by the Bombay Government could not have resulted in supplying the information required, either for enabling a correct judgment to be arrived at as to the real condition of any station, or for enabling sanitary works and proceedings to be devised and recommended for sanction.

3. Dr Leith, in complying with his instruction, appears to have called for replies to questions sent by him to the stations; and he has compared the information so received with the conclusions of the Royal Commission, which, as already stated, were not specially applicable to Bombay, and with the reports from the stations contained in the second volume of the Commissioners Report. And the result is, that although Dr Leith shows that certain improvements have been carried out since the Commissioners began their inquiry, and although there are a few discrepancies between the two sets of replies, Dr Leith's Report leaves the question of the sanitary condition of the Bombay stations very much in the same position it was left in by the

Royal Commissioners, so that a thorough searching inquiry, followed by well-digested proposals for improving the stations, has yet to be carried out.

4. We might have concluded our remarks at this point, had it not been for certain statements which Dr Leith has made, involving the accuracy of a few points in the Report, and in the estimates of mortality contained in it; as also, for certain views advanced by him on sanitary and engineering questions, which are of so much importance to the improvement of Indian stations generally as to require notice.

5. In paragraph 10 of Dr Leith's Report, he directs attention to an apparent discrepancy between a statement in the Royal Commissioner's Report, that some means of passing the time are provided for the soldiers at all stations. The usual games are long bullets, quoits, fives, and cricket, and almost every station has its ball court and skittle alley," (which, he says, is the case in the Bombay Army); and the summing up in the recapitulation, that "the means of recreation are few, of exercise none."

The discrepancy is, however, only apparent, and only such as is incidental to a general conclusion, one object of which was to lead to a provision being made for exercise on such a scale as did not exist at any Indian station. Even with regard to the Bombay stations, the reports published by the Commissioners show the following results: At the town barracks, Bombay, and at Malligaum, there were no means of recreation whatever. At Sattara there were no ball courts, skittle grounds, library, nor reading rooms, no gardens, workshops, nor gymnasia. With the exception of a small library and a reading room, not lighted at night, the deficiencies were the same at Baroda. At Ahmedabad and Neemuch there were no ball courts, workshops, nor gymnasia, nor any means of exercise except skittle grounds. At several of the larger stations which had ball courts, the provision was insufficient. At several of the larger stations which had ball courts, the provision was insufficient. At several the ball courts were uncovered and useless during the heat of the day. As a general rule, the men were confined to barracks from eight o'clock in the morning to four or five in the afternoon, eating all their heavy meals during the heat of the day, in eight or nine hours of inaction. There were no gymnasia, no covered places for exercise; although there were generally skittle grounds, these could certainly not be considered as sufficient. And from almost all the stations there were demands for increased means of exercise and occupation.

The next sentence in the recapitulation, not quoted by Dr Leith, viz., "the soldier's habits are sedentary where they ought to be active," explains what the Commissioners meant.

6. In the same paragraph 10, Dr Leith takes exception to the statement made by the Commissioners, that "the men's amusements, such as they are, are always connected more or less with drink."

The statement was made on authority of Dr Colvin Smith, one of the witnesses examined, in answer to a pointed question put by Colonel Greathed, who is one of our best authorities on such subjects. And another witness, of excellent authority, Brigadier General Russell, stated in evidence, that in endeavouring to improve the habits of the men, by providing day rooms, etc., it was necessary to keep the canteen as far as possible from the place of amusement, "the very smell of the liquor being a temptation." Besides, Dr Leith himself confirms the statement in the Report that the cost of the means of recreation (Dr Leith says "implements of play") is paid for out of the profits of what men drink at the canteen.

7. In sections 12 and 13, Dr Leith touches upon a far more important subject, and one which the Royal Commissioners state to be an "indispensable sanitary improvement," for all Indian stations; viz., what is included in England under the general term of "house drainage." Dr Leith states, that this recommendation was made "from the imperfect data, derived probably from "observations made on the banks of the great rivers of the Bengal Presidency and Burma." The recommendation was certainly not based on such data. He states, that such drainage requires a very copious water supply. But in reality no more water is required for house drainage than is required for household purposes. He is mistaken also in supposing that, for house drainage, an outfall is required into 'an abundant ever-flowing current."

The question of drainage is one of ordinary sanitary engineering, not to be settled by general assertions as to its possibility or impossibility. The only way to arrive at sound conclusions on the subject in India, is to do what is required everywhere else, viz., to make an inquiry at the station which it is proposed to drain. Such an inquiry would include the levels and outfall, besides a survey and scheme of works. There may be exceptional cases, but so far as can be judged of from the Bombay Stational Reports, there is no station in this Presidency in which works of house drainage could not be executed, and an outlet found. Dr Leith very properly objects to fouling streams by sewage. There is no difference of opinion on this point. But the fact that streams in England have been so fouled is no objection against drainage works, either in England or in India. The evil has been in selecting streams for outfalls, and thereby sacrificing a large amount of valuable manure, besides polluting the stream.

The evil and loss were all foreseen in England before the Public Health Act was passed. But although public opinion is slow in forming itself in England, it is satisfactory to know that at length the attention has been awakened to the subject; and that the evils adduced by Dr Leith, as affording an argument against draining Indian stations, will, it is hoped, be grappled with and removed by the application of

sewage to agriculture. Dr Leith is mistaken in saying that "in England there are as yet but comparatively few of even the larger provincial towns that have house drainage, such as is considered indispensable for our military stations." Not to speak of the immense population of the metropolitan districts, amounting to nearly three millions, which has house drainage, and the large provincial cities and towns, executing works under private Acts, there are between 400 and 500 towns and places in England which have been placed under the provisions of the Public Health Act and the Local Government Act, and at most of these places works have been completed.

It must not be forgotten that whether Indian stations are provided with "house drainage" or not, a water supply of from 20 to 30 gallons per head per day for every station must be brought into it for household purposes, and that it must be removed out of the station either by drains or by hand labour. The same drains which remove the ordinary refuse water would remove the latrine drainage, whilst the latrines might so be placed as to act as flushing tanks (which tanks must in any case be provided) for the main lines of sewer, so as to increase the general efficiency of the whole system. In any case an outlet must be found for the water supply; and the safest, as well as the most profitable outlet for it, would be on land under cultivation. There is not only no reason why the latrine drainage should not be disposed of in the same manner, but there is every reason to believe that it would be a very profitable use to make of it. It is highly probable that in the vicinity of every station in India, a few acres of waste land could be found on which to dispose of the whole sewage; or it might be used for gardens at a safe distance from barracks. The exceptional cases, both as regards barracks and towns, would probably be those in which the sea or a large river would form a more convenient outlet.

8. It may here be stated that in the 32d paragraph of Dr Leith's Report, he considers that the impracticability of providing a proper outlet precludes the possibility of adopting the recommendation of the Royal Commission, that iron or earthenware latrines supplied with water be introduced instead of the present system. This, it will be seen is the same question as that dealt with above; and if an outlet can be found for the drainage of any station, the difficulty of course vanishes.

As a point of experience we may mention that the camp at Aldershot was for a number of years provided with latrines, consisting of moveable vessels. But after sufficient experience of this system it was deemed desirable to abandon it, to drain the camp, introduce water latrines and to find an outlet. This great improvement has already been carried out for three-fourths of the troops, occupying an area of 500 acres. Water latrines, quite inodorous, have been introduced over this large area; and 150 acres of sandy soil have been let on lease to a gentleman, who will apply the whole of the sewage for agricultural purposes,

chiefly the cultivation of vegetables for the troops, and of fodder for cows, from which milk and butter will be derived for the camp. In a few months the works will be in complete operation. This case in point shows what in all probability might be done at many stations in India.

9. The next matter of importance is the question of water supply, which is discussed in paragraphs 14 to 23 of Dr Leith's Report.

In paragraph 21, Dr Leith alludes to the classification of water sources, contained in the evidence given by the late Dr R. D. Thomson before the commission. And as there has apparently been some misunderstanding as to the nature of the classification of sources, it may be well to restate the points of importance in regard to it.

Three sources of water are recognized for sanitary purposes:

(a.) Water proceeding from mountain drainage. As mountain districts at home are generally used for pasture, this water is called "pastoral water." It comprehends springs, heads of streams or rivers, mountain lakes, or artificial impounding reservoirs for collecting and strong the rain fall in upland districts. This water is the purest of all for sanitary purposes, especially when derived from primitive and igneous rocks. It contains very little solid matter, perhaps not more than tow or three grains per gallon, and only a trace of organic matter of vegetable origin.

(b.) The next most pure water-source, but one much less pure than mountain drainage, consists of rivers. As rivers at home flow through agricultural districts, this water is usually called "agricultural water." It contains a considerable quantity, very often from 15 to 20 grains per gallon, of dissolved inorganic matter; and a sensible proportion of organic matter, often amounting to several grains per gallon, derived from soluble substances in the land through which the river passes.

(c.) The third source are wells, which differ in many important points from either of the others.

Dr Leith states that, from information collected by him, the wells in use throughout the Bombay Presidency belong to the two first sources, viz., mountain drainage and agricultural drainage, mentioned above. It is of importance to state that well-water can never belong either to the one source or to the other. It is true, that by driving a tunnel through primitive rocks a supply of water might be obtained. But this water would be essentially well-water, and would either have or want certain soluble constituents which would distinguish it from the mountain drainage

of the district. The great characteristic of wells, that in which they differ essentially from the other water sources, consists in

their being dug through the superficial strata; and it is these strata which confer upon the peculiarities they may possess. Thus, if wells are dug through ground long occupied by population, such as the area of the metropolis, the well drainage will contain in solution whatever soluble matter it has been able to take up in its course in filtering from the surface to the bottom of the well. The matters held in solution are usually inorganic compounds of various kinds, organic matter, animal and vegetable, or compounds of nitrogen, resulting from the decomposition of organic matter of animal origin. None of the London well-waters are fit for use from this circumstance. But Dr Leith is mistaken in supposing that these waters are "assumed" (by the Royal Commissioners in their Report) "as illustrative of what the wells of Indian cantonments are" (paragraph 19). The London experience is merely used to show what the water in shallow wells may become, under certain conditions of surface and population. Wherever in India these conditions are reproduced, we may feel satisfied that shallow well-waters will exhibit similar impurities. Where wells are dug through rich vegetable soil, the dissolved organic matter will, of course, be of vegetable origin. These conditions, derived from the surface soil, are quite independent of the rock in which the well is dug. The rock may be of the most insoluble character, and yet the water may be polluted by impurities in the surface soil. Notwithstanding this danger, wells may be made perfectly safe as water sources, provided they be dug to a sufficient depth to obtain water of the requisite purity, and provided the surface water be cut off by casing the well above, as recommended in our "Suggestions."

10. It is impossible to state whether the water from any source is sufficiently pure for use in such climates as those of India, without a careful qualitative and quantitative analysis. And so far as this indispensable information is concerned, Dr Leith's Report affords no additional information to that previously in our possession.

There are, it is true, the analyses of four well-water sources at Pune, given at pp. 18 and 19 of the report. They are stated as follows:

Per Imperial Gallon.			
"Of one well, organic matter, grains 32:80			
Other well	"	0.726	"
	40.		
First well	"	1.68	"
		14.40	
Second well	"		
2.24	"	37.60"	

For sanitary purposes, analyses of this class are of little

or no use. With one exception, they show the waters to be very impure, as a whole; but before their probable effect on health could be stated, it would be necessary to give both the organic and inorganic constituents in minute detail.

We have given in our "Suggestions" the chief points requiring attention in the analysis of water; but we may add, that as impure drinking water is the fruitful source of water diseases, it is necessary that the water in the condition in which it is drunk by the men should be analyzed, both as regards its suspended and dissolved impurities, in addition to the analysis of water taken from the source of supply.

11. Dr Leith states that "the physiological test," viz., the effect of water on the health of troops, may be presumed to supply in some degree the absence of a chemical test. In reports from the stations appended to Dr Leith's Report, the writers state their opinion that the waters are not injurious to health, notwithstanding the prevalence of cholera, dysentery, and other bowel diseases, and fevers at the stations. The point at issue is to determine to what extent the existing water supply contributes to this diseased predisposition. And the first step towards an answer is to ascertain accurately what is the composition of the waters. With our improved knowledge on such subjects at home, the occurrence of any extent of bowel disease, especially of dysentery or cholera, would necessarily lead to an analysis of the water. And our experience has certainly shown that not a few preconceptions as to the physiological effects of impure water have been erroneous, and that it is a far more frequent and important cause of disease than was formerly believed. In such cases no medical opinion taken by itself can settle the question.

12. There is one other point regarding the analysis of water which may be noticed, viz., the precautions required in using the microscope for ascertaining the extent of animalcular life in water. At paragraph 18, Dr Leith takes notice of an apparent error on the part of a medical officer at Hyderabad, who writes, in regard to a certain water mentioned in the Stational Reports, "Although I have never examined it microscopically, I have no doubt it swarms with animal life." In the abstract of the Stational Reports, the first member of this sentence was omitted in abstracting, as being apparently unnecessary, seeing that a medical officer was not likely to be mistaken in such an opinion. Dr Leith says of it, that it was a "surmise," which "has been found to be groundless." We notice this, in order to call attention to the conditions absolutely necessary for ascertaining the amount of living organisms in water. And unless the method has been adopted in this case, it may be found, after all, that the water does contain them.

The following is the proceeding usually followed in examining water by the microscope:

(a.) Half a gallon of the water to be examined should be allowed to remain at rest in a scrupulously clean glass vessel for six or eight hours, and the sediment carefully collected and examined under the microscope.

(b.) If the sediment be small in quantity, the lower portion of the water should be transferred to a clean conical glass vessel, and allowed to stand for three or four hours. The sediment should then be submitted to the microscope.

13. There are one or two other points in regard to the water supply which require notice. Appended to the Report of the Royal Commission is a report from Asseerghur, giving an account of the water supply of the station. Dr Leith, in paragraph 16 of his own Report, states that the Commissioners, misled by the want of precision in the Asseerghur Report, mislead others by the way in which they quote it. The statement in the Stational Report bearing on the question is as follows: "The water supply is derived from tanks and rainfall, these tanks being open and generally well filled. The tank surface is 163, 000 square feet in the fort, and about 7, 000 square feet in the lower fort and village." "One tank is used for drinking and bathing; for the former, the natives slightly clear away the surface. The water supply is sufficient for 3,500 inhabitants inclusive of the water in the fort. The water in the sweet well reserved for Europeans is good. But that in the tanks is very bad, though not considered so by the natives when filtered; and the tanks are preserved for the use of the garrison, and used only for drinking."

Now, at this station the Report states that there were present of Her Majesty's 95th Regiment (a detachment merely) 93 men and 9 pendalls (native barracks) for 50 native soldiers each, 450 in all. The water supply is intended for both; and it is such as is described above. It is surely not an inaccurate representation of the text quoted above, to state, in the abstracts Dr Leith represents as misleading, "water derived from tanks, same tank used for drinking and bathing; for the former natives clear away surface. Water in the sweet well for Europeans is good, that in the tanks is very bad."

But, besides, it must never be forgotten that the object is not only to provide a proper water supply at Asseerghur for a small European detachment, but for half a native regiment and a civil population, among which no epidemic disease (often arising from bad water) can occur without endangering the health of the troops.

It is a very limited view of such questions, to include in one's vision only the requirements of 93 men, and even these we should in this country consider were very imperfectly provided for by simply having a well from which they could draw water.

We are glad to find that Dr Leith sees no valid reason why the recommendation of the Royal Commission for a constant water supply, laid on by pipes, over the stations should not be adopted.

14. Dr Leith deals with the question of the superficial area and cubic space allowed for men in barracks and sick in hospitals, in paragraphs 24, 25, 26, and 34. In these paragraphs and in the reports from the stations given by Dr Leith, there is some discrepancy between the amounts of space and area per man and the amounts given in the Appendix and Report of the Royal Commission. Dr Leith's report gives the cubic space and superficial area available at the time he received the information: and both elements are calculated, after deducting guards, prisoners, and sick ward, together with the dimensions of the rooms and wards, and the superficial area and cubic space each man had a right to. The Stational Reports show this for most of the stations.

This element, namely, the "regulation space," is quite different from the accidental occupation. The cubic space and superficial area, recommended by the Commissioners for future adoption, as so recommended, with the intention of its being made matter of regulation.

15. In the same paragraphs, attention is directed to certain important discrepancies between the measurements of some barracks and hospitals, given in the Appendix to the Report of the Royal Commission, and measurements of the same barracks and hospitals obtained by Dr Leith. The mistakes were made in India, and though of no very great moment as regards the general result of the inquiry into the question of cubic space, still it would have been as easy for the committees at the stations to have been accurate in the measurements as not.

16. We are glad to find, from paragraph 29, that increased glazed window space has been introduced into both barracks and hospitals in the Bombay Presidency; although Dr Leith informs us that there is still often a great deficiency of daylight both in barracks and hospitals.

We would call attention also to his statement that there is nothing, except the cost, to prevent barracks and hospitals from being lighted with gas.

There are several excellent forms of portable gas apparatus, such as a re used at home for lighting country railway stations, which might be tried for lighting military stations in India.

17. In paragraphs 35 and 36, Dr Leith deals with the recommendation of the Royal Commission as to the introduction of iron bedsteads and horse-hair mattresses into hospitals. He states that there is not at present a hospital in the Bombay Presidency in which the sick have any but iron-bedsteads. As it might be inferred from this that the recommendation of the Commissioners was unnecessary, it may be as well to state that the reports from the stations show that, at the date they were sent in, the hospital bedsteads at Malligaum, Kolapure, Neemuch, and Hyderabad were of wood. At Nusseerabad they were chiefly wood; at Kurrachee partly wood; at Aden planks on iron trestles; at Surat the hospital bedsteads were the same as those in

barracks. It is satisfactory to know that the great improvement of substituting iron bedsteads has been completed.

18. As regards the introduction of hair mattresses for hospitals, the commendation bestowed on this kind of bedding by the Commissioners was the result of experience both in civil and military hospitals. In the Bombay Presidency, Dr Leith stated that straw is the usual stuffing for hospital beds; but that cotton or coir are substituted in special cases. Both straw and cotton are inadmissible materials. The choice at present lies between coir and hair. After due consideration and experience the introduction of hair mattresses was made matter of regulation in the hospitals of Her Majesty's regiments; and in conformity with the regulation they should be introduced throughout India. This is, indeed, the object of the recommendation.

19. In paragraphs 39 to 42, Dr Leith calls in question the representations made by the Royal Commissioners as to the sick-rat and death-rate of the Indian army. He adduces certain statistical tables to show that the Bombay army is much more healthy than could be gathered from the data referring to the whole of India given in the report. As the analysis of the Indian returns was made under the directions of Dr Farr, he has been so good as to place at our disposal the following remarks on the subject:

20. Dr Leith says in his Report, *"The data on which the conclusions of the Royal Commission regarding the sickness and mortality of the Indian army, were founded, are returns that extend to periods far back, during many years of which the troops were exposed in the field to the inclemencies of weather, and privations in food and shelter, as well as to losses in battle, and to periods during which much new territory was occupied with, as usual, increase of sickness and loss of life, from the now acknowledged rules of sanitary science having then been as little attended to in India as elsewhere. The heavy sickness and mortality of India have thus been made TO APPEAR IN BLACKER RELIEF THAN THEY WOULD OTHERWISE HAVE DONE."*

Dr Leith charitably adds: "It is to be hoped that good will flow from attention having been thus directed, more forcibly than might have been expected, to the existing evils, which it is desirable should without delay be removed or at least lessened by all practicable means."

In the next paragraph, Dr Leith intimates that the ratio of 84 men constantly sick in a battalion of 1,000 is too high; the Royal Commission has applied, he says, "a heavy ratio of sickness which existed in one Presidency" (Bengal) to the whole of India.

The Royal Commission writes, in the recapitulation, "the annual death rate for the whole of India has hitherto been 69 per thousand;" and Dr Leith proceeds to controvert this statement by showing from Returns "that for 15 years back there has been progressive improvement in the health of the troops [in Bombay]" (page 11).

The 15 years ended in 1863; and his returns relate only to the troops in Bombay; and, after 1856, are based on the strength and mortality in regiments, neither including non-effectiveness nor deaths that happened among invalids after their embarkation. Dr Leith gives no information about the numbers of invalids.

The Commission has been charged in other quarters, and on the same grounds, with having exaggerated the mortality of the army of India.

Now, this charge is unfounded, and the Commission cannot accept the equivocal compliment that good may possibly flow from the overcolouring of their Report.

The dates are of some importance. The Commission was no sooner appointed (31st May 1859), than the members who were specially intrusted with the statistical part of the inquiry proceeded to the India House, and were supplied with all the documents down to the latest date, but found nothing later than 1856.

The mutiny and consequent campaigns had produced great disturbances in the returns, and some of the records of regiments which had suffered most severely were, it appears, entirely lost.

All the Commission could then gather was that the mortality of the battalions of the East India Company in the mutiny had been excessively high. This was confirmed by the subsequent information, and to avoid uncertainty on the one hand, and any overstatement on the other, the investigation was closed at the end of the 1856: thus not including the excessively high rate of mortality in the mutiny, which began in May 1857, and ended early in 1859.

The deaths of the whole of the European troops in India during the years 1857, 1858, and 1859, have never yet been published; and the Director General's second Report begins with the Indian Returns of 1860.

The Report of the Royal Commission was written earlier than, but it was dated 19th May 1863, in order to include the latest information which the Director General could supply. That information related to 1860, and was used to show the rates of mortality in particular stations down to recent names.

But the collective information available respecting the four years 1857, 1858, 1859, and 1860, confirmed the Commissioners in the opinion they expressed in their Report of the average losses of the armies in India exposed to the evils which continued to exist down to the date of its appointment.

Their statement is to the following effect, and it has often been misquoted:

"Sir Alexander Tulloch gave, in his evidence, a series of War Office Returns of the strength, deaths, and mortality of the Royal Army in India during 39 years, 1817-55, from which it appears that the mean strength in the three Presidencies was 20,332, and the deaths, 55,584, so that the annual rate of mortality was 70 per thousand. The Mahratta, Pindaree, Burmese, Afghan,

Sinde, Suttlej, Punjab, and Chinese campaigns, account, according to his estimate, for 10 of the 70 annual deaths. Those who are conversant with military statistics, are well aware of the difficulty of obtaining results at once exact and precise. This difficulty is increased in India, and the necessary calculations are further complicated by the distribution of European officers among the Native corps, by the mixing up of officers and men, or of the Royal Army with that of the late Company, or of men at home in depot with men in India, and by the confusion of invaliding from disease with the discharge of soldiers whose terms of service have expired. The medical returns for some time appear to have included only the deaths in hospitals.

"After carefully examining all the documents at our disposal, we selected for analysis the nominal rolls of strength and casualties at the India House relating to the late Company's European troops. The collection of annual casualty rolls at the India House was 'compiled upon the principle of accounting for every man becoming ineffective in the year.' Verified by the signatures of the commanding officers and adjutants of corps, the rolls are perfectly intelligible and substantially correct; they have been, therefore, analyzed elaborately for the purposes of this inquiry. The troops of the Company, unlike the Royal Army, served only in India, where they remained until death, or until they returned home. The deaths in the 57 years, 1800-56, among all the Company's non-commissioned officers and men, including invalids in India, amounted to 40,420 out of an aggregate of 588,820 years of life, obtained by adding up the average annual strength in those years; so the annual rate of mortality has been 69 in 1,000 during the present century. The mortality rate was as high as 134 in 1804, in the first Mahratta war, and it was as low as 41 in 1852. It was high again in the years of mutiny, and it has been subsequently lower than the Indian standard. From the rate of 55 in 1700-99, the rate rose to 85 in the 30 years, 1800-29; and the mortality rate fell to 58 in the 27 years, 1830-56; so that the death-rate of the British soldier, since the first occupation of the country down to the present day, has oscillated round 69 per 1,000. If the mortality is set down at 69 in 1,000, it follows that, besides deaths by natural causes, 61, or taking the English standard, 60 per 1,000 of our troops perish in India annually. It is at that expense that we have held dominion there for a century; a company out of every regiment has been sacrificed every 20 months. These companies fade away in the prime of life, leave few children, and have to be replaced at great cost, by successive shiploads of recruits." (*Report, 8vo Edition of 1864, pp. 9 and 10*).

It will be observed, that the mortality, deduced from the latest War Office Returns which Sir Alexander Tulloch could give in, closely agreed with the mortality deduced by the Commission from still better materials, the nominal returns of the Company's European troops. By the one, the mortality of our European troops

was 70, by the other 69, in 1,000.

The soldiers who were invalided from the Royal Army and from the Company's force included many who laboured under the slow fatal diseases, such as chronic dysentery or consumption, which were contracted in the service. The Commission did not bring them into account: yet the returns showed that, while in strength of 1,000 the annual deaths during 57 years were at the average rate of 69 in 1,000 and the other casualties were 82 in 1,000, making the total "casualties" from all causes, including invaliding and discharges, 151 in 1,000. The Commissioners only brought 69 per 1,000 into account.

The Commission discussed the effects of war in a special chapter, and showed that the years of war were those in which the mortality was generally highest, but that the greater part of this mortality was the direct effect of cholera and other diseases, leaving a small proportion from deaths in battle and wounds.

Sir Alexander Tulloch, who estimated the mortality of the Royal Army at 70 deaths in 1,000, referred 10 of the 70 casualties in the field; and the Commission was of opinion, that more than 10 of the 82 men discharged for other casualties, including chronic maladies, would die of diseases induced in India.

It is evident that the mortality of any army in war cannot be omitted in any investigation of the general mortality to which armies are liable; and it is in war chiefly that the deficiency of their sanitary organization is seen. Thus, as it would not be right to leave out the years of the Crimean War, in investigating the aggregate mortality of the British Army, neither could the Commission exclude the years of war in India from their survey. The suggestion that, to reduce the mortality of the army, the sole course is to avoid war in future, requires no discussion.

For the reasons stated, the Commission did not include the years of the Persian War and of the mutiny, for, imperfect as the returns in their possession were, the returns by the commanding officers of regiments, published in detail (at pages 757-79 of Vol. I., folio Report), convinced the Commission that, had the returns been brought down to the latest period, the rate of mortality would not have been lowered by that operation.

This is evident in the Table A. appended to these remarks, by which it appears that in the military year April 1857, the 64th Regiment engaged in Persia lost in deaths 237 men; the 70th, 117 men; the 1st battalion of the 60th, 194 men; the 81st, 170 men, and other regiments also great numbers. In the year following, 12 regiments or battalions lost 105, 384, 223, 280, 128, 175, 107, 104, 120, 123, 118, 113, 141, 176, 123, 139, 112, 112, 165, 141, and 148 men in India; and of other regiments the losses were heavy. After the war, the invalids and disabled, many of whom died, were sent home in large numbers, and thus reduced the deaths in India during the

following years.

The following Table, not including all the deaths in India, shows that the mortality during the excluded years must have been higher than the average of the previous years of Indian experience:

(CHART)

These Regimental Returns will be of use to the future historian of the war of the mutiny; but the Commission, desiring to avoid anything like over-statement of the case, did not bring the mortality of any regiment during the years 1857-8-9 into account; they only paid a just tribute to the men whose military virtues were so loudly proclaimed by their deaths:

"It is impossible to read the losses of particular regiments in the war of the mutiny without being struck by the inextinguishable valour of the British soldier; but it was disease and not the enemy that killed him; for out of 9,467 men dying among regiments in India prior to the mutiny, or sent out in 1857-8, only 586 were killed in action or died of wounds." (8vo Report, 1864, p. 19.)

The reform in the Army Statistics of India, which Lord Herbert's Commission suggested, had not come into operation in 1859, and the Indian returns gave very little information respecting the proportional numbers constantly in hospital for sickness, and no information about the diseases by which that constant sickness was caused.

Dr Leith says, "The existing returns of the daily sick in the hospitals of the Bombay Army extend only four years back, from 1863 to 1860; they show 73 sick in every 1,000 of strength" (p. 11).

The estimate of the Commission for all India was 84 in 1,000; a "heavy ratio of sickness," which Dr Leith thinks inapplicable to the Bombay Presidency.

No returns exist, but it is found that there is a certain relation between the "sick" and the dying; and Dr Leith shows, that while in the four years (1860-3) the mortality was at the rate of 21, the sick were 73 in 1,000. Now, following out this proportion, and taking his figures, if 21 deaths gave 73 constantly sick, 29 deaths annually, his rate of mortality from 1849 to 1863, would imply that the sick were 101 per 1,000 of the strength. This is Annesley's proportion, and it is higher than the low rate (84) which the Commission intentionally adopted.

It was a current opinion among Indian writers, the able author of "Vital Statistics of the Anglo-Indian Armies," for instance, that the "European army in India has hitherto disappeared in about 13 ½ years." This result, deduced from the facts by a mathematical oversight, and some unintentional exaggerations of other writers, the Commission corrected; and to calculate the prevailing loss of men by death, invaliding, and other causes, the life table for the English soldier in India, and the greater

part of the deductions, were based upon the facts observed in the last available 10 years, 1847-56, when the current annual rate of mortality was 51.2 per 1,000 in India; namely, 67 in Bengal, 39 in Madras, and 38 in Bombay.

Public attention has been directed to the health of the army; the measures which Lord Herbert and Miss Nightingale originated began to bear fruit; the appointment and the inquiries of the Royal Commission gave a n impulse to sanitary affairs in India; and finally, the new stations in Oude and the Punjab opened to the Bengal army some of the advantages of a healthier country, which had before been realized by the European forces of Madras and Bombay. Thus it happened, as subsequent returns prove, that the mortality was reduced in the year 1862 to 35 per 1,000, in the year 1861 to 37 per 1,000, and in the year 1826 to 26 per 1,000. During the latter year, 28 per 1,000 were invalided from India for discharge or for charge of climate.

The mortality per 1,000 of Bengal was at the rate of 28, of Bombay 25, and of Madras 21.

This most happy occurrence, which has come to light since the inquiry of the Commission commenced, is cited by a certain class of writers to prove that the Commission, in their Report, overstated the deplorable mortality which prevailed during the present century down to the year of the mutiny. Other critics, by excluding years of war, as well as even the deaths from cholera, and selecting years after war had cleared the army of invalids, contrived to exhibit low rates of mortality; but none have impeached the accuracy of the calculations of the Commissioners. They have only reasoned in this inconclusive form: "The mortality in the years since the Commission was appointed has been lower than 69 in 1,000, therefore that rate could not have accurately represented the mortality of soldiers in India up to the date of the last returns." The answer is, that the mortality which the Commission cites is an incontestable fact.

With regard to recent lower death-rates, it is necessary to bear in mind that numerical records made for short periods (still more for a single year) are usually either in excess or in deficiency. And no general law, either as regards sickness or mortality, can be deduced from them. By selecting particular years, all the stations even on the West Coast of Africa might be shown to be among the healthiest places in our foreign possessions.

It is always possible, by selecting years and localities skilfully, to prove that the mortality of the troops in a great country is either high or low. The Commission was well aware of this; and to avoid all such misleading fallacies, based their estimate on returns during long series of years; displaying, however, the facts for each year, and for each Presidency. The Commission not only described the mortality of each Presidency separately, but, as far as was practicable, of each station, each regiment, and each arm of the service.

Dr Leith is apparently able to show that in 1863 the mortality was so low as 12 in the 1,000 in Bombay (p. 12). This result may require some correction for deaths not included by Dr Leith, as he makes the mortality of Bombay in 1862, the previous year, 20.8, while Dr Balfour shows that the mortality was 24.611 per 1,000 in that year.

But allowing for any necessary correction, the reduction of the mortality of the Bombay army, which for 56 years had been 66 per 1,000 (68 in the 10 years 1840-50 and 31 in 1850-6), to (say) 15 per 1,000 is a most gratifying fact, particularly as Dr Leith is able to say that "the progressive decrease of mortality may reasonably be attributed to the increasing attention that has been paid to the welfare of the soldiers in barracks and in hospital" (p. 12).

So far as the Commission could discern, there was less disposition among Indian authorities to believe that the mortality of European troops had been high, particularly during active service, than to admit that the mortality could possibly be reduced below the past standard; it was all the fault of the burning implacable sun, according to popular belief. The Commission addressed itself, therefore, especially to this branch of the inquiry; and they proved (1) that in several of the hottest stations of India the mortality had been low as 30 and 20 in 1,000 during a series of years; (2) that the mortality was mainly due to certain diseases which are the result of various excremental organic compounds, and marsh malaria, producing the same class of diseases in Europe; (3) that the mortality of the population from the same class of diseases was formerly higher in London than it is now in Calcutta; (4) that the dietary, regimen, barracks, sanitary arrangements, particularly in the field, had been inconceivably defective during a long series of years; (5) that the native cities and bazaars of India were in a deplorable sanitary condition, that they were centres of disease, but that the native troops of the East India Company lost less than 20 per 1,000 by death; (6) that the military officers of the Company died at the rate of 20 in 1,000.

All this seemed to show that if British soldiers died at the rate of 69, or even 50 per 1,000 annually, it was not the uncontrollable "climate" that killed them.

From these and other elaborate inquiries, the Commission concluded that the "climate" of India includes various elements, and that the mortality of our army in India and of the European race is due chiefly to those elements which are to a large extent under control. The diet of the men could be improved, the excessive doses of poisonous spirits under a burning sun could be commuted into other drinks, the mind of the soldier could be occupied; troops could be transferred from stations irreclaimably bad to stations proved by experience to be comparatively salubrious, and susceptible of being rendered more salubrious still; the same sanitary measures, too, as had driven plague from

Europe, and mitigated malarious fevers, must, it was inferred, produce the same salutary effects in Bombay, Madras, Calcutta, and the other cities of India.

Upon all these grounds the Commission saw a brighter prospect before the English Army in India.

It is thus described:

"We have, in the course of our inquiries, endeavoured to ascertain the probable excess of mortality in the Indian Army, occasioned by the sanitary defects we have described, as well as the reduction of mortality which would follow on the adoption of improvements in existing stations, combined with the use of hill stations, and the abandonment of as many unhealthy localities as may be practicable. The statistical evidence shows that the mortality varies from 11 ½ per cent in the most unhealthy to about 2 per cent in the most healthy places, even in their present unimproved state. It has been estimated that the lowest of these rates, or 2 per cent (double the rate at home stations since the introduction of sanitary improvements) may be taken as the possible mortality under improved sanitary conditions."

Nay, they go further, and hypothetically predict a still better state of things:

"A careful examination of the causes of disease, and of the character of diseases prevalent at the more healthy stations, would lead us to hope eventually for a greater saving of life than we have here estimated. Causes of disease, such as exist at these stations, would even at home be sufficient to account for one half of the 20 per 1,000; and if the time should ever arrive when, under the influence of improved culture, drainage, and sanitary works, India should be freed from the local malaria which exists everywhere there now, as it once did in some form or other over Europe, we may cherish the hope of realizing what statistical inquiries appear to point to, namely, that the natural death rate in times of peace of men of the soldiers' ages in India will be no more than 10 per 1,000 per annum."

Now, although Dr Leith and other writers have not proved that the mortality of the British Army in India, down to the date if the inquiry, was less than the calculations of the Commission indicate, they have shown that the somewhat sanguine prediction of the Commission, that a future low rate of mortality is to be obtained in India, may be realized, and Dr Leith tells the Government that the mortality in Bombay is at the rate of 12 in 1,000. He ascribes it to an unusual degree of freedom from cholera, and to "increasing attention to the welfare of the soldier." But very much remains to be done before such a rate can become permanent.

21. After a careful consideration of Dr Leith's report, although we are glad to find that there has been a lower death rate since the Royal Commission began its work, and although there have been some improvements in a few matters of detail

regarding barracks and hospitals, we are of opinion that the report contains no satisfactory evidence that any material improvement has yet been effected in the sanitary condition of the Bombay Presidency.

In comparing its statements with the recommendations of the Royal Commission, we find-

(1). That the sale of spirits in canteens, at the date of the report, was pretty much in the same condition as represented by the Commissioners. But we are somewhat surprised to find out that at Colaba Sanitarium, where men are sent for the recovery of their health, "a quart of malt liquor and two drams of spirits are allowed to be bought by each of the invalids in the barracks at the canteen," and that, at Ahmednuggur, the quantity of spirits which the men can purchase at the cavalry canteen appears to have been doubled since the date of the report made to the Royal Commissioners. Surely this requires reform.

(2). That the means of instruction, exercise, and recreation are still very deficient.

(3). That invalids are not yet embarked for home with the necessary speed.

(4). That works of drainage and water supply have still to be carried out at all the stations, that the existing water sources still require to be analyzed, and that means of filtration, combined with improved distribution of water, have still to be provided.

(5). That plans for improving the existing barracks and hospitals, as nearly as practicable in conformity with the principles laid down by the Royal Commission for building new barracks and hospitals, have yet to be prepared and carried out.

(6). That the ventilation of barracks and hospitals has still to be completed on sound principles.

(7). That a sufficient amount of glazed window space has still to be provided for lighting barracks and hospitals, and that gas has still to be introduced.

(8). That the ablution and bath accommodation for barracks and hospitals is still very deficient, and the supply of water for cleanliness quite inadequate. [Dr Leith shows that at Hyderabad, on the banks of the Indus, the allowance of water is only five gallons per head per day, and even shower baths cannot be used].

(9). That drinking fountains, supplied with pure, cool, filtered water, have still to be provided.

(10). That barracks cook-houses are pretty much in the state they were.

(11). That in consequence of the want of drainage and water supply improved latrines, water-closets, and urinals cannot be provided for barracks or hospitals.

22. With the view of supplying these deficiencies, we would recommend as follows:

(1). That each station be carefully examined by

competent sanitary and engineering officers, and that a careful survey be made, and a well-digested scheme for improving the station be prepared and submitted for sanction. This scheme to include-

(2). Levelling, filling up, paving, and otherwise improving the surface drainage of the station.

(3). Drainage and water supply, including sub-soil drainage, house drainage, filtration and distribution of water over the station.

(4). Improving existing barracks and hospitals, including raised floors, with ventilation beneath, or providing upper floors for sleeping rooms, in localities where it may be necessary to do so.

(5). Ventilation of barrack rooms and hospital wards, on the principles laid down in our "suggestions." Improvements in lighting barracks and hospitals.

(6). Fixing, *by regulation*, the superficial and cubic feet to be allotted per bed in barracks and hospitals, the amount being regulated according to the healthiness or otherwise of the locality, on the principles laid down by the Royal Commission. In doing this, rooms or wards unfit or doubtful for occupation should be excluded; and the amount of additional barrack and hospital accommodation necessary to admit of the regulation being compiled with should be stated.

(7). Sub-dividing long barrack rooms and sick wards, so as to have no more than from 20 to 24 beds per room, and providing that each room is completely cut off from the others, and ventilated separately.

(8). Improved latrines, water-closets, and urinals for barracks and hospitals.

(9). Improved and extended ablution and bath accommodation for exercise, recreation, and instruction in the way of gymnasia, workshops, reading and day rooms, soldiers' gardens, covered ball courts, etc.

23. It is impossible for us to do more than indicate generally the more important points of such an inquiry. Nothing short of an actual examination on the spot, by persons competent to conduct such an examination, is of any real use in determining the nature of the influences affecting the health of troops at any given station, and the nature of the works required for improving its sanitary condition. Such an inquiry, followed by a carefully drawn up Report on each station, accompanied with the necessary maps, plans, and surveys, affords the only basis on which a practical opinion could be arrived at as to the extent and class of improvements required.

(Signed) *Richard Airey*, Quartermaster General and President.
Douglas Galton, Assistant Under Secretary of State for War.
John Sutherland.

T.G. Logan, Inspector General of Hospitals.

Edward Belfield, Deputy Director of Works, War Office.
Proby T. Cautley, Member of the Council of India.
J. Ronald Martin, Inspector General of Hospitals.
Robert Rawlinson, Local Government Act Office.
J.J. Frederick, Secretary, Barrack and Hospital Improvement
Commission, War Office, 6 January 1865.

1870

"Letter" to the Council of the Bengal Social Science Association,
25 May 1870 in *Transactions of the Bengal Social Science
Association*. Calcutta 1870, 4:xiv-xv [10:233-34]

London

25 May 1870

Gentlemen, Pray accept my warmest thanks and tender them for me
to the Bengal Social Science Association for the honour you have
done me in electing me an honorary member Believe me, it touches
me the more deeply the less I am able to express it. For I am a
poor woman, overwhelmed with business and illness.

For eleven years past, what little I could do for India, for
the conditions on which the Eternal has made to depend the lives
and healths and social happiness of men, as well native as
European, has been the constant object of my thoughts by day and
my thoughts by night. These efforts on my part have been humble
indeed, but if the Almighty has blessed them in some measure and
if they are recognized by you who have done so much more in the
same cause--and we in England also recognize with admiration and
shame that the native gentlemen of India have sometimes surpassed
ourselves in progress in this matter--it is a source of the
deepest thankfulness. May increasing success be granted!

The task before India is truly gigantic. But men have done
greater things than these. What would you say, for instance, to
draining and cultivating the great endemic area of cholera from
the sea-board to the Himalaya where the waters of the
Brahmaputra, the Ganges and the Mahanuddy flow out, and from
which endemic district the great epidemics of cholera rush forth
to afflict the world? As well, you will say, try to put a girdle
round the world! But a girdle has been put round the world by the
electric cable and the day may come when you will have brought
the waters of this great area under some control, when you will
have drained its marshes, cultivated its rich provinces,
exchanged its desolating malaria for useful production and
possibly extinguished cholera as a scourge for mankind as well as
for India. If the work is a work for heroes, it is the more
worthy of your ambition.

I beg to acknowledge a copy of the society's *Transactions*. I
may perhaps be permitted to offer the society a few books and, as
my small contribution for a membership I so much prize, shall beg
to enclose 100 rupees to your order. Pray believe me, gentlemen,

ever your faithful servant

Florence Nightingale

P.S. Encouraged by your kindness, I may perhaps venture to write to you again in more detail but will not delay sending my poor thanks by this mail.

"On Indian Sanitation," *Transactions of the Bengal Social Science Association*. Calcutta 1870, vol 4:1-9. Together with her covering letter dated 24 June 1870 to H. Beverley, Esq. and Babu Peary Chand Mittra, honorary secretaries to the Bengal Social Science Association. also in the British Library Asia, Pacific and Africa Collections Eur Mss F6/27, F130/2413. [10:235-43]

24 June 1870

Gentlemen, You have done me an honour which I deeply feel in choosing me to be a member of your Social Science Association. I must try to do my little best to deserve that honour, since I, like yourselves, have never been accustomed to be a "sleeping partner."

I look at your name ("Social")--which may I now venture to call our name?--and I think that perhaps what is most wanted, and most acceptable to you now, is the *social* aspect of the Indian public health problem, in other words, placing it before the peoples in their own languages, so that they may understand so much of the subject as may enable them to co-operate with the government in protecting their own health.

I am aware that this has engaged your attention, who are able to bring to it far more ability and experience than I can bring. But I venture to send you my very humble contribution. Alas! I know no Indian language. I must therefore trust to your good offices to make what I write known to those of your members who do not speak and read English in Calcutta and the North West Provinces. And I trust that I have your permission to do the same through other friends in other parts of India.

I shall send a copy of my little paper enclosed, with your leave, to Lord Mayo who sometimes honours me with his commands on these subjects. Pray believe me, gentlemen,
ever your faithful servant

Florence Nightingale

P.S. I feel most unwilling that my ignorance of Indian languages should entail any expense on the funds of the association. I should esteem it a favour if you would allow me to contribute further for the translation, if you do have it translated, of this humble little paper not only, but of other and better works which you translate for the peoples of India.

F.N.

The best proof of my feeling of gratitude for the honour which you, the Calcutta [Bengal] Social Science Association, have offered me of membership, is to show myself a member in spirit, however unworthy, and to send a few remarks, however imperfect, with reference to the health and habits of the great populations inhabiting India, which you know and understand so much better

than I do. Yet still I shall succeed, if in nothing else, in showing the great interest now felt by public opinion in England in the health, both physical and social, of those to whom we truly feel as to our beloved brother-and-sister subjects in India.

Since our queen first directed an inquiry to be made into the health of her people in India, very much has been done by the government to give effect to the recommendations of the royal commission which conducted that inquiry. But the work increases in importance year by year. I have the privilege of hearing frequently of the proceedings in India. And while on the one side no one subject has more attention than this branch of the social condition of the Indian peasantry and dwellers in towns, on the other, no one subject seems to loom greater and greater still and more immeasurable and important, as you approach it, like your own great Himalayas, as you come nearer to them.

There is so constant a relation between the health of a people and their social civilization that alas! one of the best, if not the best, indication of the social state of populations is afforded by the numbers who die year by year.

Not only this--but the Almighty has so linked together the happiness or misery of all His creatures, that we in Europe can almost anticipate whether Indian cholera is to devastate the nations of the West by the number of people who are dying of it in lower Bengal.

If we are not linked together in love and mutual help, as we ought to be, of our own free will, we shall be linked together by mutual injury--the injury inflicted by mutual ignorance and prejudice, and this by the laws of the Eternal Perfect One, who thus leads His children in the East and in the West to know and follow after the right.

To come to the practical: It is scarcely too much to say that the future advance of Indian social civilization and the question of cholera or no cholera are little else than one and the same thing. For if you in India ever succeed in eradicating this scourge, the whole tone of Indian domestic and social habits will be raised in the process. But if this scourge be left to follow its own course, the social condition of the people, it needs no prophet to tell us, must inevitably decline.

Cholera, it is true, is not our only scourge. But where cholera disappears, diminished by sanitary measures, there is no fear but that fever, diarrhoea, dysentery and the like will disappear faster than cholera itself.

Here several questions arise to us. What can the people do individually to prevent cholera? Have they any power to do so? What are they to do? Or can government alone do the work for them?

The work is twofold, as we all know. Part of it is so great that it is quite beyond the power of private individuals to do it. But another part of it is so great that no government can do

it and it can only be done by the people, acting for their own safety.

Take Calcutta. The municipal authorities are draining Calcutta and supplying it with water works beyond the power of private individuals. But the authorities can never by any process ensure that the people shall attend to the minute cleanliness of their houses, clothes, persons and habits, which is just as essential a sanitary business, believe me, as any engineering works, however costly.

All that a municipal government can do by engineering works is, in most cases, to give the people the greatest possible facilities for keeping their dwellings, habits and persons pure and clean, and for obtaining wholesome water. Everything else must depend on their own exertions.

Take another instance. In a most important report on cholera (Dr Bryden's Report on Epidemic Cholera in Bengal), we have been shown that in all probability this pestilence is a product of the wet, drying-up subsoil of lower Bengal, that the whole country, including the deltas of the Mahanuddy, the Hugli and the Brahmaputra, is the perennial home of cholera, and that this is mainly due to neglected subsoil and unused riches. Here then is a noble field for government to work in. To drain, to regulate the rivers, to encourage better agriculture and to introduce improved implements, would be to add another province to India and to do a great work in eradicating India's opprobrium.

But although these advantages could not be obtained without public works, advantages of equal importance would still have to be won by the people themselves. The cultivators of a country are its real health improvers. There is work enough and to spare for both government and people in this enormous field of usefulness.

While those, therefore, who like you are leading this movement should help in forming public opinion, as to introducing arterial drainage works in malaria districts, in spreading over India improved agricultural methods and better agricultural implements, in forwarding municipal improvements of drainage, water supply, cleansing, etc., in cities and towns, there is still a greater work to be done in training the tens of millions of India in improved domestic and social habits. Silver and gold and stone and bricks and steam and cotton are easy to work with in comparison. But men's hearts and minds, their ignorance and their cleverness, their prejudices and their enthusiasm, are not easy to work with and require a far higher order of genius in those who have to deal with them. So much the more honour to those whose wisdom and devotion are such that they may be called the leaders of mankind. For, ah! mankind often abuses the permission to be a fool.

And as we find in all history and true fable that the meanest causes, universally multiplied, produce the greatest effects, let us not think it other than a fitting sacrifice to the Eternal and Perfect One to look into the lowest habits of

great peoples in order, if we may, to awaken them to a sense of the injury they are doing themselves and the good they *might* do themselves.

For instance, is it not true that, in many houses, the accumulated filth of the whole household is scarcely ever removed? Is it not true that, in or near to many houses, there are private tanks used for all purposes, washing, bathing and such like, and the water afterwards used for drinking or cooking? Is it not true that there are religious ideas prevailing among certain people which favour the drinking of foul water? (And would not the pure religion of the One Perfect rather lead the other way?) Is it not true that, in many private houses, the privy and the well are close to each other? Is it not true that the blood and offal of slaughtered animals are kept within the dwelling places of those who slaughter them or are left to fester and generate disease round places of sacrifice? Is it not true that many houses of the poorer class are so crowded at night that the air is poisonous? Is it not true that the surface drains intended to carry off the rain are made places of deposit for every kind of filth?

Of course every one of you gentlemen could multiply and multiply these instances, being so far better informed than I am. I myself could suggest many more. Perhaps I have not even suggested those which are the most destructive to health. I have given these merely as instances where government can do little or nothing, where the people can do everything.

It is impossible to read much of the present voluminous "reporting" literature from India without being struck (1) with the state in which so many of the people in India live, and (2) with their great intelligence (surpassing that of many of the western nations), the great opening and willingness among so many for education, for improvement, for knowledge.

No doubt much of the willingness for education is due to the fact appreciated by them that education makes money. But would not the same appreciation, if enlightened, show them that loss of health, loss of strength, loss of life, *is loss of money*, the greatest loss of money we know, and we may truly say that every sanitary improvement which saves health and life is *worth its weight in gold?* (as is the phrase).

An unhealthy people is always a poor people, a dirty people is always an unhealthy people. Take for instance the Central Provinces (and I must just allude to the fact that what is called a province in India has often twice the population of what is called a kingdom in Europe). We find from a very able report on cholera (Dr Townsend's Report on Cholera in the Central Provinces, 1869) that, in the limited district attacked, there are no fewer than 30,135 towns and villages, containing a population of nearly 8 millions; 4100 of these villages with a population of upwards of 2 millions were attacked and 47,848 people died.

Something about these villages we learn--just enough to show that every one of them is worthy of a separate social study. The people (men, women and children) and animals appear to live together in many cases. The villages generally are in a most filthy condition. They appear never to be cleansed and the people are as filthy as their dwellings, the water generally bad and unfit for use, filth of all kinds washed into the shallow ponds and shallow wells or into the drying-up river beds from which the people take water almost poisonous. The domestic habits of many of these men, women and children seem little better than those of the lowest class of animals. Is it any wonder that nature, in avenging her laws, decimates those who transgress them in this way?

But worse than this. A long course of bad domestic habits brings moral blindness. The hard and fast link between pestilence and its determining causes is first lost sight of--next ignored--and then denied. Cholera is a bad thing. But there is a worse thing than cholera even. And that is that people should feel that nothing need be done--that nothing can be done--that what has always been is best. Even the native doctors, who ought to know better, have fallen into this marsh of stupidity, we are told in one report.

Consider these eight millions of people in the Central Provinces, living in 30,000 groups. Take in the rest of India, what a vast social problem it is! But there is one good hopeful point and this is that small groups of population, of a few hundreds living in separate villages, are far more easily kept in health and improved in habits than great masses of population living in cities. It is perhaps not too much to say that the problem of keeping London in health with its three and a quarter millions is ten times as great and difficult as that of the eight millions of the Central Provinces. Yet this has been solved, though much remains to be done. And it has been solved too with your own great city of Bombay, though much remains to be done. Bombay is at this time healthier than London. The people are awake to all the causes of unhealthiness and cry out when cholera, fever and smallpox appear even in single deaths, that the causes ought to be removed; whereas formerly half the population might be swept off and the other half think it "all right."

Your own Calcutta, though not healthier than London, is healthier than Manchester or Liverpool, since you have introduced your great works. Shall we have solved the harder problem and shall we give up the easier in despair? Never--God forbid!

Let us make *model villages*, as in England we make model dwelling houses (in which good work the great husband of our beloved queen laboured more than we all). In these Indian villages little or no skilled labour appears to be necessary except indeed where populations live on ground requiring extensive drainage works.

There is perhaps scarcely a village in India, the inhabitants of which might not find among themselves all the labour required for keeping themselves clean and in health. It is, after all, mainly a question of cleanliness and pure water. It is a true saying that "all smell indicates disease and all smell indicated loss of money" (for it proves the loss of valuable manure).

Sanitary work in these villages would appear to be simple enough and government is providing efficient district sanitary inspectors, who could easily help the people by giving a proper direction to improvements. At first it is to be feared that little good would be done without frequent inspection, without calling dirty people to account and persuading them to do better. Could you not, gentlemen, who have formed this social science organization--perhaps by means of enlightened natives of India--direct the attention of their countrymen on the spot to the need of personal exertion and personal help in improving the condition of towns, villages and houses?

Merely to tell people what to do, though useful no doubt, is not all that is required. Enlightened personal influence is, above all, needed as in the West so in the East. Bring influence to bear at once on the improvement of a few villages by way of trial. A little real work, as we shall all agree, is worth any amount almost of discussion or writing.

We shall also agree on a few main improvements, such as might be introduced at once.

1. Drain away all stagnant water in and about the villages.
2. Fill up all holes and level the ground.
3. Make and improve the roads and lanes in the villages and in their neighbourhood, so that surface water may run off easily.
4. Dig a well or two in clean new ground away from the houses and deep enough to obtain good drinking water. Build up the well inside and raise a coping all round the mouth of it to keep surface drainage from running back into it. Cover the mouth of the well and pave or concrete the ground about the mouth. If a pump cannot be had, draw the water by a windlass and iron bucket and chain. The water skin is a dangerous abomination.

5. One of the most filthy and injurious habits in India is fouling the ground in compounds of houses by cess-pits, and the ground in the neighbourhood of villages for purposes of manure. This foul habit is one of the principal causes of cholera and other epidemics. There is only one way to deal with it and this is to make the people see that their present practice pollutes air, earth and water, and kills themselves, while the proper use of all manure is to afford nourishment for vegetable life and by so doing to keep man and beast alive. Covering and cropping ground which has been used for these purposes, or removing all filth daily and digging it into ground as manure for crops, would remove one of the most serious causes not only of ill health but also of social degradation.

6. Some arrangement should be made for removing dung heaps to a safe distance from villages--and animals from the neighbourhood of dwelling houses.

7. Could a few model dwellings, with proper sanitary appliances, be introduced here and there as examples of what might be done in the construction of healthy houses? Example is the best teacher and enlightened native gentlemen, especially landowners, who have influence among the working population in town and country, might work miracles.

The munificence in charity of native men of rank in India is well known. Here is an equally noble and patriotic way of exercising charity.

In most country villages, there is said to be provision of some kind for cleansing which might be extended and made more systematic.

To interest the existing races in social questions of this kind, a powerful engine might be found through the schools. Is there any reason why Indian schools should not give some elementary instruction in physiology and the law of health, but especially with reference to the destructive consequences of present filthy habits, to the binding character of natural laws--nature never forgives--and the duty and benefit and absolute necessity of acting in conformity with what these laws require, if we are to live and not degenerate, but improve?

The object is that of all true lovers of their country, their God and mankind. It is no less than rooting out of the vast empire of Indian soil pestilences like those which in former times scourged the world. The work is still in progress everywhere. Nowhere is it completed.

The whole problem is not peculiar to India. Whole regions of the earth which were formerly devastated by fever, pestilences and dysenteries have long since been free from them, except in the milder forms in which they now occasion part of the ordinary mortality and, guided by the light of experience, we see no reason why India should form any exception to the rule, that in proportion as the conditions of health become better known and complied with, these diseases, the *opprobria* of imperfect civilization, should diminish both in frequency and malignity. (Report of the Royal Commission on the Sanitary State of the Indian Army.)

Florence Nightingale, honorary member of the Bengal Social Science Association

"Paper on Sanitary Progress in India" in *Report on Measures Adopted for Sanitary Improvements in India from June 1869 to June 1870*. Together With Abstracts of Sanitary Reports Forwarded from Bengal, Madras and Bombay. Printed by order of the Secretary-of-State-for-India-in-Council (London: Eyre and Spottiswoode 1870):

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I have been asked to say a few words on the present aspect of the work of sanitary improvement in British India, having had the privilege of being allowed some share in it, ever since the Royal Commission on the Sanitary State of the Indian Army first collected its evidence from every station in India, and I was desired to give my opinion on that evidence, both as regards her majesty's troops and the civil and native populations. Without farther apology, then, and as the evidence now coming in on the native populations is infinitely fuller than ever it has been before, I will try to say my few words as follows.

1

1. Much need not be said on the difficulties of beginning to improve. The question in its practical shape was new. But it was not the less grappled with at once by the Government of India, rather tentatively, as was fitting, the administrative recommendations of the royal commission were at first adopted, but as the practical action contemplated in these recommendations was not followed up, several changes in the arrangements were made--further changes appear to be under discussion. At present the work is to a large extent inspectorial and reporting, although much real work has been done nevertheless.

The inspectors are gradually bringing to light what is the real social state of the mass of the Indian peoples. And it is difficult not to feel that, next to education, if not before education, stands the great and useful work for the Indian government and people which these inspections raise up and present before our eyes to be done. Their reports have removed any veil of romance woven by poets over Hindustan and show us peoples to be numbered by tens of millions living under social and domestic conditions quite other than paradisiacal.

2. These reports reveal to us great nations and races, subjects of the same queen, after a social existence of twenty centuries, less or more, living amidst their own filth, infecting the air with it, poisoning the ground with it and polluting water they drink with it. (Some of them even think it a holy thing to drink filth.)

Habits of cleanliness are inculcated as matters of doctrine by most Eastern religions. Have these habits degenerated in India into mere "washing of cups and platters and such like things," while all the weightier precepts of the laws of health are passed over with little or no notice? For many ages the people of India were more civilized and more cleanly than almost any nations of Europe. Why has this condition of things been in later days reversed? Now they are generally as bad as, sometimes worse than the worst of our own people here in Europe.

Not only habits of personal cleanliness, but the provision by the state or by private charity of pure air and pure water, and of means of keeping the earth pure and wholesome, are inculcated by most Eastern religions, however much they may vary

in other respects. Why should these precepts of personal and social purity, which are universally true and useful, be forgotten? They have no necessary connection with any contested questions of moral or intellectual belief.

3. There are great tracts of country, especially in lower Bengal, liable to all manner of irregularities in the relations of land and water to each other. This is well known. But the hand of man appears to have introduced few or no compensating processes or works. The only escape from pestilence appears to be when the country is under water. As soon as the land begins to appear, pestilence appears with it. And so on year after year.

Must we not sum up the results, so far as health is concerned, by the words perennial cholera, dysentery, fever, sometimes like plague, affecting first the people on the spot, then overflowing into unaffected districts and stations, decimating the troops, passing the boundaries of India and devastating Asia, Europe and Africa? (Is not this the history of the great cholera pestilences at least?)

To judge from the reports, this seems the established chain of events at the present time. Cholera intensifies itself. At first it scarcely attracts attention. After a time it covers more ground and becomes more fatal. Then it overflows its accustomed limits and spares neither race, class, age nor sex. It becomes the deadly connecting link between the filthy habits of the lowest classes in Bengal and the highest civilization of the Western nations. It comes into existence among the hot moist vapours of the wet, undrained, uncultivated deltas of the Ganges and Brahmaputra, and it spreads and spreads till it ultimately claims its victims in almost every climate in the world.

4. It is always well to know the worst. And this inspecting work should be continued until the state of every village in India is laid bare (although the Bombay health officer, all honour be to him and to his activity, does make a piteous appeal to us to let him work and not report).

The sheer logic of facts, if nothing else, will compel our selfishness to help forwards a higher civilization in that vast empire. But I should be wrong if I seemed to appeal merely to selfishness; the force of public opinion in England, particularly in a strong interest in the affairs which concern the health of our Indian native fellow subjects, has been steadily growing here for the last twelve years.

5. At first sight the problem to be dealt with appears to be of such vast extent that its solution is almost hopeless. But the very extent of the problem results from the great subdivision of its parts and this subdivision is of immense advantage in dealing with it.

With numerous large and populous cities and towns, India is nevertheless essentially a country of villages. In all jungly parts of the country, many sanitary difficulties are habitually settled by bodily removing the village to a new site, and this

habit often continues long after the people have ceased to be what their more settled neighbours would call "real junglees." If the children or the chickens die, or "mother smallpox" or "mother great plague" visit the village, the people disperse, the elders burn the huts and when they reassemble select a new site for the village. Even in Calcutta, the general conflagration of whole "bustees" (the collection of native mat huts which are interspersed among the brick palaces) was, and is perhaps still, looked on as the natural and wholesome mode of making a clearance. And certainly the great fire of London, two centuries ago, though we had not sense enough to look at it in this way, was really the sanitary improver which did in our place, in a more summary manner, what we ought to have done. It was a sanitary blessing and the only way to avoid greater evils. But in these days, although Charles Lamb did tell us that the Chinese burn down a house to roast a sucking pig, we should not exactly recommend, if London, Calcutta or any town or village were in a bad sanitary state, as the only sanitary remedy: burn it!

Our Indian inspectors tell us much of the conditions, fatal to health, under which population exists in both towns and villages.

6. The town populations are neither better nor worse than are the villagers so far as their habits are concerned, but the town populations have not the same facilities for preserving health as the villagers might have. Towns everywhere require certain classes of works which individual householders have no power to execute. Many of these Indian cities and towns have municipalities, but many municipalities have no money. In one or two instances, do not parts of the great drainage city-works appear to have been more or less copied from the so-called "cloaca maxima" at Rome? and is not that the most useless, costly and mischievous of all ancient sanitary models which time has spared? Hence there is "no balance at the bankers."

A negative result is often a very good thing, if only it compels people to think and not to copy bad models in future. But alas! in the meantime a large extent of Calcutta has to be left undrained. Bombay appears to have been frightened, and have not certain professional people proposed to deal with these cities as if they were villages? Lo! is there not such an art as sanitary engineering?

2

Also, has not some uncertainty been thrown over the whole subject of Indian public health questions by intruding into it theories of disease? The intention is of course to obtain some central principle of action. But as no two people in search of such a principle ever probably arrived at the same, the general result of this method of dealing with public health questions is to amaze practical people and to afford a good reason for doing as little as possible.

The public health question is not a question of opinion. It

is a question (1) of what is fact? (2) of what is practicable and expedient? However ingenious a theory may be, the wisest thing is never to expend public money on it. Are not the theories we have had, too, not of Indian produce but of European manufacture? And have they in reality anything whatever to do with public health problems? The questions to be dealt with are either questions of fact or they are nothing. No speculative matter should ever peep out of or creep into public health reports intended to lead to practical action.

(From any quarter which will help us to understand questions of public health, light is welcome, but is not the usual procedure of disease theories to take some one fact and to found a whole chain of consequences upon it, leaving out all other facts and the consequences which follow from them? Then, as there are people who know these other facts, these people, not deficient in intelligence, put in an inconvenient oar and call in question the authority of the one-fact philosophies and their conclusions.

May I just say that recent reports afford striking illustrations of this; e.g., one German professor tells us that cholera is a fungoid disease, another, that it springs from some special condition of the ground water. The government has an inquiry instituted and the first result is that there are no special cholera fungi in India, the second, that cholera has assumed great intensity where there is no ground water at all. Others state explicitly that cholera *excreta* are the special *foci* of cholera. But then we find cholera spreading in great intensity where cholera *excreta* are dealt with in conformity with this theory, and not spreading at all--as in the hospitals of Calcutta--where they have not been so dealt with. Another lays all the blame on cholera poison getting into water, unconscious, apparently, that cholera has committed ravages where no such occurrence could possibly have taken place.

These are but a few flowers from the garden of theories, but should these gardens be cultivated at all where the struggle with cholera is a dreadful, too dreadful reality and not a book theory?

Now, may I give an instance of wise reserve from Dr Smith's report on Bengal, where one of the medical officers teaches us a lesson we all should learn? "Perhaps after the epidemic which has prevailed lately among cattle in England and the experience which has been gained therefrom, but which led to no better result than an order for the indiscriminate slaughter of all beasts affected with it, more allowance will be made for the difficulties and honest doubts of those whose lot it is to treat cholera in its chosen home. I hope especially that a confession of ignorance will not be taken as an admission of stupidity.")

1. None of the reports received here, so far as we know, except those for Calcutta and Bombay, give engineering proposals

for improving the public health among the larger groups of population, especially as regards the introduction of works and methods of procedure long familiar in Europe. Some of them recognize more or less fully the advantages which would arise from such works, but what is really wanted is this: *progress reports*, such as those of the municipal authorities of Calcutta, showing (1) the increase of sewerage and draining, (2) improvements in water supply and distribution, (3) surface drainage, filling up ditches, etc., and the like, or else cleansing reports like those of the Bombay officer of health, showing the real amount of work done. We want *progress reports* from every part of India, for stations, cities and villages.

2. The improvement of Indian military stations, as has long since been shown, involves the consideration of questions of surface and subsoil drainage, water supply, removal of sewage from buildings, improved barrack and hospital construction, improvements in existing barracks and hospitals and last, though by no means least, sanitary improvement of native towns and bazaars in the vicinity of military stations. Referring to these health requirements, the Army Sanitary Commission, in their "Suggestions for the Sanitary Improvement of Indian Stations," nearly seven years ago, laid down the following general principle: "No improvement in barrack or hospital accommodation will compensate for a malarious subsoil or for bad water; and on the other hand, no improvements in drainage and water supply will neutralize the influence of an ill-ventilated, badly constructed, overcrowded barrack and hospital. And even if these works were carried out, much removable sickness would still exist, unless the men's leisure were profitably occupied and the sanitary police of bazaars [markets] and town efficiently attended to."

In the documents received here no reference is to be found to the surface or subsoil drainage of stations, no reference to sewerage of buildings. Dry earth conservancy is apparently the only thing attended to, although is it not simply a matter of common knowledge that the dry earth system makes little difference in the amount of dangerous impurity contained in the fluid sewage of a station or town? There is no reference to improved water sources or improved methods of distribution for any military station. But Bengal presidency has done the next best thing, in having had an exhaustive examination made of many of its water sources, and the result is this: very few can be depended on for pure water; some are extremely impure and consequently dangerous. There is no reference to cleansing measures for filthy native towns near stations, except such reference as shows how excessively filthy these towns are. Some of them, indeed, appear never to be free of cholera, and then people wonder that cholera attacks troops who live near them or frequent them.

The one measure which has been extensively carried out is building new barracks--some of them apparently on a more costly

scale than necessary for the station or climate, all of them apparently without the necessary ground measures, without which no new building is of much use. There can be no doubt that at many stations new barracks were necessary and that they will eventually prove of the greatest benefit to the public service, but ought not more care to have been bestowed in keeping them cool? And is one rigid plan and rule of construction everywhere necessary? or would it not, financially, have been better to have had the stations carefully examined one by one, on the ground principles mentioned above? and, then, a general plan of improvement laid down for each station, having special reference to the class of works required to remove disease causes? We are afraid that the result shows that this would have been the wiser plan, for these new barracks have not been free (nor could it have been expected) from miasmatic diseases, incident not specially to the old barracks--although no doubt bad barrack accommodation added to the mischief--but to undrained locality, to malaria-generating country near the station, to filthy native towns in the vicinity or to bad water.

3. There are perhaps very few stations, except those in low, flat, wet, alluvial plains, where malaria proceeds from unregulated waters or water-logged subsoils and bad agriculture, which might not be readily placed in healthy condition, if the energetic powers of Indian administrators, with a governor general and commander-in-chief, zealous and able, were to be applied to this work. Our recent cholera experience, indeed, proves that there is no time to be lost. We cannot endure to see die a regiment a year by cholera in the Bengal presidency, especially with such an experience before us as that of Madras presidency, viz., that places of pilgrimage which used to be the continual foci of cholera have been for years kept free of the disease by sanitary measures. The prisons of northern India afford similar experience, and not an hour should be lost in dealing with the military stations.

4. If there must be stations close to unhealthy towns, one of two things must follow: either towns as well as stations must be put into a safe sanitary state or British soldiers must die of cholera. There is no third way possible, as all agree.

With such unhealthy stations and towns as Allahabad, it might be worthwhile, if practicable, to hold someone responsible for putting the whole place to rights, vesting him with absolute powers. If this cannot be done, then what other alternative is there but to remove the troops to the nearest spot that is safe, if Allahabad cannot be given up as a station? The same may be said of Peshawar, where so many of the finest troops in the British Army have been destroyed.

It is admitted now by our highest authorities that a station placed near enough to a native town to be injured by it, or by a village too large for entire removal, is badly placed, strategically and politically, and should be moved. Most of our

stations have been placed haphazard, hence many are close to such towns or villages and should be moved. In the case both of Peshawar and Allahabad, the evils complained of should be corrected at once, whatever the expense. It is believed that the last commander-in-chief most wisely ordered all troops out of Allahabad except two companies in the fort. The mistake of trying to keep more than a strong outpost at Peshawar, if the communication across the Indus can be perfected, is admitted in theory, though not yet recognized practically.

5. Has not much of the mischief resulted from want of sanitary engineering? And sanitary engineering is a specialty. It does not come by nature. No one expects a first-rate physician to be a first-rate operative surgeon, although he knows surgery. Though there are engineers in India, the work of the sanitary engineer is not done. A sanitary engineer does not use open unprotected wells, dug in foul subsoil, for supplying troops with water, as in some places. And scarcely does he bring water by open cuts in the ground, as in other places. Nor does he leave the stations without so primitive a contrivance for drawing water as a hand pump, let alone a steam pump, as in all places.

May a single fact in last year's Bombay presidency sanitary report be quoted as an instance of the condition of water supply? All the drownings reported, 1608 in number, took place in wells and tanks. No fewer than 1100 dead bodies were taken out of wells during the year in this presidency alone.

What too becomes of the liquid sewage of stations: does it not go into the subsoil? And it stays there, because it has nowhere else to go. A sanitary engineer would scarcely run his sewage or allow it to run into the subsoil. Is it too much to ask, and if we don't ask the question, Nature asks it so loud that we *must* answer--she asks that the stations be subsoil-drained, properly sewered, sufficiently supplied with good water for all purposes of health; she asks that the bazaars and native towns near be cleansed and kept clean.

This question she goes on asking and it is not a sufficient answer to her to build barracks. She does not take this answer, but just goes on levying her own cess [tax] in her own way till we give her the answer she requires. She does not care about agents but only about results. If there are agents there who can do the work, she says: "Set them to work." If there are not, "Send for them." The work to be done is great and will be costly. But a beginning might be made. The worst stations are well known and might be grappled with in detail.

4

1. However extensive the stational improvements required may be, they are but a small matter when compared with those required for the civil population. How great a work there is before the Government of India! But the work is so great that the government cannot accomplish it by itself.

In two capitals, Calcutta and Bombay, much has been already

done, and the death rate actually reduced to below that of London in the case of Bombay, below that of Manchester or Liverpool in the case of Calcutta. Madras has not been so active. She endures herself a high death rate by not doing for herself what she has done for her pilgrims, and her abominable river is still more abominable than ever. In other large cities there are active municipalities all more or less engaged in improvements.

But the true key to sanitary progress in cities is water supply and sewerage. No city can be purified sufficiently by mere hand labour in fetching and carrying. As civilization has advanced, people have always enlisted natural forces or machinery to supplant hand labour, as being much less costly and greatly more efficient.

The Army Sanitary Commission have shown in their "Suggestions" that the steam engines belonging to London water companies will do as much work for a shilling as 900 men can do in a day of eight hours. Shall a shilling's worth of work continue to be done in India by 900 men in a day or by one man in 900 days?

Other boards and other "guardians" have, however, been unwilling to change. More unwilling perhaps than energetic India. But they have had to change. No one can stay behind when once public opinion and the march of events say, Move.

Indian municipalities are moving. Let some one city be completely set to rights as an example, and let the government encourage such a work. Pune is a good example of the need of action: a large city of 70,000 or 80,000 people, a camp bazaar of nearly 20,000 more, many villages and smaller camp bazaars about, and two large military stations; good natural climate, good water to be had and good soil. Dr Leith showed what was needed by an excellent report years ago, viz., (1) drain city, camps and villages, *not* into the reservoir which supplies the great part of Pune's water; (2) open good streets; (3) give good water; (4) improve the barracks. Something is being done to give good water and barracks, but nothing to drain. The great town and camp still drain into the subsoil or into the reservoirs of water for the poor people.

2. The most enormous work will, after all, lie with the villages, and it is in the villages that unhealthy conditions appear to exist almost in greatest intensity. Read the details given in Dr Smith's report on Bengal, in Dr De Renzy's report on the Punjab, Mr Planck's on the North West Provinces, Dr Townsend's on cholera in the Central Provinces! Do not they show why cholera weighs so heavily on these village populations? Dr Townsend tells us that only last year 4100 villages in his district, having a population of over 2,000,000, were attacked with cholera, which carried off 47,848 of the inhabitants--a mortality of 22 per 1000 from cholera alone.

Bearing in mind that these cholera epidemics are constantly doing their destructive work in India, we may form some idea of

the immense suffering and loss inflicted. Bearing in mind the enormous number of villages in India, we may see that no government could do the work required, although no people could do it without the government. All that a government can do in such circumstances is to collect and make known the facts, to bring them and their consequences to the knowledge of the people, to help them with advice and to encourage their efforts by examples. But the people themselves will have to do the work. Fortunately, little engineering is required for villages.

Is not the main thing wanted a good cleaning out to begin with, then some local means of keeping the villages clean? Arrangements for storing the manure of each house and cattle stand at the village outskirts would be required, but these need only be of a very primitive kind. Roads through villages require to be repaired, the surface to be levelled and drained, holes to be filled up, new and properly constructed wells to be dug and better methods of drawing and distributing water to be provided. The people might be required to find the labour. A few model dwellings or even a model village in each district would do much good among peoples who are essentially imitative. A few simple rules for keeping their villages healthy might be drawn up. (An octavo volume is not wanted; a dozen lines may be made to hold much wisdom.)

If these things were done and if government provides inspection, with the occasional advice of a sanitary engineer where required, it is certain that the good results would be immediate and in time the people would be able to look after their own health. The work is easiest of all in villages dealt with individually. A good collector or commissioner, with power to order and to spend a little money, patience and a good native prime minister, might get everything done by the people themselves.

The work is one of health, but it is also a work of education and civilization. Would it not be well to introduce some elementary knowledge of physiology and the laws of health into the teaching of government schools? especially as regards social and domestic habit. Would it not do good in two ways--as acting on parents (and villages) through their children and on the children themselves in after life?

We learn from the highest authority that at Bombay it was the young medical students of the Grant Medical College and their friends in the Elphinstone College who made the sanitary improvement of Bombay possible. And at a recent meeting held in Calcutta for discussing a report on cholera by Dr Murray, the most comprehensive and practical treatment of the whole subject was contained in an address by a native Indian physician.

A great work of a certain kind has nevertheless been accomplished in India--astonishing when one realizes the conditions of that vast empire--a work of giants. And indeed our great Indian

administrators are giants, even in these days. Great things have been done in sanitary legislation in the last years. Many commissioners have been zealous in doing their difficult duty to the people over whose interest they are placed. Inspectors and medical officers have made signal efforts in the same direction. The work of municipalities must not be forgotten nor the large sums spent by them in improving the public health, nor the building of new barracks and hospitals nor the other improvements at military stations, which have been carried out at a great cost and on an extensive scale.

There is life where there was none before. There is increasing interest in the work of protecting the public health. And a large amount of the most indispensable information is being collected by the sanitary commissioners. What is wanted now, as we shall all agree, is practical work. The people themselves must help. There is plenty, too, for the higher powers to do.

The texts from the reports received are many and admirable. We could preach from them for a year. But we would rather work from them. Are not the simple facts that India is a hotbed of malaria and the Ganges delta the breeding ground of cholera sufficient to show in what direction the Government of India should work for the public health, a work in which it is certain that the people can do little or nothing for themselves? Are not the simple facts that in India whole provinces, which in Europe would be kingdoms, are living in habits little higher than those of the lowest class of animals, sufficient to show how the people, encouraged and instructed by their own landowners as well as by British authorities, might work for their own health—a work in which it is certain that no government can do much for them?

1874

"Irrigation and Means of Transit in India," *Illustrated London News* 30 July 1874:99. [9:751-55]

The second reading of the India Councils Bill of Lord Salisbury--that master workman and born ruler of men--having been carried last night in the House of Commons by a majority of more than three to one, how can we help thanking you for your memorable words: "A great opportunity is before us. An enterprise of surpassing magnitude claims our immediate attention"? For is not this act the first step to carrying out this "enterprise of surpassing magnitude," to laying hold on this "great opportunity"?

"Much has been done already in the way of public works, little, however, as compared with the need of them," you truly say. As an example, take the Punjab: less than one-third of that great province (without the holding of which, thanks to Lord Lawrence during the mutiny, should we have been enabled to hold India?) has irrigation works, either complete or in progress. More than two-thirds are without irrigation, and almost without communications. Take the North-West provinces: these are well off

comparatively. About five-eighths are guaranteed from famine by irrigation; one-eighth, though it has no irrigation, has communications. But is not one-fourth of this vast district, which equals in size one Ireland and a quarter, wholly destitute both of irrigation and communications?

You say: "Periodical famines ought to be made impossible, will be we trust." One-half of this destitute fourth is the unhappy district of Bundelkund, over and over again desolated by famines, in a most depressed condition, with no means of communication but common roads. Take Bengal: Out of a district--what am I saying?--a kingdom two and a half times the size of Ireland, with more than five times its population, including Patna and all the famine regions of this year, regions which by this time, but for the Christian heroism of British officials, who have justified our Christianity to the earth, who will never themselves be known by name, but who have created an almost new thing--official heroism in saving, not taking, life, would have been the "abomination of desolation." Take all Jeremiah's strongest epithets and apply them here. Out of this vast country considerably less than one-sixth part, about two-thirteenths, are all that will be saved from future famines by the only two great irrigation schemes now in progress, namely the Orissa and the Sone works. Of the Patna division, about three-fourths the size of Ireland but with a population twice and a half that of Ireland, less than one-third (south of the Ganges) will be protected by the Sone scheme, leaving more than two-thirds yet to be provided for, and of these a small matter of upwards of population than all Ireland, less than one-third will be protected by the two Gunduck schemes, of which the high-level canal is to be started. Common roads are at present the only communications of this part (North Behar).

One of the great advantages of the Sone scheme is not only that it protects a country which, though small, has a population more than that of all Ireland put together, from scarcity, so far as the rice crop is concerned, although storage of the water of minor streams is wanted for the cold-weather crops, of which more anon, that it secures intercommunication by water. All the Sone canals being connected with the Ganges, South Behar will become accessible to the river systems of Bengal, the North-Western provinces and Oude.

Meanwhile is anything being done, or proposed to be done, for poor Lower Tirhoot? In Dubhunga and N. Bhaugulpoor, the centre this year of the severest scarcity, and a pretty large centre, too, is anything being done to utilize a snow-fed river, with always a large volume of water, either for irrigation or navigation? Are there any communications but common roads? Has not the first attempt at improving the communications been the railway for transporting the government grain from the Ganges to Durbhunga? Shall I give more than three examples? Are not these three enough to show that, though "much has been done," it is as

little compared with what has to be done?

"Periodical famines ought to be made impossible." But, then, the cost, people say. Did not the famine of 1866 cost the government--though one out of three of the starving people died--upwards of two millions? The present famine where, however, nearly all have been saved, will cost at least five millions. In eight years will not Bengal thus have cost us for only two famines nearly a million a year, with scarcely any return? Would not twice these seven millions insure against future famines, according to estimate, three vast districts of the Punjab, equal to Ireland and one-fifth the wretched of Bundelkund, in the North-West provinces, three great tracts of Bengal, the Gunduck region, the Damooda and the Nuddea or Lower Ganges? Would not these fourteen millions also complete the Upper Tumbuddra works in Madras, and give tanks to the central provinces? This expenditure, and more, Lord Salisbury is advisedly anxious to incur. Would I not gladly enter here into the question of returns! But I must not presume upon your patience.

"No village in India should be difficult of access--railways, internal roads"--should you not add canal navigation?--"storage of water and well-planned irrigation may be to India trustworthy sources of incalculable wealth." They may indeed. Have we not seen how in every famine food has been more difficult to convey than to procure? Notwithstanding all that has been done, is not the country of India most imperfectly supplied with cheap means of transit? Do not the enormous distances make it imperative to reduce the cost of transit to a minimum? whereas some calculation has been made that "the cost of transit in India is actually eight times what it is in England." Do not in a poor country bulky goods of low value form the great mass of traffic? Is not water carriage generally the cheapest, the working expenses being so exceedingly small? The cost of transit generally on canals is 2/1 penny per ton per mile. If an irrigation canal connected with a Bengal river be made navigable does it not become accessible to the whole of the water system, upwards of 3000 miles already? That the Bengali is not slow to take advantage of this opportunity may be illustrated by the fact that, before the Midnapoor Canal had been open six months, native boats were plying on it from such distant places as Benares, Dacca and Patna. Is not the main feature of Bengal traffic that the boat owners are petty merchants trading on their own account, thus diffusing a wider trade more quickly than where boatmen are carriers only? The moment an article is in demand, is not the whole river plant set in motion to convey it from where it is to be had to where it is wanted? Boats, too, can stop at the exact place where there is a demand for their article and can serve as warehouses till their cargoes are discharged

As to the additional expense for making irrigation canals navigable, is it not from one-third of the whole cost, where there is a steep fall, as in the Midnapoor Canal, to one-tenth of

the whole cost, where the slopes are flattish, as in the Punjab and North-Western provinces? When we find whole kingdoms (as they would be called in Europe) of India with no other means of communication but the common country roads, which mean the worst roads, is it not wonderful that the cost of transit is not eighty times instead of eight what it is in England? For instance, in a doab almost rainless, between Indus and Chenab, camels are the only carriages except boats on the Indus. This tract, about two-fifths the size of Ireland, stands third on the list of those (of the £14,000,000) most urgently requiring irrigation, the Bundelkund being first, and the Gunduck second. If you would give us some of your inimitable sketches of the canal source of plenty, to occupy us during the holidays, we should be half way to our goal.

I have been too long already for your patience. How take up your time with telling how *storage of water* is generally supposed to be a difficult matter, involving incalculable cost? Is not the case rather the reverse?--namely that there is hardly any other country in the world which has such admirable sites for storing water in India, at a cost quite insignificant compared with its value? What gold or silver mine equals the value of the water treasure of India?

How compress into few words the explanation that some of the driest regions in the world in India have a fall of ten inches more rain in the year than England, which is a very wet climate? But half the year's supply of rain falls in that region sometimes in two nights, separated by one fortnight. But for a tank system such a country would be almost uninhabitable.

I hasten to an end. There is no time to spare in India. If only these £14,000,000 were spent on irrigation and navigation we should be saved from famine expenditure without returns but the sad returns of loss of life, our revenue would be raised by incalculable increase of produce, our intercommunications would supply, as Sir George Campbell says, the millions of one starving province from the abundance of others, at the lowest rates. NO extra taxation would be incurred; the traffic would be beyond calculation almost, but for America beyond imagination, and we should be doing our duty to one-fifth of the human race--our own fellow countrymen and countrywomen.

Florence Nightingale

1875

"How some people have lived and not died in India" a paper read at the meeting of the National Association for the Promotion of Social Science, Norwich, 1875. with an appendix on Life or Death by Irrigation, 1874. Report on Measures adopted for Sanitary Improvements in India, from June 1873 to June 1874: together with abstracts. London: Eyre & Spottiswoode 1874. 48-55

On a former occasion I ventured imperfectly --for India is immense, while a paper is small --to bring before the Association

how people have died, and not lived in India; how people may live, and not die, in India.

I used some of that great body of information brought together by the "Royal Commission on the Sanitary State of the Indian Army", which was at work during four years, 1859-1863, and was presided over, first by Sidney Herbert --whose statue still stands before the War Office as a witness in favour of progress --then by Lord Stanley, now Lord Derby.

Ten years have elapsed, during which most of the sanitary proceedings which have been initiated, and their results, have passed (on paper) through our hands. And we may now reckon up our gains.

2. I must begin by guarding myself and other. A caution. We have made an impression on the sanitary state of that vast country: but "impression," so far as this: only to show us the immense work that remains to be done; the immense success that can attend it --we cannot yet say the immense work that has been done.

But how much this is: what progress since the time we were taught to lament the "hopeless Indian climate"!

The caution is this: as in all epidemic countries, more than in most--the death-rates of the Indian Army had shown two characteristics: they fell and they varied according to the nature of the season and the prevailing "epidemic state."

(1) E.g., in past, and, alas! in present years, we can say approximately what districts will be visited by fever or by cholera in "epidemic" times: "if the drainage and water supply, and neighbouring ground are left in that bad state"--when comes the "epidemic", those dwellings may expect it. If air, earth, and water continue to be fouled, if foul damp ground be not drained, if the public ways be not better kept, when comes the "fever", when comes the "cholera," those districts will have it.

But why does not cholera come every year to those dwellings? Their state is the same. And why is fever not always in those districts? We do not know.

All we can say is, we know into what swellings cholera and fever will not come, however "epidemic" the year ; we can put towns and districts into such a state that the epidemic, like the mediaeval witch, is exorcised, so that it cannot come near them. More than this we do not know.

(2) In past years--not so long past--in a great town of England, 47 children out of every 100 used to die before they were five years old. But why those 47?

We do know how this infant mortality, or rather massacre of the innocents, can be mitigated or prevented; namely, by cleanliness of house and child, by fresh air, care as to food and clothes, whitewashing, by "minding baby" in short, and by avoiding all "soothing syrups" whatever.

But we do not know which babies will be taken and which not.

All this is pre-eminently true of India. From the great

Sunderbunds, where cholera seems to have had its birth-place, and had not been born some centuries ago [great towns, shown in old Portuguese maps, not no longer to be found, seem to attest that the Sunderbunds were not then the home and hearth of epidemics], cholera sets forth on its terrible march over Asia, so reaching Europe; but why in one year and not in another we know not.

If the Sunderbunds were drained, cultivated, and again rendered fit for human habitation, would cholera disappear?

3. Now, after this caution, to proceed: the results we find, in the last Report of the "Sanitary Commissioner with the Government of India", and in other District Reports, have been so striking, that they may be fairly accepted as showing, not that India has become "healthy forever" (the year 1871 was a non-epidemic year), but that we can grapple with- that we may one day finally subdue, if we will- spite of the bugbear "climate"- those local conditions which in former days decimated the strength of the Army, and which, unless preventable and prevented, make up a terrible prospect- that only at such a price could India be held by a British force. And this when man's life was becoming every year more valuable.

In the first part of this century the Death-rate among British troops serving in India had revolved round 69 per 1,000 per annum ; that is, 69 men out of every 1,000 died on an average every year.

The "constantly sick" in hospital amounted in old times to ten per cent of the strength ; that is, out of every 1,000 men 100 were always ill in bed.

Or, in round numbers, the whole British Army went three times into hospital every year. The Royal Commission of 1863 gave a Table showing, as they state, "that on an average in the stations of Bengal 84 men in a battalion of 1,000 were constantly in hospital, where 69 men die annually."

But men invalided "are a total loss to the service as much as the men who die :"-indeed more so, as far as the country is concerned, for they have to be supported.

And the loss by invaliding was, as may be supposed, high in proportion :-- in Bengal, as high as between 80 and 90 per 1,000 per annum, including all such casualties.

Steps had been taken before, steps were being taken during the inquiries in India of the Royal Commission, for removing some existing sanitary defects, with corresponding improvement of the health of troops.

The Report and evidence were printed, with an abstract of evidence from the Stations, by Parliament in August 1863.

In December, Sir John Lawrence was sent out as Governor-General (Lord Elgin's death impending), and almost immediately on beginning his vice-reign he formed an organisation for grappling with the evils, with this hundred-headed Hydra, in the localities themselves- in the home of the beast.

In this way of late years a vast amount of simple,

inexpensive sanitary work has been done in respect of cleansing, draining, improving the water supply. In many of the cities and towns of the North-West Provinces this cleansing, the better making and keeping of public ways, the straightening and widening of streets, are now looked after.

In the North-West Provinces and in Oudh the civil stations have been improving their drainage, and the whole subject is marching on.

In the Central Provinces, we are told, improvements of various kinds are going on.

In Berar the people are thinking about it- thinking how bad is their water-supply. One trusts that they will go farther- though thinking is a good thing- and not only think but act. In the Punjab a good deal, we are told, is being quietly done in the towns.

In Bengal Proper, where most is wanted, least seems to be doing.

Many stations all over India- e.g., Barrackpore, Umballa, Murree, Meerut- are supplying themselves with better water.

Many have had their barracks improved or reconstructed- not before it was wanted- and sometimes, it must be admitted, not in the most economical way.

Still the work has been done, and is being done, very zealously, as is shown by the Reports of Sanitary Commissioners, which give a striking instance of results to health from sanitary improvements as could well be imagined, were it even a Hercules who was working for us [these are real miracles of the present day] or as have been realised at home. And this has been done without burning down the city, which, it seems, was the only way of saving London, from another great plague.

4. And first, as regards the Death-rate of the Army: For on this subject Dr Cunningham gives some most important facts, especially as regards Bengal, formerly, as we know, the most unhealthy province- if province it can be called- a country of nearly 69,000,000, the most densely populated in the world.

Formerly the Death-rate for all India revolved round 69 per 1,000. In 1871 the Death-rate, including deaths among invalids after their arrival in England, was 18.69 per 1000. [The strength was 56,806 non-commissioned officers and men]; that is, 18 men died where 69 died before. Of the invalids sent home to England, 16.02 per 1,000 on a similar strength were discharged the service.

From these facts we arrive at this result: namely, leaving out the loss from invaliding in the old Indian Army altogether, the total loss to the present Indian Army in 1871, 18 men only by death- in India and England both- out of every 1,000 of the British Indian army; and 16 more were discharged as unfit for further service: that is, there was a saving of 51 men in every 1000 in 1871 (a healthy year), or 2,858 men in an army of 56,806 were the savings of that year: one year's results: as

compared with the average losses of old.

Let us remember, with the mercantile Briton's spirit, that every man costs with his arms 100 l. set down in India: hence 285,800 was the money savings on recruits in that year.

But what is the value of a man otherwise?

To us these are not figures, but men.

Returning to the Bengal Presidency, we find in 1871 the deaths 17.83 per 1,000, where formerly the Bengal death rate lay between 70 and 80 per 1,000, and annual losses from other casualties actually rose to between 80 and 90 per 1,000. In other words, 17 men only die instead of 70.

A few results for 1871, from different groups of formerly most unhealthy Bengal stations, tend to show that improvement in health is going on; thus:

In Bengal Proper the death-rate for the ten years preceding 1870, including a time of sanitary improvement, was 29.5 per 1,000; and the daily sick nearly 7 per cent., or 70 per 1,000. In 1871 the death-rate was 18.72 per 1,000, and the daily sick-rate 5 per cent., or 50 per 1,000.

Let us here add, that in round numbers the whole Indian Army went once-an-a-half times into hospital, and about 5.5 per cent. of the force was always in hospital, during the year 1871, instead of nearly double the number.

We all remember the frightful sickness and mortality of Fort William. Its sick-rate continues rather high, but its death-rate in 1871 was only 10 per 1,000 less than a tenth part of its former death-rate: and 2.5 per 1,000 less than the death-rate of 1870.

In Oudh the death-rate from 1860 to 1869 was 28.5 per 1,000. In 1871 it was under 23. The constantly sick had also fallen from 69 to 61 per 1,000.

At Cawnpore much has been done to improve the site, and the station shows a death-rate of only 13; while Benares and Allahabad, in which less has been done, and Dinapore, in which we do not hear of much done, show quire double the rate of death.

Meerut and Rohilcund, in the ten years before 1870, were sick at the rate of 72 per 1,000, and sick unto death at the rate of 26.5 per 1,000. In 1870 these fell to 69 and 18.5 respectively; and in 1871 to 65 and 16.5. But in this group Roorkee, which has always distinguished itself, and Moradabad died at the rate of only 8 and 5.5.

In Agra and Central India, for the ten years before 1870, the sick-rate was 74, and the death-rate 38.5 per 1,000. In 1870, thought the sick rate was 77, of these there died only 22 per 1,000; and in 1871 there were sick only 4, and there died under 18.5 per 1,000.

In the Punjaub, there has been apparently some progress in improving the heavy sick-list. The ten year period shows sick at the rate of 56, and dead at 35; but 1870 gives daily sick at 69, and deaths at under 24.5 per 1,000; and 1871, sick at 54, and

dead at little more than 18 per 1,000.

Now the Hill stations come in. During the ten years before 1870 the daily sick were 49, and the dead nearly 15 per 1,000. In 1870 the sick were 40, and the dead 11. In 1871, 48 and 9. But at one Hill station, Raneeekhet, the death-rate was as high as 24; while at another, Chukrata, it was under 6.5; and a Dugshai 5.5.

Now for the convalescent depots: These gave a death-rate of nearly 31 per 1,000, during the ten-year period; for the men seem to have died rather than convalesced- whereas in 1870 it was little over 22.5, and in 1871 under 13 per 1,000.

The Army Sanitary Commission concludes its notice of this part of Dr Cuninghams' statistics by 'congratulation at the improvements already effected in the sanitary condition of stations and troops serving in the Bengal Presidency; 'especially, it says, when the former history of the old Bengal European Army is considered, with its annual death-rate ' of from 70 to 80 per 1,000;' and 'its annual losses from other casualties of between 80 and 90 per 1,000'. But it warns us not to delay measures for making the statistics of 1871- 'an avowedly healthy year'- the real representative statistics of every year in India.

For it must not be assumed that the work of improvement is done. Far from it.

The general result only indicates progress towards realization: not realization.

As yet what is BEING done is all we have to show.

The Royal Commission pointed out that the death-rate, when we have prevented preventable diseases, ought not to be more than ten in the thousand.

The importance of the present results consists in showing that India is not necessarily fatal to European lives, and that the Government of India, the India Office at home, and the British public, have not only a common interest in the results already attained, but that they have a right to expect, and do expect, that their officers' hands shall not be stayed in this good work; that they shall be assisted in every possible way. Expense has been incurred-somewhat more perhaps in certain directions that was necessary. But has there been no gain?

It has been shown that we are in the way of regaining every year a large part of the outlay.

5. Had time permitted, some account should have been given of the success of sanitary work in India in cities, and even in country districts.

But we must be content with a few illustrations.

Ten years ago I reported to the Royal Commission that no one of those three large and populous cities- seats of Presidencies- Calcutta, Bombay, Madras- had as yet arrived at the degree of civilisation in their sanitary arrangements at which the worst parts of our worst towns had arrived before

sanitary reform sprang up in England at all.

Yet all the fault of the inevitable results was laid to the 'climate'.

Bombay, the second city of our Empire, had, it is true, a better water-supply, but no drainage.

Calcutta was being drained, but had no water supply.

Two of the seats of Government had thus each one-half of a sanitary improvement, which halves ought never to be separated.

Madras had neither.

This was ten year ago.

Now (and I cannot but name the name of the Calcutta municipality engineer, Mr Clark, with this great improvement- let us give him a cheer), Calcutta has its water-supply complete: all classes, all castes, use it; and find, indeed, the fabled virtues of the Ganges in the pure water tap.

Draining had been going on, subsoil and surface: the subsoil water-level effectually lowered; and not only this, but a fine current of water runs through the subsoil from the river on one side to drainage out-lets on the other, carrying with it old sewage out of the subsoil. The main drainage of most of the town is complete, and native owners of houses are already applying for private drainage- a fact of great importance.

Still there remain to be provided for- to make the Sewerage perfect- connections between the main sewers and the houses (and especially in large districts of the poorer population, and in the Bustees- 'temporary' villages, of mat and thatch and mud).

Many miles of ditches have been filled up, to the great detriment of mosquitoes and great comfort of the inhabitants.

Then, also, the sewage is being applied to agriculture.

And what has been the result of all this sanitary engineering?

From 1866, when the deaths from cholera in Calcutta were little short of 7,000 they have decreased to 800 in 1871, the lowest number of deaths on record. Calcutta in 1871 was more salubrious than Manchester or Liverpool, and may be considered soon a sanitarium compared with Vienna, or even with Berlin, where the city canals are still fouled with sewage.

Still we must not 'sing before we are out of the wood'. Much, as Mr Clark and Sir George Campbell would tell us, remains to be done.

And before the inhabitants of Calcutta can hope to be free from finding themselves any morning in the claws of some epidemic disease, they must have done a great deal more to the houses of the people, crowded as they are on small unhealthy space, and to the undrained districts surrounding, and especially below Calcutta.

Caste prejudices have been alleged as insuperable stumbling-blocks in the way to sanitary improvement, but a curious and cheerful instance of caste prejudice being overcome is this: when the water-supply was first introduced into

Calcutta, the high-caste Hindoos' still desired their water-carriers to bring them the sacred water from the river; but these functionaries, finding it much easier to take the water from the new taps, just rubbed in a little (vulgar, not sacred) mud, and presented it as Ganges water.

When at last the healthy fraud was discovered, public opinion, founded on experience, had already gone too far to return to dirty water. And the new water-supply was, at public meetings, adjudged to be theologically as well as physically safe.

Besides its water-supply, then, the drainage of Calcutta bids fair to be a wonder of the world, when we remember what has been loudly said, even in this our day, that Calcutta at least was hopeless, because it lies close to the level of the river; and its public health has equally defied the prophets of irremediable evil, and will yet improve still further its powers of defiance, while the active- not prophets of evil, but performers of good-- Mr Clark, and the energetic Lieut.-Governor of Bengal, and other such authorities live.

Now for Bombay - Bombay, hitherto the pioneer: Bombay the active, not to say restless, the energetic Bombay. Bombay has for years done everything to drain itself, except doing it: it has had the best engineer, Major H. Tulloch, to look at it, to plan for it; it has had surveys, plans, reports, paper, and print enough to drain all India- writing and talking enough for a thousand years. The only thing it has not done is to do it.

In the meantime it has had to thank its able Dr Hewlett, the most vigorous of health officers- now alas! No longer at that post- for having, at quite incredible cost of time and energy, in organizing, personally superintending, and being as it were the constantly present head of an immense and most expensive system of hand-labour, saved them from cholera epidemics, and done that for them, single-handed, or rather single-headed, which should have been better and more cheaply done by the civilised hand of engineering and machinery. He has been a sanitarily engineered city in himself- his own Reports are his best witnesses.

As for the water-supply, much the same may be said. The increased water-supply, needed by the city is still on paper, some small portion only having been obtained.

And what has Madras done- Madras which had neither- neither water-supply nor drainage?

Madras has obtained a water-supply, and has just improved it, and is applying part of her sewage to agriculture with success. In other respects she appears to be pretty much as she was, with her filthy Cooum estuary, and her foul, undrained area.

She has recently had the census taken, with the advantage of discovering that Madras is a very unhealthy city.

6. These illustrations would be incomplete if taken only from the large cities. Here, however, are a few experimental results described by the Sanitary Commissioner for Madras in his

report on cholera of 1870. Cuddalore town had forty-two deaths from cholera out of a population of 28,421. Cuddalore jail with 301 prisoners escaped. The jail had those two indispensable requisites- good water and perfect cleanliness- which were absent in the town. Madura town contains 39,872 people, of whom 376 died of cholera, which, on arriving there, found bad conservancy, foul privy arrangements, foul subsoil, contaminated water. There are two jails at Madura, one old, the other new. The old jail had bad water and other insanitary conditions, and lost four out of fifty prisoners by cholera. The new jail contained 180 prisoners; these were the only persons not exposed to sanitary defects, and they all escaped cholera.

Rajahmundry town, where the population live under the usual Indian insanitary conditions, lost 147 people from cholera out of a population of 17,498. The district jail, situated within the town, and under similar conditions, lost 16 prisoners out of 89 by cholera. The new central jail, where the sanitary conditions were good, had not a single case of cholera among 845 prisoners, although the disease prevailed 'violently in all the country round'.

Vellore town lost 67 people out of 30,529 from cholera. It has two jails, one old, the other new. The sanitary condition of the old jail was rigidly attended to, and there was no cholera among its 152 prisoners. The new jail had 576 prisoners, but no cholera. It occupies a healthy site, and its sanitary arrangements were good.

More sanitary experiments of this kind could be cited, but here is one of special interest regarding villages:

Mr Kearns, a Church Missionary in Southern India, states that on his arrival at Puthian Puttur, in 1856, few villages had suffered more from cholera and fever. The place was wretched and foul, and had bad water. To remedy this state of things, wells were dug and properly protected; surface drainage was improved, rigid cleanliness enforced, trees planted, and other improvements introduced. Similar improvements were carried out in other villages. And they escaped cholera.

It is worthy of remark that the facts were brought out, in reply to a statement made by the Madras Government, that this village was exempt from cholera, 'cause unknown'. Mr Kearns replied to this by showing that he was perfectly well aware of the 'cause'. Quite recently, improvements of a similar kind, including reconstruction of houses, in the foulest and most unwholesome parts of the city of Madras, have been attended not only by an enormous diminution in the district death-rate, but the people have improved in civilization as well as in health.

7. But on more word about country districts.

And let us remember that Bengal is the most thickly populated country in the world- a country of villages.

Till country drainage is introduced, till agriculture is improved, till irrigation and drainage are combined- both better

when together, the first dangerous when apart- no great improvement in health, civilization, or vigour of the people can be expected.

The 'drain' in another sense, the drain upon human life and happiness, of fever in India is literally untold. But as far as can be told- in 1871, a peculiarly healthy year, about one-an-a-half millions of people died in India from fever, or nearly 12 in every 1,000, or 23 times as many as cholera destroyed.

But this is a mere trifle compared with the ravage fever commits in sapping the strength and vigour of the country, in making the young old, the healthy infirm for life, the industrious helpless invalids, the rich poor, the thriving country a waste.

The deaths must first be multiplied by 50 or 60 to give us the attacks.

Then, a man who has once had a bad attack of malaria has it for life.

And almost all this fever is malarial.

Cholera destroys life, but does no more.

Fever destroys the life of the country; saps the world in which it is.

Look at the Burdwan fever; look at the Dengue fever.

'Dengue' is rarely fatal, but in its districts 'Dengue' is master, and 60 or 70 out of every 100 are 'down' with it!

Irrigation is essential in many parts of India, but irrigation with stagnant water is almost as injurious to crops as to health. Irrigation should be accompanied by improving the natural drainages of the country, so as to keep the water moving, however slowly.

Let me tell a curious history told me by one of the members of the first Bengal Sanitary Commission. In 1857 nine miles of country, with twenty-five villages, were laid waste by fever; death came sometimes in three hours; of 600 in a village only a few in the center houses lived. All the others died or fled. All the other houses were unroofed and tenant-less. In the other villages nothing was left but pariah dogs. The crops were uncut. The dead lay about in the hollows, unburied and unburnt, for there was nobody left to bury them.

Where the people did live they degenerated mentally and physically.

The cause of all this was a screw turned by a coolie, which flooded the low lands from the Ganges canal faster than the water could be carried off. The man at the screw (at four rupees a month) ruled the destinies of a large population, not only as to health and life, but as to soul and mind, according as the screw turned to the right or to the left.

This, the cause, was found out- only a few months before my informant gave me the account, through an inquiry made by Sir John Lawrence.

And all the time the people were going on degenerating, except those who were dead.

This melancholy history is given here (merely as an illustration; did time permit, hundreds such might be told), not for our discouragement, but for our encouragement; not because it is so hopeless, but because it is so hopeful. If the screw turned too much brings fever, the screw turned just right brings plenty and health.

Let the people only see how much they can do for themselves in improving their surface drainage, in keeping their water supply free from pollution, in cleansing inside and out.

Let the Government see how much they can do for the people in introducing and stimulating better agriculture; irrigation, combined with drainage works in water-logged districts; for the two must never be separated there.

There is not a country in the world for which so much might be done as for India.

There is not a country in the world for which there is so much hope.

Only let us do it.

8. Unfortunately there is one disease-cause in the British Army quite beyond the influence of engineering works, for every man is his own disease-cause, and must be his own remedy.

And this is: drink.

The quart of porter and quarter of a pint of spirit per day are still procurable at the canteen, and as much more as the men like (and as will destroy them) at the bazaar- and will always send to the graveyard and invaliding depot a large number of men every year, until they are made to understand their own interest, and are furnished with employment.

9. I might have ended here by repeating the caution with which I began: not to stay our hand, because the year 1871 gave a death-rate of only 18 per 1,000; but the experience of 1872, minus the superadded epidemic death-rate, was as low as that of 1871. But cholera intervened, and raised the death-rate materially in Bengal, though very little in Bombay and Madras.

This is no reason for discouragement, but the reverse.

It is not a defeat, but an attempt of the enemy to turn our flank.

We know enough of his strength and his arms to turn the check into a victory, if we are only wise.

But is not the following an example of action quite other than wise?

The report by the 'Sanitary Commissioner with the Government of India' on this same cholera of 1872 tells that people have been trusting much to quarantine for safety, and that quarantine has been fully tried, with results such as the following: 'In a question so intimately connected with the happiness of the human race, it cannot be too widely known that quarantine was tried in

the hope of protecting a number of the cantonments of Upper India; that in many of them it signally failed, and that in no single instance is there the smallest reason to believe that it was productive of any good. The direct evils of quarantine are great enough, but... By no means the least indirect evil is this, that so long as men believe that they can escape from cholera by such means, they will never be fully alive to the importance of the greatest safeguard, sanitary improvements.' Forced removals of sick, especially of women, for quarantine purposes, and other restrictions 'set the people against everything that is done under the plea of the public health', and the sanitary reformer is regarded 'as the greatest destroyer of their domestic comfort and happiness.'

As a consequence, cholera cases were concealed.

The troops also had to bear their share of this medieval infliction. The evils are described as 'very great'. 'The troops are exposed to form cordons at the very time that exposure, and especially exposure to the night-air, is calculated to prove most mischievous'. Tow stations, Meean Meer and Umballa, appear to have suffered from this. Both supplied complete cordons, and both suffered severely from cholera. No better reductio ad absurdum of the whole practice could be given than the fact that the fear of spreading cholera interfered with the more decisive moves of troops which were their best chance of safety from cholera.

And then, to crown the whole, there does not appear to have been a single instance in which quarantine could be rigidly enforced. The government of the Punjab has taken the common-sense course of prohibiting quarantine except by special orders; and in the case of organised bands of pilgrims.

Sanitary reformers, like other reformers, have more to fear from their friends than their enemies.

Da chi non mi fido, mi guardero io,

Da chi mi fido, mi guardi Iddio.

But we must stop; only, however, to bear emphatic witness how great are the sanitary deeds already achieved, or in the course of being achieved, by the gallant Anglo-Indian, as formerly we bore emphatic witness against the then existing neglects.

Let but the Government of India continue to sustain the energetic efforts of their officers, and at the same time insist on the municipalities and local authorities prosecuting the good work. This was of importance for the Central Government to do ten years ago, seeing that there was no local self-government at all; it is, if possible, of still more importance now, when there is some local self-government; but I want guidance: which does not mean that the Governor is to do municipality himself, even though a very good municipality he would make.

The natives are always ready to be taxed, as far as obtaining, at least, a purer and more plentiful water-supply

goes. There is never any 'discontent' about this. What they do not like is paying the tax and receiving no water; and in this they are not so far wrong.

The lieutenant-governor of Bengal has invited, by proclamation, the prayers of some of his rates [this as regards roads] to claim the benefits (or their share of them) of what they pay for.

Thus it will be rendered not only an easy matter to hold the great Indian Empire by a British force, But benefits untold will be conferred on the vast populations of our fellow subjects of whom we have undertaken the charge.

1877

"Irrigation and Water Transit in India." A letter (dated 29 June 1877) to the Editor of *The Illustrated London News* 71 (7 July 1877): 22-23; also published as appendix to "The Madras Famine" with other papers, by Sir A. Cotton. London: Simpkin, Marshall 1877: 25-30. Also in "Reply to the Report of the Committee of the House of Commons in Indian Public Works and other papers, including a letter by Miss Florence Nightingale," by Sir Arthur Cotton. Dorking: R.J. Clark, Printer, 1880: 25-30

Abridged in "The Great Lesson of the Indian Famine" with appendix, containing letters from lieutenant-general Sir Arthur Cotton, Miss Florence Nightingale, etc. By a journalist. London, Paris and New York: Cassel, Petter & Galpin 1877: vii-x [9:761-68]

Sir

You were so good as to admit a letter from me once [in 1874] on that subject of vital-I should say mortal-importance in India, "Irrigation and Water Carriage." The frightful famine in Madras recalls us all to it. When the government is obliged to feed one million and a half of our fellow subjects-when these have been perishing, in spite of us, at the rate of 930 per 1000 in the relief camps-when nearly half the population of villages have died in a month of "famine cholera"-when men were not put on the relief works till they were too far reduced by starvation to do any real work-when their bullocks were all dead, so that their very means for raising the next crop were gone-we are fain to ask, What has irrigation done for the Madras presidency?

This question a report just issued by the Madras Irrigation and Canal Company, dated 8 May 1877, received at the India Office 19 June, answers for us, at least as to one district.

But first let us observe that there are at this time four districts which ought to have been, like the other twelve, overwhelmed by this terrible calamity, but three of which are not only entirely free from famine themselves, but are in the highest state of prosperity, having a large surplus to supply the famine districts, and the fourth, though not entirely relieved from famine, yet has a very considerable supply of grain.

What has made the difference between these three districts

and those which are under the dreadful sufferings of famine? The government irrigation works. The three districts of Tanjore, Godavari and Kistna, instead of adding five millions more to starve, are pouring into the starving districts hundreds of thousands of tons of food. Sir Arthur Cotton, the great master of the irrigation art, twenty-six years in charge of the public works in those very districts, which are, in the heart of famine, supplying food, could tell us more about this.

It was the same in the Bihar famine. The Son works, while they were yet unfit to be opened, were made to water 160,000 acres, producing a crop worth £500,000 in the midst of dearth. The whole cost of the works was actually saved by a single crop, and thousands of people saved from death.

But to return to the fourth of the Madras districts referred to: This is Kurnool, N.W. of Madras, in the very depths of the peninsula. This is the district watered by the Madras Irrigation Company, from the Tumbuddra River. The works have cost £1,600,000 and are capable of watering 400,000 acres for two crops, or at the rate of £2 per acre of crop. Then also the navigation would afford carriage at a nominal cost. The main canal alone, from Kurnool to Cuddapah, is 190 miles in length. The officers are to sell the water at the price of twelve shillings an acre, worth to the purchaser £2.

A missionary in the Godavari district told Sir Arthur Cotton that scores of times the people had gratefully said to him: "We never got the Godavari water on our lands till you Christians came here. Truly, the greatest Raj is the English."

In Kurnool last year, however, as indeed before, the water was refused by the people during the main cultivating season, but when the pressure of the famine began to be felt, they forgot all their difficulties and asked urgently for water. By this time the supply was already beginning to be deficient, so that the canal could not be kept full. Nevertheless, let us see what was done by these works. I quote from the report above mentioned:

The total area that has been supplied with water is 91,000 acres. In addition to the satisfactory revenue thus realized by the company, the food crops raised by the canal have contributed materially to mitigate, in the districts of Kurnool and Cuddapah, the effects of the terrible calamity of drought to which these and other districts of Southern India have been and still are exposed. The money value given in the following statement of the grain grown under the canal is £940,000, none of which could have existed except for the irrigation supplied.

The works having cost £1,600,000, two thirds of the cost have thus been saved by a single partial crop. The report then goes on to complain of their being prevented from using the canal for navigation owing to the delays in the proceedings of government, showing how "the value of the canal, if it had been used for boats, would have been considerable. The cartage of rice

from the Gooty Railway station to Kurnool is 5d. per ton per mile, or £1 6s. per ton. But that from Cuddapah to Nundial is 7d. per ton per mile, or £2 3s. per ton for the whole distance. The rate by the canal, even at 1½d. a mile, would be 10s. (ten shillings). *The want of any better outlet for canal produce has been a bar to the spread of irrigation under the canal.*"

Yet this canal produce might have been placed in direct communication with the market of Madras and with all the markets of the world at a nominal cost of internal carriage. The canal now extending to Cuddapah, 190 miles, ends there. The North Coast Canal from Madras extends to Nellore, 110 miles, and the interval between this and Cuddapah is 80 miles. This work has been estimated for, but still remains unexecuted. Had it been executed there would have been a perfect communication between the great irrigated deltas of the Godavari, etc., and the inland districts which are in this terrible condition.

The extension of the North Coast Canal to the Kistna is an immense point gained. The duke of Buckingham is cutting also the short line of canal through Madras to connect the South Coast Canal with the North Coast Canal.

Let us resume our extracts from this important report. "October 1876. Throughout the month not a drop of water has been allowed to run to waste down the Pennair," that is, the whole of it has been used for irrigation. "In another fortnight or so all the accessible dry land for which water is desired will have had a first flooding." Again: "Applications for water have been very numerous, and from all sorts of places, *far beyond the reach of canal water....* We are also much hindered by the quarrelling among the ryots themselves as to who shall first have the water."

In November, it is reported:

The most bigoted of the old ryots are now quarrelling and fighting for the water. The old prejudice is entirely broken down, and, as a Curnam expressed it, 'They (the ryots) have come to their senses about the water.'... *The sight of the country commanded by the canal is truly refreshing.* In one village above Canalla I rode through tall cholam fields for a mile or two. There more than three square miles of land were saved from utter drought, and about 300 acres of rice were just ripening. It is very sad to compare this with the rest of the district, where utter failure has occurred, and I regret to say cholera is rapidly increasing."

How we wish that *The Illustrated London News* would give us two of its admirable views—first of the desert, and then of the irrigated land, often seen side by side! Misery and plenty, starvation and comfort.

Again: "All the crops are reported in good condition, both dry and wet. The former, sown under the canal, are acknowledged by the ryots themselves to be in as fine and healthy condition as any crops they have ever sown.... Of the thirteen government tanks commanded by the canal, five were filled before the end of

the month, and the remainder will be filled before the middle of next month."

For December, the chief engineer reports in January 1877: The result of my calculation is: In Cuddapah district, 19,050,000 lbs. food grain. In Kurnool district, 65,240,000 lbs. food grain. *Enough to feed the whole district of a million inhabitants for two months*, and probably the straw will be enough to maintain all the cattle not yet perished in the villages under the canal. In this calculation vegetables are not reckoned as being any substitute for food grain, whereas they do, in fact, often save grain-e.g., sweet potatoes, crinjals [rice variety], pumpkins, etc. This grain, at present prices, is worth £700,000; and, if the value of vegetables, indigo, cotton and straw be added, the actual value of the crop created by the canal cannot be more nearly estimated than as one million sterling. But its value in helping the district to tide over the critical month of May, and in supplying village wells with good water, can only be poorly represented by such an estimate. The actual saving to government by the provision in the least accessible parts of the district of such a food supply, which would otherwise have had to be bought, is about £500,000.

The government are now feeding at imperial expense a third of the population of Kurnool district. This could scarcely have happened had the ryots not sacrificed the whole of the first crop, which the canal might have matured by irrigating their fields and filling their tanks. This infatuation, fortunately, did not extend to the second crop, about a quarter of which will have been reared *under the already failing water supply of the Tumbuddra*.

Again: "It is probable that the ryots, under the canal, will save most of their cattle and thus be able to resume their work on the first appearance of rain. Elsewhere in the district, it is probable that much land will be idle, as nearly all the cattle will be dead. The sale of bullocks in Kurnool has been so great that the coolies find it cheaper to buy meat than grain, a bullock selling for three rupee."

Again: "The villagers under the canal may be considered to be in a very prosperous condition, the crops being very good indeed."

In January of this year "the overseer reports that the white cholum sown in Pratakota is magnificent.... I have never seen finer fields of this dry crop than those of Banakercherla and Vempeuta [Vempalle?]. The ears were so full and the plants so thickly grown that they were touching one another."

Again: "The average yield per acre of paddy is two putties [cloth bags?], which is above that of the preceding season. This putty has been recently sold at forty-eight rupees. The straw is almost half as valuable as the grain." Thus the whole value of

the crop is about 140 rupees, while the charge for water is six rupees, and the total cost of the works is only £3 per acre.

In February it is reported, "The wet crops, more particularly in the Cuddapah and Proddatur talooks [districts, estates], are the finest that have been reaped."

In March it is

estimated that nearly seventy million pounds of food grain have been grown under the canal in three talooks. This is sufficient to preserve one quarter of the population of the Kurnool district for six months, and to feed more than 8000 pair of bullocks. There can be no doubt that, if the water were properly and timely taken, and with the same eagerness that was displayed this season, when it was too late, the grain grown under the canal in the Kurnool district would feed the whole population (amounting to nearly a million) for twelve months, even if no crops were raised except from canal irrigation.

Again, in March:

There is little doubt that the canal water affects the health of the people considerably. When procurable, canal water is always preferred to well water, some villagers are in the habit of going a distance of two miles for it. While in camp I was unable to find a well in any village containing water fit to drink. In one place, though greatly in need of a draught of water, I was compelled to abstain from drinking any of the water of three wells, as the taste was filthy.

Thus far our quotations. Have these things no bearing upon the famine?

As regards canal transit, grain can be carried by water at one twentieth of the cost of carriage by railway, which, besides, cannot produce one pound of food either for man or beast. Had the millions that this famine will cost been spent in irrigation and navigation, the whole of these provinces would have been secured forever from famine and from ten to twenty millions added to the income of the people.

Further, had the necessary preparations been made when the famine had become certain, the link of the canal might have been cut from Nellore to Cuddapah, and the districts of Bellary, Kurnool and Cuddapah have been put in direct communication with Madras, and with Godavari and Kistna. Thus the famine would have been turned into a blessing, and an annual benefit derived to the country far beyond the interest of ten millions.

The extension of the Coast Canal from Nellore to the Kistna has at last been undertaken; by the latest accounts 50,000 people were employed upon it, and it was expected to be finished next month. If this is accomplished, putting Madras in communication with those great deltas and with the *coal tracts* of Godavari, it is quite certain that far more will be gained even from this small work than the interest of ten millions. It will complete

one line of transit of 550 miles from Madras to the second barrier of the Godavari, and will connect altogether 1200 miles of navigation with that city.

Sir Arthur Cotton has repeatedly pressed upon the authorities, both in India and at home, the necessity of providing for these famines, whenever the failure of the monsoon made such a calamity certain, by marking out an important work of irrigation or navigation, erecting shelter, and collecting food and tools beforehand—so that, as soon as the pressure of the famine is felt, well-organized parties may be set to work at once, and before they are reduced to a state unfit for work. Now, their ribs must show the signal for them to be on the relief works.

There is always time for this, but it has never been done. The consequence is, almost the whole of the money expended is lost. Whereas a famine is, in fact, the opportunity of executing in a single season important works to raise India forever out of its present poverty. Hitherto, without exception, not a finger has been moved till the people were actually dying, and then it was too late to organize works effectually. What might not the millions that the last two famines will have cost have done to make famine impossible?

In Mr Monier Williams's (Sir Monier Williams, 1819-99) letter to the *Times* from Madurai 28 December, he says: "All the belts of land reached by the grand system of irrigation which stretches between the Godavari, Kistna and Kaveri rivers—fertilizing the soil wherever it penetrates, and forcing even haters of the English rule to admit that no other raj has ever conferred on India such benefits—present a marvellous contrast to the immense tracts of arid waste which meet the eye of the traveller as he journeys by the Great Indian Peninsula, Madras and South India Railways."

Here are two subjects for *The Illustrated London News*. "Look here upon this picture, and on this."

Had half a million more acres been irrigated in each of these districts, and had they been put in effective communication with the rest of India by steam-boat canals, which would have admitted of all India being laid under contribution for food, the famine would have been nothing comparatively. And had the comparative few who would then have had to be fed been employed on further great works, the famine would have been a source of plenty.

"General Strachey said, on 18 May, at the Royal Institution: "We must be content to pass through a condition of periodical suffering of an acute kind, during which... ways of escape from these evils will be gradually perfected. These ways of escape are, indeed, already sufficiently evident, and, so far as they have been hitherto applied, have been found to be thoroughly efficacious. They are the provision of artificial irrigation and of improved means of transport."... And he has "passed a large

part of his life in seeking for the means of extending those essential material allies in the battle of Indian life."

As regards Bengal, an act is being prepared for a compulsory water rate in Bengal, which, though stopped at present, will be carried through, if possible. It is estimated that the landowners benefit to the extent of two rupees an acre from the irrigation works, even when they do not use the water, through the embanking of the rivers, the drainage of the land, etc. If they pay those two rupees, then they will have the water for nothing.

In the Godavari and Tanjore, where the Tamil and Telugu people had sense enough to know their own interests, it was sufficient to give them the water, and they took and used it. But where the people are as stupid as some people in England who would not have factory laws, there is nothing for it but to make them have them. We see what the famine has done under the Tumbuddra in forcing the poor people there to benefit themselves. Why should we wait for a famine to do this?

It is estimated that the lands in Orissa have actually increased in value three or fourfold since the irrigation works without the water being used, the zamindars thus receiving the whole of the present profits of the works, while the government have had the whole of the expense.

This year, as has been said, a crop in Kurnool is worth 140 rupees, or twenty-four years of their water rate.

If all England could set her face against the Suez Canal we must not be surprised that there are other people almost as stolid. Another nation [France] had to cut the Suez Canal for us, and thus force upon us such an incalculable benefit. In England and Bengal you must take men as you find them, and force blessings upon them.

So we thank God and take courage. We are really gaining ground.

1878

"The United Empire and the Indian Peasant." In *Journal of the National Indian Association. In Aid of Social Progress in India*. No. 90 (June 1878):232-45 [10:487-99]

7 May 1878

A terrible famine not yet over: in Madras and Mysore out of 35 millions of people at least three millions dead of starvation [in] spite of all the government and the "Mansion House Fund" have done; in northern India looming upon us too, if not already here. For instance, in Oudh, Rohilcund and the North West Provinces there is severe suffering, if not actual famine. English soldiers marching through Rohilcund to Lucknow, collecting among themselves their little all, buy up all the food they can and distribute to the famishing people--it is but a drop in the sea.

Not however do these scourges fall upon us only from great droughts. In whole regions of the Deccan, of Madras, in some

parts of Bengal, in other parts of India, a peasantry always in a chronic state of semi-starvation, always on the brink of famine fever, is to be found.

In Madras and Mysore the personal property of all kinds, of many millions of cultivators, is worth about 9s per head--half the "value of a Leicester ram's fleece" (according to Mr R.H. Elliot). In the Deccan land is going out of cultivation. And why have these, the most frugal and industrious of people, no personal property? Because, after having fed themselves and their families on the poorest of food there is hardly anything left. What is their food? What are their luxuries?

In Madras four fifths of the cultivation are of the coarser grains. Luxuries are unknown. Tea, tobacco and liquor as a beverage are never heard of. The wants of life are reduced to the lowest scale. "The common people who find it hard to live when bread is cheap feel themselves about to die when bread is dear."

In Bombay and Madras, including the Deccan, the ryots cultivate their own land. The state is the landlord. In Bengal the landlords are the zemindars. What is the state of the ryots there? A whole family fed and clothed on 8s or 10s or 12s a month. Food of a labourer and his family in whole tracts, one meal a day only, and that a little rice, with what is called vegetable curry (a little oil and potherbs). This is the ordinary daily food. (It is true that, in districts and castes which are very particular about cooking, and consequently cannot spare the time to do it more than once a day, the one cooked meal a day is found among many of the better castes of Hindus, who eat a little dry parched grain at other meals. The Bengalis are not so particular, and in good times ought to have two or three cooked meals of rice and *dhal*.) "Milk we can never look at." *Dhal* is too dear. Drinking water in the dry season often has to be collected out of filthy puddles. Fish curry or vegetables are added by those who are "better to do." But the salt tax makes salt--a necessary of life to vegetable eaters even more than to us--so dear that imperfectly cured fish is sometimes the cause of disease. Fish is wasted for want of cheap salt.

You cannot compare, it is said, on account of differing climates, the Hindu's wants with the English labourer's, far less with the English navvy's. No, but with the Hindu sepoy's you can, and this is what the Hindu sepoy needs daily to keep him in health on duty: 2 lbs of wheat, $\frac{1}{4}$ lb of peas, $\frac{1}{4}$ lb of vegetables, 2 oz clarified butter, $\frac{1}{2}$ oz salt and pepper, with an occasional pint of milk.

Compare this with the Bengal labourer's diet. And these among the most hardworking people of the earth! The Hindu peasant is, like the French peasant, a born hoarder, but often he has nothing to hoard. Pre-eminently a lover of his family--no Poor Law among them--each supports his own people, old and young. Nay, boys and girls undertake this duty, not only for their own smaller brothers and sisters, but for orphan babies of others.

In the Madras famine little boys and girls of seven to ten or twelve years bring--sometimes carrying great distances in their poor thin arms--little naked living skeletons of two to four years to government "relief centres," feeding these babies with the daily dole, asking for nothing for themselves, day after day for weeks, till the little foster mothers themselves sink fainting at the gates. Or sometimes they bring the starving babies to the missionaries, till the mission houses can take no more. The missionaries and their wives with bleeding hearts see their own scholars lying starved to death by the wayside.

Great things are done in feeding the people by their own rich men in Madras. There is no space here to tell of these. If there is one thing proved by the Madras famine relief it is that the people are the farthest from pauperization that can well be, sometimes preferring even death to relief--whether from "caste" feelings or not, cannot here be entered into.

All over India less pauperism and fewer beggars, other than religious, than in most European countries. And yet there is no Poor Law. A thrift, a self-denial, a "political economy," so to speak--but the very reverse of our political economy--unknown to any Western nation; e.g., in many a village extraordinary self-control was shown by Madras farmers in keeping the secret of hoarded pits of grain, hoarded for seed corn, but also for another year of famine--a secret which needs must have been known to many in each village--and not selling at the time of highest prices.

To ask some questions about the Indian cultivator--so incomprehensible to us--the poorest in the world, and in some places getting poorer every year, the most industrious in the world, the most heroic, the most secretive and false; questions about indebtedness to money lenders, so that a full crop, if the cultivator has one, merely means so much in the money lender's pocket; questions about slavery to the zemindars (in the permanently settled regions, like Bengal), worse than American slavery before the Civil War, almost as bad as Bulgarian slavery to Turks; questions about irrigation, so vitally, so mortally needed: these are the subjects, heart stirring enough in themselves, which might stir all England.

1. First question: How to help the ryots, especially in southern India, to seek *help* and not slavery at the hands of the money lender, that useful and necessary member of Indian agricultural life? Otherwise, give the ryot water and the profit will all go into the money lender's pocket. We see ancestral lands passing into the money lender's hands, the ryot becoming not metaphorically but in some cases literally and legally the money lender's slave--the money lender having every legal help to possess himself of the land and to make the ryot his slave.

Such was the state of things in the Bombay Deccan that a commission of inquiry was sent to report upon it. And what does it report? Law giving the creditor all power to imprison the

agricultural debtor, every legal engine that can drive to ruin the indebted cultivator; this power and this engine used, not only to strip the debtor and his family of everything, down to the miserable clothes on their backs, but to strip him again and again, for he cannot even become insolvent, as often as he scrapes together another rupee; and in one case, at least, to strip him, his wife and daughter of honour, sacrificed to save him from a debtor's prison.

Terrible material for tragic romance among these poor Deccan ryots, even in the dry bulk of an official report. But I am not here to write a romance: a few bare facts without their startling and loathsome details out of the myriad facts of the commission's report are enough. Well may it add in words startling enough in themselves: "When we compare the law of India with that of other countries, we find that not one is so oppressive in this respect, not even the law of Moses, which allowed the debtor a discharge after serving seven years." It is the government commission which says this. It is true that by the new civil procedure code, which has already come into force, the cultivator's cattle and farm implements will be saved from seizure.

If again we ask, does the money lender, when he sells up the cultivator and gets possession of the cultivator's lands, perhaps at less than one tenth of their value, at least invest capital in the land, adopt the best methods of cultivation, make improvements (as the squatter does in Australia), sink wells, repair tanks, turn "dry" into "wet" crops, and generally raise the value of the land, the standard of cultivation and of the cultivator's comfort? So would the transfer of land into the hands of monied classes and better farmers greatly benefit even the poor ousted men? Just the reverse. The money lender simply keeps on the old occupant, reduced to the condition of a mere serf, and grinds all he can out of him. So the last state of that land is worse than the first.

How to save the cultivator from the money lender's clutch? A system of small loans from government at moderate interest to the country ryot (now carried out to a very small extent), to be extended to meet the need and supported by British capital, would save the ryot. But the ryots, it is said, will not take the loans. The indebted ryot--indebted, though except at his children's marriages--he is the most frugal of mankind, and the usurious money lender is pretty much the same all over India.

Government is the first mortgagor on the land; government has all the machinery ready for lending. It would ask less than 7 percent (asked by the money lender 50 percent is low, 100 percent is something). But government loans are taken advantage of by the ryot in an almost infinitesimal degree. Perhaps in all India only a quarter of a million is out at interest in this way.

The question is: why is the indebted ryot unwilling to accept the government loan at less than 7 percent and willing to go to his own money lender at 36, 40, 50, 60 or even 100 percent?

Worse even than this: with a humane motive a new law upon the currency of a bond was made for the Bombay ryot, enforcing the bond within three years of its date. The usurer holding a bond, say for 100 rupees, will now force the debtor at the end of three years not only to pay the 100 rupees, upon pain of being carried to the law court, or of being sold up and his land passing into the money lender's hands at a tenth or less of its value, but to give a fresh bond for 200 or 300 rupees.

Why does not the ryot free himself from the usurer's claws and throw himself into the just arms of the government loans? Is he afraid of putting himself in the power of minor native officials of government? Is he afraid of offending his banker?

In the last India Office "Progress Report" it is written--this is on government authority--that "even when, after floods at Ahmedabad, government sanctioned the advance of £1000 to poor cultivators, *without any interest at all*, no one availed himself of the offer." And it is added: "There are few ryots in a position to offend their banker. The great object of the money lender is to evade repayment: if the season is good he lets the debt run on from year to year at 36 percent interest, and this system is preferred by the cultivator to the tedious formalities and rigid terms of repayment attached to government advances."

The same Progress Report speaks of "their (the money lenders') heartless and unscrupulous action towards their debtors," and adds--it is the government who say this--"it is hoped that some amelioration may be effected in the position of the ryots by a modification of the present system of civil procedure."

One echoes the hope that the government will make good their hope, but the "modification" in "civil procedure" given above has, on the showing of an ex-member of the Bombay council, done nothing but harm.

The same "Progress Report" says--it is the "financial commissioner" who speaks: "That sales and mortgages take place to a large extent is not to be doubted. It is desirable that the landholders should, if possible, retain their lands and should prosper." Probably. It is to the flourishing Punjab that this paragraph refers.

In close connection with this matter comes another question: in cases where ryots are unwilling to accept the water for irrigation purposes, why are they so? Because it puts them in the power of the minor officials (all native), tehsildars, etc.? "A question to be asked."

Bribery, oppression, corruption, bullying, are the rule, the universal rule, with these petty officials. They have unlimited power to make themselves disagreeable, and must be bought off with a bribe. Does the official network of petty administration require improving? "A question not to be asked."

No idea can there be of "improving" the money lenders--so intolerable and so necessary, but not necessarily intolerable--

"off the face of the earth." But of improving them as a class there can. But of government rates of interest coming into competition with usurer's rates of interest there can. So each would benefit each. Can we fancy the ryot with education enough to give him confidence in the government loans? For, without such education, even could the government pay off all the ryot's debts tomorrow and he, the ryot, be no better educated then yesterday, it would be no use, for the day after tomorrow he would be just as badly off as before.

Can we fancy great and philanthropic men among Indian gentlemen, lovers of their kind, lovers of education, public benefactors? Is it quite a wild utopia to think that education might teach the ryots to seek legal powers against the money lenders, as in Eastern Bengal against oppression? It is a wild utopia to think of getting rid of the money lenders. It is not to put them on the right footing. Let Indian gentlemen prove that it is not. Is it the wildest delusion to think that some day a teacher might arise of their own people? Nay that even the money lenders might sit at the teacher's feet?

There have been great prophets in the East before these days: we in the West have learnt all our spiritual life from them. May we not give back some of our material life for it? One there was who, we are expressly told, preached--a voice crying in the wilderness--this very subject: to take no more than their dues, and the people came to him. And he preached to this very class among others--to usurers, to minor officials of government--and they came to hear him and asked him what they should do: to put no man in fear, to accuse no man falsely, to do no violence, to be content with what rightfully accrued to them.

What a noble, glorious task before the wise men, the holy men, the powerful men of the East, again to bring the usurers, the petty officials, tehsildars, to honesty and mercy, to free the ryot from indebtedness and slavery. And may the God of mercy and justice, whom we all believe in, raise up such prophets in these days, and be with them all in such a saving task!

And young Indian gentlemen, they come to England in these days: is it the wildest of utopias that they might study, e.g., the co-operative store of the West--a product one would think surely fitted to thrive in the Indian soil, the soil of village communities, so as to be able to introduce it in the East? (It is principally in regard to small banking business, that is, money loan advances for agricultural purposes, that the ryot deals at a disadvantage: could this work be undertaken by co-operative institutions? or by a loan fund set on foot by benevolent native gentlemen?) And here the ryot would not have to trust the government, he need only trust himself, with his savings. Hoarding is natural to him. In the co-operative store a child may put in its penny and receive 5 percent.

Far from us the idea of boasting. The co-operative store is as much wanted for the reckless waste and unthrift of some great

towns in England as for the grinding poverty of some great tracts in India.

It has been said that "thrift" is what must save the Indian ryot. We have heard of the horse being made to live (or die) on a straw a day, but we don't know that we ever heard before that the horse ought to exercise "thrift" and save his one straw a day. Yet this is what it appears the country ryot has actually done in some cases in the Madras famine. He justified the English counsellor and died. What thrift, what endurance have we Westerns compared to this? And we in the West preach thrift to them! The "horse" literally "saved" his one straw a day for his children's sowing. And they call these people not thrifty. It is the very heroism of thrift.

Compare the working men on high day wages of some of England's largest towns--their drunkenness, their lust and vice and brutal crime, their reckless waste, absolutely unable to look forward a single day, hardly an hour--to the industrious cultivators of India. There is no comparison. One might ask which is highest, even in the scale of civilization? And we must not forget that England spends seven millions, the price of a famine, a year on her Poor Law relief.

2. Second question: How to help the Bengal ryot against the zemindar, his landlord under the Permanent Settlement? This sounds formidable; but we have to ask another yet more important question (we have also destroyed the *zemindar* as a progressive landlord under the Permanent Settlement): how to help the zemindar to make himself master, not of his ryots--that he is already--but master of his own progress, which must include theirs, for all progress is and must be *solidaire*, as the French say: *one* man can't go forward while the others go backward, master of progress by putting within his reach all the arts and means of progress, and of raising the value of his land by improved agriculture.

We did the zemindar a cruel disservice by giving him all the rights without any of the duties of landlords, so that all his dues under that settlement having been more than paid him, few of his duties under that settlement were required of him: duties, that is, under the form of providing police, water, drainage, roads, education, etc. Such are the duties of an improving landlord. Such were the duties intended by the Permanent Settlement to be required of the landlords. Instead of this landlords have thrown their duties on the ryots in the form of oppressive abwabs (levying illegal taxes).

Give the ryot water and all the profit goes into the zemindar's pocket. And how can a landlord thrive with a wretched tenantry? It is a first axiom--a well-to-do peasantry, a well-to-do landlord; a rich people, a rich treasury.

There are excellent landlords in Bengal, such as would do honour to any country. The maharanee of Burdwan is one. She has prohibited the levy of abwabs of every kind on her estates in

Midnapur. May we not have the pleasure of mentioning with respect, on the lieutenant-governor's word, some others who are really good landlords to their ryots: the proprietors of the Mysadul estate and the Roy Babus of Jara. In Bankura, Babu Radha Bulluh Singh, of Kuchenkole; Babu Damoodhur Singh, of Maliara; the Banerjees of Ajodhya and the Messrs Gisborne. In Beerbhoom Rajah Ramrunjun Chuckerbutty, of Hetampur.

May we not give them a cheer from over the water? Are we not all one, all brothers and sisters and fellow countrymen--all we? We in England, in India and in the colonies will be "we." It is not longer "as far as the East is from the West," but "so near as the East is to the West," so near must "we" be to one another.

A successful experiment on the Hugli: the drainage of about 80 square miles of swamps on the banks of the Hugli, called the Danconi works, at the expense of the landowners, under a special act. The landowners behaved like honest patriotic men. "The Danconi drainage scheme in Hugli," quoting the lieutenant-governor's remarks in 1876-77, "has done immense benefit to the country, and the operation of apportioning the cost (484,127 rupees) among the proprietors of the lands reclaimed is now going on."

The one question which has in these drainage and irrigation matters always stopped the way is, who is to pay? Whether government will make the zemindars, whom it has made the possessors of the soil, pay for the works or not? Are the zemindars so selfish and worthless a class as to exercise their considerable influence over the government thus? No indeed. The Danconi drainage experiment proves the contrary, and will be the precursor of many more such experiments and proofs.

An unsuccessful experiment in Jhansi: Jhansi in misery and degradation impossible to exaggerate. Why? Within the last ten or twelve years in the Central Provinces and in Jhansi we have revived our "well-intended but visionary plans," as Sir Thomas Munro called them, "for the improvement of India by the creation of zemindars of whole districts, or of simple villages." In Jhansi the famine of 1868-69 came alike upon our own villages and those transferred by us to Scindia, but our own villages could not recover; in Scindia the people recovered entirely. The explanation is not far to seek.

See how we have benefited the landlord! "In native territory proprietary right is unknown, while in British Bundelkund government, with the best possible intentions, conferred at one blow the proprietary right in their villages on the zemindars. This perilous gift has been of great disservice to them. Instead of rising in the social scale, and standing out as a comfortable yeoman class, they found their newly obtained rights useful only as a security upon which money might be borrowed." The money lender again and his clutch!

"The Marwaris and others were ready to lend money to an extent before unknown, and when the famine came they freely

signed away their birthrights for a morsel of bread." "Freely" can hardly be said; cultivator and zemindar alike appear in slavery to the money lender.

"Old debts, which had long passed the limit of recovery in a court of law, were revived by needy men in want of a little money and were secured by registered bonds bearing ruinously high interest. The men of this part of the country were always improvident and little disposed to labour, and when pressed for food for themselves and their people, and called on at the same time to pay up a portion of the government demand, they signed away their lands for the sake of a little present relief."

Esau and the mess of pottage over again! Such are among the effects of the recent land settlement of the Central Provinces. But the vital question is, after all, *water*.

3. *Water*. If we had given them water should we now have had to be giving them bread? and not only this, but to have seen millions (take all the famines in this country) perishing for want of it, in spite of all the government has done? *Water*. That is irrigation by strengthening, repairing and keeping up the old tanks, by keeping the tanks always supplied, where possible, even in droughts, with water; by storage and regulation of water; irrigation by every attainable means: canals, tanks, storage, wells; encourage the people to dig wells, to repair tanks--in the old times it was not the government, it was the village community itself which repaired the tanks.

Water, that is, cheap water transit, including where possible steam navigation canals.

Can nothing be done for these poor people, especially these poor Deccan people, to show them how to raise more and better produce, and to give them a market for their produce, the first by irrigation and better methods of agriculture, fodder crops, etc., the second by cheap water communication and roads? Could there not be a model farm in every district, an agricultural school in every province?

There is no time to lose: "Live horse and you'll get grass" is a proverb, but if the grass long delays in coming the horse dies first, and so will India.

If all this be true, and we have it on the word of the government, the fear must be, not of the conquest of India by the Russian, but of the conquest of India by the money lender.

Is it possible that England would re-conquer India:

by enabling the indebted country ryot to redeem his lands and pay off his debts;

by putting her loans within his power and, aided by powerful native influence, even within his prejudices;

by reforming the system of land assessment, where it needs reform, so as to "enable independent ryots," as Sir Thomas Munro said, "by lighter assessments to rise gradually to the rank of landlords";

by amending land tenures;
by putting improved methods of agriculture within the cultivator's knowledge and power, with model farms and schools of agricultural instruction--and what could the wealthy Indian gentleman do more for his race than by founding industrial and agricultural models and schools?
by forest plantations, and encouraging villages to plant trees;
by encouraging the cultivator in all ways to make wells, repair tanks, even to subscribe for canals;
by enabling the landlords to execute great works of drainage and improvement;
by enabling the merchants of Calcutta and the great towns to carry out works of cheap water communication--zealously advocated even by railway engineers;
by assisting the engrafting of co-operative stores, loan funds and the like in India, especially in the village communities which still exist;
by improving the official network of petty administration;
by extending the system of representation, not only of zemindars, but of ryots, by which the people not only virtually rate themselves, according to the surveys of what is wanted, but spend the money locally under the elected district committee's orders--perhaps by constituting a representative assembly, not legislative, in Calcutta;
by just laws for dividing increase of production between zemindar and ryot under zemindari settlements;
by just laws for adjudicating between money lender and cultivator under ryotwari settlements;
by opening the way to manufacturing progress in both? What a glorious conquest that would be!

If this be England's part, what is the part of India's gentlemen? of the zemindars, to deserve well of their ryots and abolish illegal abwabs, to take their part--a disinterested, but also an interested part--in drainage and irrigation, and possibly in navigation works and in manufacturing enterprise. Of the native gentlemen, to take their part in founding industrial and agricultural schools. Of all, in educating the people and particularly the agricultural ryots, not merely by schools, but if possible by going or sending among them, so as to raise them out of their fatal ignorance. Of young Indian gentlemen coming over to England, in bringing back what is worth of Western civilization, such as habits of personal influence in raising and bettering the condition of the people--perhaps creating institutes of the nature of coffee public houses, with stories and readings aloud for the country people (We have borrowed the coffee shop from the East--they had it long before the West)--perhaps creating savings-banks, with money loan advances at a moderate rate of interest, co-operative stores and the like.

The East--where should we have been without the East?--the

East used to be the land for great founders, great reformers, prophets in short--sons of kings as well as sons of the poor--sons of God in fact--going forth to gather and lift up the people. Why is it not now?

One country, one sovereign: England, the colonies and India. O, to be really one country, one nation, in such a work as this, in deed as in word, in feeling and education, in social and political improvement, in free trade, in giving to and taking from one another, in learning from one another. And how much has India, if once thriving, happy and contented, to give England of her wheat, her cotton, her various material, raw and manufactured, as well as England to give India of her agricultural methods, her manufactures, her engineering, her modes of intercourse and civilization! Far from us the word that we have not something to receive and something to learn from India.

Native troops ordered from India to serve with English troops--though war may God forbid. Indian gentlemen and even gentlewomen coming over to England, young Indian gentlemen to study at Oxford, others to be examined in London--they see and judge of Western civilization, of the much to learn and to carry back, and also of the much *not* to learn in the West for the East. England and the colonies asserting their right--the colonies quite as much or more in proportion--to feel for and to pay for India's famines, besides the government in two famines working almost a miracle. Learned men showing the English that they may be proud of descent from the same blood, the same tongue, the same race as India: England's elder brother and her child. All this marks a new era: the bonds of fellowship drawing closer.

But why India's poverty? In England if thrift is, there too is thriving; the words are synonymous, the things too. In India it is not so: thrift there *is*, not thriving. Why? Some causes we have said: want of irrigation and cheap communications, want of improved methods of agriculture, excess of money-borrowing, want of independence on the land.

England does give free trade; her markets are free to Indian wheat and cotton. If only India had cheap water communication to bring her wheat and corn and cotton to her ports, and so ship it over the world, she might be the richest instead of the poorest of countries. The colonies do not give England free trade and England does not yet give herself the free trade with India which she gives to India with herself in corn. But this will come.

Let all of us, each in his or her own way, small or great--and God speed us all--do our very all to make of one heart all the kingdoms of this empire. Let it be no longer the "United Kingdom of Great Britain and Ireland," but the "United Empire of Great Britain and Ireland, the Colonies and India." God bless the empire! God save the queen!

"A Water Arrival in India" by a Commissioner, *Good Words* (July

1878): 493-96 [9:771-78]

"The bridegroom cometh."

An Indian famine: the heavens as brass, the earth as brick; men, women and children, as well as cattle, perishing for want of water and food, strength ebbing away, people living, or rather dying, on weeds, on jungle produce perhaps.

A royal progress. Like an epic poem the hero-lover meets his people and his ladye-love; he has delivered his country from the destroyer; the bride's and the people's rejoicings, "with noise of weeping loud," as they go forth to hail the arrival in triumph of their victorious hero, bringing peace and plenty to his stricken land, the very hour of each meeting is noted.

Such are the contents of this official paper, reporting the opening of some engineering works--opening of the Khana Nuddee (Blind River)--in the Hugli district, one of government's relief measures for a famine not yet here, but hanging over us.

With spade and shovel and at a cost of not more than £1200, the waters of the Damodar are let into their old channel--which had silted up and become "khana," or blind, before the present century--the Khana Nuddee, fifty-seven miles long, joining the Damodar with the Hugli.

"It is easy to imagine," says the commissioner, "the joy and satisfaction of the people in one of the most densely populated parts of Hugli, at seeing a river, five or six feet in depth and from forty to eighty feet in width, suddenly flowing through their villages, especially in such a season as this, when their water supply was in the greatest jeopardy, and they were watching anxiously the few dwindling pools of water that used to lie in the old bed of the river. I venture to say that no such great and appreciable benefit has been so suddenly and so cheaply conferred on such a large number of anxious people during the present century, and this work alone will suffice to make the lieutenant governor's administration memorable in the district of Hugli."

Compare this whole account with the fears often expressed in the highest quarters that the people could not be induced "to use the water" without "compelling" them.

Drinking water collected out of filthy puddles--one must have known a hot country in a time of drought to know what a depth of misery that means--among a people, too, whose only drink is water. But could they afford milk, the milch cattle are dying too for want of water.

See the conquering hero comes,
Sound the trumpet, beat the drums.

It is a government report which gives the account: "The works were ready on 27 December; the officials were present, when the waters of the Damodar were admitted into the bed of the Khana Nuddee, amidst the acclamations of the people who had flocked to the spot." The water arrives eight miles farther. "Great excitement prevails." Again the commissioner's report:

The villagers taking the greatest interest in its arrival."

They turn "to watch its progress and, to facilitate its advance, cut the bunds (dams) that held it back. On the evening of the 3rd, the water arrives at Kamalpur. At Kooloot the water arrives during the night of the 4th. At Radhanagar the water arrived at 6 A.M. on the 4th. The greater portion of these and adjoining villages are uncultivated for want of water. At Nundanbatty the water arrived on the 5th at 6 A.M.

Does it not read like a triumphal progress? "The admiration and gratitude" "of the people within reach of the use of the water - - . " "In the villages of Nundanbatty" "there are no tanks and the people express great satisfaction at the arrival of the Damodar water."

So comes the conquering hero on, till "at Dukhinkool" the water arrives "on the 6th at 7 A.M." "The people are enthusiastic." (Still the commissioner's report.) "Their tanks were nearly exhausted and would have been quite dry in a month" (think what that means!); "the few tanks they have are extremely foul, and the clean water now brought to them is of immense benefit." And so on, and so on, till "at Bhola the water arrives at 1 P.M. on the 8th." "The people are loud in their gratitude"; "it has saved their lives." It has indeed.

They irrigate "eagerly"; they "commence preparing the land for onions and sugar cane, it being too late for other crops." (These are the "people" who have been accused of immovable want of enterprise. Sugar cane is the crop which requires most labour and care, and is also the most valuable. It takes eleven or twelve months' water to grow sugar.)

"At Anundopore [Anandpur? Anantpur?], thirty-four miles down," "the water has just arrived" (8th, at 9 A.M.). "At this place was a pool of water," "used for steeping jute," "in a filthy condition"; "but the people were using it for drinking and all other purposes." (Does it not seem miraculous that they are alive at all?)

The police, 9 January 1874, report that "the inhabitants are overjoyed," "praising and thanking the English government." "It is a gift from God." "They were 'badly off' (badly indeed) for water, but now they have full and plenty." (See report from Mr Buckland, commissioner of Burdwan Division, to Bengal government, no. 177, dated Burdwan, 23 January 1874. Is not Mr Buckland an epic poet, without knowing it?)

Normal state of the Burdwan people. This is not a famine year, though it might easily be mistaken for such. 8s. or 10s. or 12s. a month, to maintain themselves and wife and children, and to clothe them against the winter cold. Again it is a medical commissioner who speaks. Daily food, usually one meal a day only. (This is not a district where the people are very particular about cooking for caste reasons, and consequently cannot spare the time to do it more than once a day.) A little rice, with what is called vegetable curry (oil and potherbs) for the whole

family, and this the ordinary daily food; extreme poverty; a permanent state of half-starvation; no proper clothing; a whole population of "poor helpless creatures, so impoverished and so enfeebled in constitution" that, when epidemics come, they lie down to die without power to rally. "Dhall (peas) cost too much," they say, "and milk we can never look at."

In 1869, 1870 and 1871 was the fatal, too-notorious Burdwan fever. Of its excessive mortality we have no idea whatever. It is again the government medical commissioner who speaks: "Unless prompt food and careful nursing be given, one half die in the first year, and with the rest it is only a question of time. And the only effectual method of meeting the difficulty is almost impossible as long as the well-to-do people keep aloof and give no help to us."

What is this but a famine fever, assisted by bad or no water supply, bad or no drainage? Yet this is not *called* a famine!

In good times, two or three cooked meals a day of rice (about a pound of rice a day) and dhall (peas). In the best of times they have fish, cured--imperfectly cured, on account of the salt tax making salt too dear--or vegetables.

To sum up: We must "consider the regulation of the water with regard to health. For several years past a great extent of country round Calcutta" (the Burdwan fever is not extinct, it reappears in other places) "has been desolated by fever of such a nature that numbers of villages have been almost emptied by it, tens of thousands having died of it." Its predisposing cause is semi-starvation. Among its immediate causes are want of drainage in the monsoon, want of good water to drink in the dry season.

This is the state of villages in those dead, alluvial plains: in the monsoon without a foot of dry ground, and surrounded by pools of water; in the dry season, not a drop of wholesome water to drink--nothing but the remains of these pools a few inches deep, in which filth has been accumulating for months. Compare this with an irrigated tract completely pervaded by drainage channels to carry off the waters in the monsoon, and canals of running water, fresh from the river, flowing through every village.

Irrigation means: first, water for irrigating land, but also all drainage and other works for complete regulation of water; navigation, and a good water supply for drinking and cooking.

II. Life or Death on the Godavari

Death on the Godavari. Before the irrigation works were begun, from eyewitnesses in tents and rough sheds on the bank of the river, or rather on the side of the riverbed: a narrow thread of water down the middle of that bed, on each side of that thread a mile and a half, at least, of hot, deep sand. Want and filth, and need of every kind around: weary women toiling through the dry riverbed with their waterpots, creeping out of their huts after the exhausting heat of the day to bring the family supply of

water between one or two miles, their naked feet sinking at every step in burning sand. How insufficient the supply, after all that labour, need scarcely be told.

Food: in the dry season any kind of vegetable matter that they could get from the jungle to keep themselves alive, cattle reduced to such a state of starvation that when the rains began they were totally unfit for work.

The superintendent of Madras government farms says that we have no idea of the statistics of "annual loss by disease amongst Indian livestock, from being kept during two thirds of the year just above starvation point."

"At the commencement of our rule"--it is a government official, a civilian, who speaks--"it" (the Godavari district) "formed a portion of a neglected province, and at one time it was brought to a state of extreme impoverishment and distress. It was desolated by famine and misgoverned by the numerous landlords (under the zemindari system) and their advisers." Happily the ruin was so complete that the government were left free to restore the land in many cases to its real owners or their descendants, some of whom had been robbed in order to transfer the land to people who had no right in it whatever.

If "honesty is the best policy," unjust proceedings are the worst-ruinous to all parties. Irrigation now could take full effect in every way in this district.

Life on the Godavari. Eighteen years later, after the irrigation works were in full action, from the same eyewitness: instead of dry sand, riverbed covered full with abundant water. Instead of parched, perishing attempts at cultivation, rich crops of many kinds, trees which seemed to have sprung up as if by magic; instead of the wilderness, a garden; instead of filthy waterless villages, channels, well-filled, flowing everywhere; instead of weary, overworked women, all, or almost all, well-fed, well-washed and comfortable; time and strength of mind and body no longer solely taken up with daily drudgery, which before absorbed every power; religious civilization possible.

Cattle strong and healthy, and doing their work. And, best of all, the people are now very generally free from the moneylender.

Now for the official civilian report: "Since the introduction of the admirable system of irrigation" (Sir Arthur Cotton's), "it" (the Godavari district) "has brightened and revived. Famine is unknown; the people are prosperous and contented; it is the garden of the great Northern Province. The revenue, instead of being reduced, as it once was, to the verge of bankruptcy, is more elastic than it has ever been. Its population has more than doubled; the material prosperity is proved by their being better fed, clothed and educated than formerly; its commerce has flourished and its trade has developed in a marvellous degree; and it may be confidently asserted that

it is in as peaceful, happy and prosperous condition as any portion of her imperial majesty's dominions."

Besides water or no water being a question of life or death, of health or disease, of civilization, comfort and cleanliness, or of dirt and barbarism and misery, it is a question of revenue. The Godavari district used to export £60,000 a year; it now exports, by sea only, £800,000 to £900,000 a year. The whole population is well-clothed, well-housed; home consumption doubled. The 560,000 acres, irrigated by an expenditure of about £600,000, yield about £1,100,000 a year more in grain, besides straw, besides navigation. And they can export food to the famine districts, instead of being a famine district--terrible word, but more terrible thing--themselves. A similar change may be seen in the Kistna and Tanjore districts.

In the last Madras famine, not yet over, where among twenty millions three millions have died--where in some places we have lost one fourth of the population--two large districts are exempt: Kistna and Tanjore. Not only this, but their populations have increased, and increased beyond the *estimated* increase of population, while all around have been dying. Why? Because of their irrigation works they have been saved.

No wonder that the ryots of Trichinopoly [Tiruchchirappalli] lately, in November 1877, addressed the governor of Madras, praying that the same benefits might be extended to them. In their memorial they relate how Sir Arthur Cotton "controlled the Colleroon" (in Tanjore) "by means of a gigantic masonry dam, so as to arrest the drying-up of the Kaveri"; how "that great engineer bridled the Godavari, a river five miles broad at the point chosen, in a similar way and with still more magnificent results"; how other such works have been applied to other rivers, "all which works have converted the tracts affected into scenes of matchless fertility and wealth, and have for ever protected them and neighbouring provinces from the disaster of recurring droughts."

The poor ryots of Trichinopoly then mention six particular projects in their own district which they earnestly demand should be executed, amongst these, "a large reservoir at the meeting of the Patchamalai and Kollimatai ranges, the projected Uengar Channel, for part cost of which the ryots have years ago subscribed and paid money." And with picturesque and pathetic simplicity, they pray for these to be carried out.

This is paper and words to us, to them life instead of death. Such are two or three instances of bringing life out of death to our neighbour in India. "Go and do ye likewise."

NOTE. Even while this is being written new and bad accounts come in from India. In Madras drought has been followed by locusts, famine is not over and the government is preparing to reopen relief works. In part of the Punjab and in extensive tracts in the North-West Provinces there is severe suffering, if not actual famine; prices very high everywhere. Actual distress

anticipated in Shahabad and Patna. In Eastern Bengal complaints that no ploughing can be done for want of rain. The lieutenant governor of Bengal [Ashley Eden] is gallantly giving himself to necessary works: to "good works" in every sense of the word, as understood by *Good Words*. F.N.

"The People of India." *Nineteenth Century* 4,18 (August 1878): 193-221 [9:778-810]

We do not care for the people of India. This is a heavy indictment: but how else account for the facts about to be given? Do we even care enough to know about their daily lives of lingering death from causes which we could so well remove? We have taken their lands and their rule and their rulers into our charge for state reasons of our own. Nay, the hour is coming, and even now is, when for "state reasons" we are annexing, or preparing to annex, or to reorganize, or to "protect," by whatever name we call it, huge and immeasurable territories because they lie between us and them. But for them themselves--these patient, silent, toiling millions of India, who scarcely but for suffering know their right hand from their left and yet who are so teachable, so ready to abide by law instead of resisting "their enemy the law"-- for their daily lives and deaths we do *not* as a nation practically care. Or should we not as a nation practically rise *en masse* to see that the remediable things to which good public servants have so often vainly called attention *shall* be remedied? Have we no voice for these voiceless millions?

What is the saddest sight to be seen in the East, nay, probably, in the world? The saddest sight to be seen is the peasant in our own Eastern Empire. But we do not look at this sight, no, not even those few who travel in India. To speak of India is, however, much as if we were to speak of Europe, since in India there are almost as many races, languages and climates as in Europe; almost as much difference between provinces and presidencies as between Russia, England and Spain. The land tenures are also as different, so large an item in material life. Only debt and usury are much the same all over India. And, alas! a chronic state of semi-starvation.

"The bulk of the people of India are paupers: they can just pay their cesses in a good year and fail altogether when the season is bad. Remissions have to be made perhaps every third year in most districts. There is a bad year in some one district or group of districts every year." Whose striking words are these? Not those of a member of Parliament or advocate making a case or historian or gazetteer writing in his closet. They are those of one of our great English proconsuls ruling in India over a population nearly twice as large as that of France, second only to a viceroy and who has done perhaps more than any in raising the Indian peasant, in giving him a kind of representation, a

voice to rate himself, in giving him education, roads and a sort of independence or power to hold his own.

Let us try to take a glimpse of one or two of the various provinces in regard principally to material prosperity or rather adversity; and first of Madras because the famine, not yet over, and the help given by England have tended to fix our eyes just half an hour more than usual upon this presidency as upon India in general. After Madras we will go to the Bombay Deccan (for other provinces this article gives no space).

What we engaged to do was to prevent any from dying of famine. What have we done? In many parts one fourth have died. In Bellary, Kurnool, Cuddapah and Nellore the deaths from famine in one year have been from 21 to 27 percent. At the end of 1876, according to the estimated population, Salem had 2,129,850 souls. On the 14th of March 1878 she had 1,559,876. More than one fourth were gone. Here, where even yet the famine will not be over for some months, already, therefore, have died considerably over half a million out of some two million souls. In Mysore there has been a waste of life of one fourth. We have lost in one year not less than three millions out of the twenty millions more especially under the famine scourge in Madras presidency, a presidency of 55,000 villages, a population of 35,000,000. In southern India, that is in Mysore, Bombay and Madras, our loss in one year's famine has not been far short of 6,000,000 souls or rather bodies: God takes care of the souls; this has been our care of the bodies, in spite of the unflinching courage and honesty of the government and of every official under it in trying even more than man can do to keep to its purpose of not allowing one famine death, in spite of England and the colonies vying with each other in coming to the rescue by a voluntary subscription of about £800,000, in distributing which all classes in Madras, European and native, worked hard and well and to the best purpose.

What should we say of a war which had killed 6,000,000 in one year in a region not much more than half the size of France, or indeed in all the wars in all Europe of the greatest of conquerors? It has not entered into the imagination of man to conceive of such a destruction. One death from starvation in London fills all the newspapers with reports of the inquest upon the body. There is a machinery which costs us seven millions of money a year to prevent it. Public opinion is now holding--holding, did I say? it is not holding, it ought to hold--a gigantic inquest upon 6,000,000 bodies, dead less indeed by our fault in sparing effort than in spite of every effort to save them from dying of famine, to save them, *not to prevent famine.*

Has any effort been made not to prevent deaths from famine but *to prevent famine itself*? Can we show any districts in Madras safe from this thrice fatal scourge? We can. Nay, in four districts we can show, not only that the population has not been decimated or rather *quadrated*--O that we should have in our days

to invent such a word to express the suffering!--as in ill-fated Salem, Bellary, Mysore, but that it has increased. In two of them indeed it has increased more than the *estimated* population.

(Population in India is estimated to increase at the rate of 1½ percent per annum.) What are these favoured districts? They are those which have been saved by irrigation works: Tanjore and Kistna. In Kistna the increase over the *estimated* population is 5.1 percent, in Tanjore 1.7 percent. In the two other districts the population of 1878 was above that of 1871 (the census year), though not quite equal to the estimated population. One of these districts was within reach of irrigated districts, though not yet thoroughly irrigated itself, and crying out for irrigation: Trichinopoly, in which a decrease of 2.9 percent below the estimated population was found. The other is Tinnevely, also partially irrigated, with a decrease of 1.9 percent. (See also correspondence in [the] *Times*, 15 May 1878, dated Madras, 20 April.)

The Bengal famine of 1873-74 is past and gone: so short are our memories. But not five years ago we were writing, talking of this, working and working hard at this. The conditions truly of Bengal are different; the land tenures are different; the race and language are different, but the sufferings are the same. Why is this? We shall have to give a separate glance at Bengal.

Between five and six millions have perished then in this Madras famine. These are figures, paper and print to us. How can we realize what the misery is of every one of those figures: a living soul, slowly starving to death? I have had photographs sent me of five or six. An infant with precocious resigned eyes of suffering, a living skeleton in its mother's skeleton arms, a dying boy, a helpless old man, a man stricken down in the prime of life. I could not bear to look at them. I hid them away and would not publish them. But not five or six, but five or six millions lay down thus to die, slowly to die of hunger and thirst, besides the millions who were saved. And when we realize that five or six millions have so died--that we count not by fingers of one hand but by millions, every finger is a million of living, dying people--do we realize what it is to say that many more millions have so lived, been so saved and will so live after the famine, going back to their bare and roofless homes where not a straw remains? All has been taken for famine needs. Without cattle, without seed corn to plough and sow their now-desolated lands, implements wanting, bullocks dead, everything gone; branches to be used instead of ploughs; instead of cattle, men; paupers, unwilling paupers, for years. And this the most industrious, the most frugal, the most thrifty, one might almost say the most heroic, peasantry on the face of the earth.

Let us look at one or two of these moving skeletons in the famine, not because they are uncommon but because they are common specimens, and particularly at the children; for care of the weakest things, of infant life and of diseased life, is certainly

in our belief the characteristic of modern Christianity, though we must put in a plea for modern Indian Hinduism and Muhammadanism too. As certainly the sufferings of children, though no whit less patiently borne, are more severe, more agonizing than those of grown-up or old people; for children cannot look forward, cannot understand, can feel nothing but the cruel suffering and weariness of dying, cannot measure the time or see the end. As a child who had fallen into a ditch for one minute said, "I was there for a thousand years."

In the Madras famine children of seven to ten years used to bring poor little naked living skeletons of two and three and four years to the government relief centres, feeding the babies day after day for weeks with the daily dole, asking for nothing for themselves, till the little foster mothers would themselves sink fainting at the gates. These were often of no kin; sometimes even of a different caste or religion. A little kindness "makes the whole world kin." Hundreds of fathers and mothers, going to other parts of the country to get work and food, left children to die in their villages. Little ones who had no little foster mothers wandered about to get a dole of food from any one who would give, then lay down and died with--pass me the word--the heroic agony of childish patience. For example, one missionary from Cuddapah met in one day's journey over one hundred who had no one in this world to care for them. He stopped and helped the oldest, telling them to look after the little ones, but he believed that all, or nearly all, died. This led to himself and his wife opening a "Temporary Home," one only out of many such instances, of course, for children under twelve years. No temptation to idleness was held out and in five weeks many were restored so as to be sent out to work. One orphan boy, nine years old, told as soon as he could speak that he knew of other famine orphans: might he bring them? And he instantly sallied out and brought in first two little Muhammadan boys under six, then carried in from a great distance in his skeleton arms a little girl too far gone to stand or sit up, and who apparently could not live through the night. But with good nursing she was brought round to look like a moving skeleton and eat rice. A tiny Muhammadan of three would call another but a little older who tried to take care of her, her sister. The two could not be parted and both were taken. Both had lost their fathers and mothers of cholera in the relief camps. Mothers often brought in children, breathing their last, to the Temporary Homes. The Famine Fund gave to the Temporary Homes and the missionaries begged "famine orphans" from government and took them into their "boarding schools." The other children uniformly showed kindness to these orphans. The Famine Fund gave bullocks and seed grain to many survivors returning home.

To the Madras famine all this relates. But what is the grinding, chronic semi-starvation of every day in many places where what is called famine does not exist? In 1875-76 Mr

Robertson, the superintendent of Madras Government Farms, tells us: He was making an official tour through Coimbatore; and writes his report without any reference to the famine since fallen upon us but not then expected. The condition of the ryots in Coimbatore, he says, was so bad that had they and their families lived in the same "luxury as the prisoners in the jail of Coimbatore, they would about eat all their produce and there would be nothing left for rent." These unhappy ryots are landholders under ryotwari tenure; that is, holding land direct from government. There are 215,207 holdings in Coimbatore, the average holding is about twelve acres. Cotton is grown, not because it is profitable but because, as they can't eat cotton, it goes to pay the rent. If they grew grain, which pays better, they would eat it. They have but two meals daily and of the coarsest food. Yet Coimbatore is on a railway, but unirrigated. The ryots are all in the clutch of the moneylender. There are about 100,000 agricultural labourers in the district of Coimbatore; "their condition is a degree worse than that of the small ryots."

We mean to return to Coimbatore, but now let us go north to the Bombay Deccan. Here almost every man has a small holding of land; say, he has a holding of twenty-eight acres and a family of six persons; though they cultivate the land themselves they can scarcely live upon the land; their very salt is heavily taxed; they are bound hand and foot in the grasp of the moneylender. He can sell them up, land and everything they possess, even to the honour of wife and daughter. (Report of Commission on the Deccan Riots.)

We will return to the Deccan, but let us first go north-east to Burdwan. This is in Bengal. What do we find here? They complained in Coimbatore, or rather the Englishman complained for them, of the two coarse meals a day. In Burdwan they had but one--one meal a day only for labourer and wife and children, and that a little rice with what is called vegetable curry. "Milk we can never look at." "Dhall (peas) costs too much." Drinking water in the dry season has to be collected out of filthy puddles. The whole family has to be fed, maintained and clothed against the cold season on 8s or 10s or 12s a month. Here, in Burdwan, the tenure is zemindari--that is, the zemindars, not the state, are landlords; and the ryots hold from the zemindars.

But where is the prosperity of India? This is the adversity.

In Burdwan in 1876-77, the lieutenant-governor's reports say that the country was prosperous. Does the "prosperity" then find its way into the pockets, or rather first into the stomachs, of the people? Ought not all such reports to wind up with telling us what constitutes the Bengal labourer's daily food, comparing it not, of course, with the English labourer's, far less with the English navy's food, but with what is considered necessary to keep a Hindustani sepoy in good condition?

The Hindustani sepoy requires daily to keep him in health on

duty: 32 oz. of wheat flour, 2 oz. of clarified butter, 4 oz. of peas, 4 oz. of vegetables, $\frac{1}{2}$ oz. of salt and pepper, with an occasional pint of milk. A Bengali labourer requires the same, substituting rice for wheat flour. What does he get? As has been said, usually one meal a day only, of a little rice, with what is called vegetable curry--that is, six or eight ounces of pot herbs, cabbage, etc., and half an ounce of oil--for the whole family. And this was the ordinary daily food. Is it any wonder that, when a bad year comes, these poor creatures are struck down in large numbers and that large numbers die? It would be a wonder if it were not so. Prosperity among the Bengalis is believed to mean two or three cooked meals of coarse rice, about a pound a day, and dhall. In the best of times vegetables or fish curry are added. But the salt tax makes salt--a necessary of life to vegetarians even more than to us meat eaters--so dear that imperfectly cured fish is often the cause of disease. And every year tons of fish are wasted for want of cheap salt in the midst of people starving for want of it. Fish, a mere drug in Bengal, is a rare luxury.

In Oudh the cultivators are even worse off than in western Bengal. Eastern Bengal is somewhat better off now. The ryots have found their power. In the irrigated districts of Sind, this is the highest prosperity of the good comfortable Muhammadan ryot: a pound of flour, or the most comfortable may even have two, one for dinner and one for supper, that is luxury: clarified butter, salt, a little chopped onion or chili. He makes a hole in the flour, kneads it all up with his hands, makes a little fire and cooks it. This is not such bad diet; but then he has nothing else. He is not so desperately in the hands of the moneylender as is the Deccan cultivator. This is prosperity, this is. Now compare these with the English labourer. And first, the Hindus here spoken of use no liquor as a beverage. I could point out a town in England where men can earn wages of 10s. a day and drink it all away. Ay, and the women, too. A woman said, "I think no more of my money than of a flea in a churchyard." They are not a penny the better for it, either in clothes, lodging, bedding or any of the decencies, comforts or true interests of life. But we will speak, not of such as these who have no future but the workhouse, the prison, the grave, in this world, as one of their own selves said, and what in the next? and who might have, oh! how good a future if they knew their real interests. We will speak of the sober English labourer, the family man with the gallon of beer a week, the half-pound of tea, sugar, tobacco, untaxed salt, good water and the rest, and the Hindu living on inferior grains for the most part and too little of them, a little vegetable curry, a little salt, too little, and his very salt, as has been said, is taxed. The tax amounts now to £7 a ton, the salt itself being worth 12s. 6d. a ton in India. The people make "earth-salt" by washing the earth and boiling the food in the salt water, and for this miserable product they are

punished.

Manufactures are strangled by the tax on salt: such manufactures as bleaching, making of glass, glazing, extraction of metals from ores, salting of provisions; agriculture and the feeding of animals are hindered and livestock die of disease from want of salt. Fish is ruined by being cured with earth-salt. The food of the poor requires more salt than the better diet of the rich, but no man could live without nine pounds of salt per annum. The smuggling of salt was enormous and necessitated a great increase of police. A tower commands the salt works, occupied by a policeman all day. Moats surround the works, patrolled by policemen all night; workmen are searched to prevent them from carrying off salt in their pockets. (See the Report of the Madras Salt Commission. See also Lord Lawrence's evidence.) The French *gabelle* [salt tax] was "a law of conscription against the well-being of man, a law entailing misery on unborn generations." Can India become prosperous under it?

"The common people who find it hard to live when bread is cheap feel themselves about to die when bread is dear." Can this be wondered at? The drinking water is a fruitful source of misery and disease to the poor in India in the dry season, collected as it is out of filthy pools filled with every impurity. In the dry season, in many districts of India, as in the Godavari districts, before the irrigation works were carried out, any kind of vegetable matter is eaten by the people that they can get from the jungle to keep themselves alive.

So far as to food, but a man must eat to live and it is no bad test of the condition of a people.

His dress is a coarse bit of rag and a scanty sheet. A tumbledown hut of straw and mud, built by himself and not always thatched, a mat for a bed, one or two cooking utensils: this forms absolutely all the house and furniture even of the richer cultivator. And this is commonly shared by the beasts. As a rule he has no money whatever, but in some villages the phenomenon may be seen of a ryot possessing one or even two rupees.

The chief object of this attempt is to ask as well as I can, in so brief a space where only a few questions can be asked or even glanced at, and only in the fewest words, for India is large and time is small, how it is that whole peoples among the most industrious in the world, on perhaps the most fertile soils in the world, are the poorest in the world; how it is that whole peoples always in a state of semi-starvation are from time to time on the brink of famine? and if not actually swept away by famine, it is by their rulers giving food, not water, wholesale. Is there any fatal necessity for this? Is it not due to two or three causes, not only preventible, but which we, their rulers, having ourselves induced, either by doing or by not doing, can ourselves gradually remove? And to come at once to the questions:

1. The great question of moneylending, which overshadows all.

2. Water. (And does the government write as though it were simply a trading company to whom the sole question was: what direct profit can be obtained?) If we had given them water, should we now have to be giving them bread? Water, including (a) irrigation; (b) cheap canal communications; (c) improved methods of agriculture; (d) forest plantations.

3. (I reserve for future consideration the great question of land tenure and land assessment. It might be well for the reader to bear in mind that the principal systems of land settlement are: the ryotwari settlement, that is, the revenue settlement made by government with each actual cultivator of the soil for a given term at a stipulated money rent, without the intervention of landlord, zemindar or middleman; this is in the Bombay and Madras presidencies. The zemindari settlement, that is, the Perpetual [Permanent] Settlement made in 1793, creating in the zemindars actual proprietors, enjoying their estates in absolute ownership, out of tax gatherers, who formerly paid to the government revenue ten elevenths of the fixed net proceeds of the lands, receiving for their trouble but one eleventh of the collections; this is in Bengal. The ryot is the peasant-cultivator. The zemindar is the landlord created out of "collector of revenues on behalf of government" by Lord Cornwallis's Permanent Settlement of 1793. (We might as well create the English collector landholder of his collectorate. He distinguishes himself by all manner of cruel exactions of rent and illegal "abwabs" or cesses levied on his dependent ryots, although expressly forbidden by the Permanent Settlement; and by carrying into effect none of the primary objects of the Permanent Settlement, one of which was to record *all* rights to the land. Sir George Campbell, during his lieutenant-governorship of Bengal, made it his aim to restore a record of tenures and rents and rights of ryots, such as has never before been made in Bengal. He did this through the provisions of his Road Cess Act. And already the ryots in many road-cess districts have come forward to take extracts from the returns relating to their holdings and rents. These returns are the first authoritative records ever framed in Bengal of the rents payable by ryots over any large area of country.)

Systems of representation, by which the people may virtually rate themselves according to the surveys of what is wanted and spend the money locally under the elected District Committee's orders; including (a) municipalities, (b) publicity, or some method of giving the people a voice.

1. The great moneylending question: How to give the ryots, especially in southern India, just and legal help against the moneylender? Otherwise, give the ryot water and the profit will all go into the moneylender's pocket. Into his hands the ancestral lands seem in danger of passing, and the ryot of becoming, not metaphorically, but in some cases literally and legally, the moneylender's slave. We now give the moneylender

unjust and legal help to possess himself of the lands of India and to make the ancestral cultivator and the rude tribes his slaves.

Is it not strange that, under a country boasting herself the justest in the world and the abolisher of the slave trade, a poverty, an impecuniosity, an "improvertyiness" leading to virtual slavery, should be growing up--actually the *consequence* of our own laws--which outstrips in its miserable results, because it enslaves and renders destitute a land-possessing peasantry (in southern and western India), anything except the worst slave *trades*? And in some respects things are done under us, though not by us, almost as bad as under the tax-farming Turks.

One thing has been much urged: a system of small loans from government at moderate interest to the country ryot (which is now carried out to a very small extent) to be extended to meet the need and supported by British capital. But the ryots, it is said, won't take the loans. We pass over the system of "takavi," that is, money advances made by the government to the cultivators at the time of sowing, especially in the south of India, to be repaid when the crop is gathered, or made in bad seasons--a system which might well be facilitated and extended--and go on to what we can learn of government loan-making. Offering loans to individual ryots is almost given up. For the government sends an officer to see what security the ryot has; then to see whether he is spending the money as he said. This the ryot does not like; he always prefers going to his moneylender, whose interest it used to be *not* to be repaid. And there was this one good point in the native moneylending transactions, that the prosperity of the Marwari depended on the prosperity of the ryot. But this is so no longer. (The Marwari represents the moneylending class: most of the sowkars (moneylenders) from Marwar are now colonists of the Deccan.)

Revelations positively astounding have quite recently come home on the chronic state of indebtedness and starvation of the ryot, especially of the poor Deccan ryot; overassessment, his fields sometimes cultivated almost at a loss or "only just repaying cultivation." "Some of this land cannot afford to pay an economic rent at all." The moneylender (and this puts one touch more to the hideous picture) is also the village shop or general dealer and village banker, and not only this, but the valuer also--estimating the advances made by him in kind at his own valuation, estimating the repayments also made to him in kind at his own valuation.

In the Bombay Deccan, where the ryotwari system prevails--that is, the cultivator holds his land direct from government--the established custom is that the moneylender provides the seed-corn and feeds the ryot and his family until the crop is ripe, making also cash advances to pay revenue instalments, buy bullocks, dig wells, etc.

"Grain advanced for seed is repayable at harvest time,

bearing 100 percent interest; grain advanced for food carries only 50 percent interest, repayable when the first crop is ripe."

It is said that the Indian case is only the case between capital and labour all over the world; that the only difference is that in Europe it is the rate of wages, while in India it is the rate of interest which is in dispute. But this is "extremely not so." For here the ryot is fed beforehand by the moneylender as a regularly established thing. Were the ordinary ryot ever one season beforehand, it would be otherwise. What should we think of the village dealer supporting the whole village to be repaid afterwards?

We have had enough experience in the English army that the commissariat must never be bankers: this was one of the lessons of the Crimean War. If in a European army it is found that where the commissariat are also the paymasters the men are almost at its mercy, what must it be with the poor, isolated, defenseless, ignorant Hindu ryot and his moneylender?

The old extinct truck system in England, the old but alas! not extinct, running-tick shop custom here are justice and mercy compared to this.

The mischief is not in the ryot borrowing, but in his being supported beforehand by the village shop and repaying afterwards in kind.

Co-operative Stores. Would not the co-operative store, if only possible, be like a new life, a redemption to the Deccan ryot? In an English village, way was opened for a co-operative store thus: a large heap and a small heap of, say, sugar or tea were displayed on the village shop counter side by side. "That, the large heap, you buy by paying ready money; this, the small heap, you buy by running tick."

If these could only be displayed by the general dealer in a Deccan village, how soon he would cease to be moneylender! How infinitesimally small, perhaps hardly visible to the naked eye, would be the small heap, at the moneylender's own valuation! How gigantic would appear to the astonished eyes of the Hindu cultivator the large heap estimated on a system as unknown in India apparently as Arctic voyaging or London commerce--the system of buying and selling with ready money!

Up-country consumers are said to be at the mercy of the retail dealer, "who can create a monopoly and raise prices in proportion to the poverty and isolation of his customers."

The co-operative store would seem to be singularly adapted to the ancient soil of village communities and we hope soon to see a co-operative store in *water*, otherwise called an irrigating community.

"*Debt*" again, it has been said, "is simply working on borrowed capital." It is the system which has created the prosperity of the "Lancashire mill owners" and the Scottish "tenant farmers." But this has nothing to do with the ryot's system of debt. The ryot's system of debt, as has been said, is

like, but even worse than, the usurer or pawnbroker feeding and maintaining the whole district and being repaid after long interval at, of course, an enormous and wholly arbitrary rate of interest.

This is quite different from either paying wages or borrowing capital. It is the old truck system: only worse, married to a usury system worse than the worst Jewish usury known in history or poetry--far worse than under the Mosaic law. Well may a government commission say: "When we compare the law of India with that of other countries, we find that not one is so oppressive in this respect, not even the law of Moses, which allowed the debtor a discharge after serving seven years." We shall see what the Deccan debtor has to serve.

"If the moneylender refused to feed the ryot till his crop was ripe, the land would simply go out of cultivation." This is stated as a justification of the system: is it not the worst condemnation?

If, in addition to the mischief of the shop being the bank, a wholly false economic principle--if, in addition to the ryot paying by his *future* labour and *future* property, a wholly different thing to receiving wages for his past week's labour or past week's production; *that* is selling his labour, not borrowing, but what this ryot does is mortgaging it--if, in addition to the rate of interest being 40, 50 or 60 percent or even 100: 50 percent is low, 100 percent is something--if, in addition to all this, *the moneylender, in a land where is no law of insolvency, can bring the ryot into court upon any bond, just or unjust, fictitious or not, which the poor simple ryot subscribed without knowing what it was, and buy up the ryot's land at a tenth or less of its value, nay, may even cause the ryot himself to serve all his life, the general ruin of the ryot is complete.*

A native said: "The English law makes the sale of our land as easy as the sale of a bullock or a turban."

If it is true that a rate of 36, 40, 50, 60 or even 100 or 200 or 300 percent is a not more uncommon rate of interest in the interior of India, as exacted from country ryots by moneylenders, than a rate of 3½, 4, 5, 6 or 10 percent at most is in England, is the greater fear that of the conquest of India by the Russian or of the conquest of India by the moneylender?

Were it possible that England should reconquer India by enabling the indebted country ryot to redeem his lands and pay off his debts, lending him money at 7 or even 10 percent; by introducing factories, perhaps the co-operative store, for which the village community of India would seem the very soil; by opening cheap village courts, enough to place one within easy reach of every village, so that litigants may be able to go to the court in the morning and return home at night, and be thus subjected to the criticism and public opinion of their fellow villagers; by restoring courts of conciliation, for which also

India is the soil, for the settlement of class disputes, as well as courts of arbitration for the cheap and ready disposal of individual suits-panchayats, of these more anon--if England could thus reconquer India from the moneylender, what a glorious conquest that would be! ("A man would often lie in a distant court where nobody knew him, who would not do so in the presence of all his neighbours who knew the real facts." *Report on the Riots in Pune and Ahmadnagar.*)

According to the Hindu law, interest on a loan is never allowed to exceed the principal; that is, however long a term may elapse before the latter be discharged, more than twice the principal could not be exacted. The Bengal and Madras regulations limit the interest of money in those presidencies. The Bombay code does not limit the rate of interest. The banjas or moneychangers evade the Hindu law by obliging their debtors to sign *fresh* bonds for sums made up of the former principal and the interest together; and thus a debt runs on increasing *ad infinitum* through the instrumentality of fresh bonds signed by the ryot who is commonly quite ignorant of what he signs. "A system of registration," says the revenue commissioner of the Northern Division, Bombay presidency, "would check this in some measure by exposing the succession of bonds and showing the sums originally borrowed."

The holder of a decree exacts every year all he can find (little though that be) in the possession of his victim who is scarcely in a condition of solvency. At the end of a few years the poor debtor is shown a large account for interest and to escape being put into jail he is persuaded to sign a new bond for the balance of the old debt with interest thereon since the decree, so that the debt is never cancelled and goes on *ad libitum* unless the patience of the debtor becomes exhausted and he absconds, forsaking the country forever. And of course the moneylender repays himself for this loss by grinding yet more his other unfortunate debtors. The rate of interest is, under the present conditions of the sowkar's trade, in some degree determined by the risk of the worst cases.

The Hindu law favoured credit by making debts payable from generation to generation, but it was a part of that law, as has been said, that the interest demandable should not exceed the principal. But to enable courts to determine the amount of principal actually paid in loan, district registers should be established for the registry of all loans of money to be paid before the District Registering Officer, and the civil courts should only allow the recovery by judicial process of such sums as can be clearly proved to be principal paid and not the accumulated principal and interest of a debt *previously* adjudicated upon.

It is said that *thrift* is what must save the India ryot. We have heard of the horse being made to live (or die) on a straw a day, but we do not know that we ever heard before that the horse

ought to exercise "thrift" and save his one straw a day. Yet this is what it appears the country ryot has actually done. (He justified the secretary of state and died.) There is so little danger of pauperization that, in the Madras famine, for one who threw himself without need on the relief measures ten died in silence, almost unknown to our masters (*not like the wolf, "biting hard"*).

There is such an element of endurance and heroism that, quite unknown to our masters, during the greatest starvation and the highest prices, the hoarded grain remained in pits safe in the earth--none betrayed the secret--hoarded, not to sell again at the highest famine prices, but for seed corn against another failure of crop. And not till the present crops were safe has it appeared. This was by the better class of farmers. What thrift, what endurance, have we Westerns compared with this? And we in the West preach thrift to them. The "horse" literally "saved" his one straw a day for his children's sowing. And they call these people not thrifty. It is the very heroism of thrift. Compare the people of some of England's big towns with their drunkenness, their vice and brutal crime, their reckless waste and unthrift, with the industrious peoples of India. Which is highest, even in the scale of civilization? A question not to be asked.

The indebted ryot--indebted, though, except at his children's marriages (and these will be shown not to be so extravagant as is often stated), he is the most frugal of mankind--and the usurious moneylender are pretty much the same all over India. But I see the "weekly statement" of the Madras Executive Committee, the 30th of March, reporting: "Within the last few days, the Hindu new year having come, the creditors have closed on their debtors and have sold everything belonging to them." "That will show the intensity of suffering." Indeed it does. Can nothing be done? Government is the first mortgagee on the land. It has all the machinery ready for lending: it would lend at 7 percent. But this is taken advantage of by the ryot in an almost infinitesimal degree. Perhaps in all India only a quarter of a million is out at interest in this way. The question is, why is the indebted ryot unwilling to accept the government loan at 7 percent and why does he prefer going to his own moneylender at five or seven or even ten and fifteen times that rate of interest? Is he afraid of putting himself in the power of minor officials of government? Is he afraid of offending his banker?

It is said, on government authority, in the last India Office Progress Report, that "even when, after floods at Ahmedabad, government sanctioned the advance of £1000 to poor cultivators *without any interest at all*, no one availed himself of the offer." And it is added: "*There are few ryots in a position to offend their banker.*" The great object of the moneylender is to evade repayment; if the season is good he lets the debt run on from year to year at 36 percent interest; and

this system is preferred by the cultivator *to the tedious formalities and rigid terms of repayment* attached to government advances." It is government which says this. Is there no procedure to obviate it? The same Progress Report speaks of "their" (the moneylenders') "heartless and unscrupulous action towards their debtors," and adds--it is the government who say this: "It is hoped that some amelioration may be effected in the position of the ryots by a modification of the present system of civil procedure."

One echoes the hope that the government is making good their "hope." But the bill now before the Legislature at Simla is not a promising hope. Is it true that the land is passing into the hands of the moneylenders? that three months ago, being the Hindu new year, this process was in great activity? that the ryot is absolutely in the moneylender's power? that the ryot's crops are not his own but the moneylender's? that all over India land is changing hands? that the moneylender sells the ryot up and gets his land for a song? No bidders appear against the Marwari decree holder; a nominal value is put upon the property by the creditor; and, in ninety-nine cases out of a hundred, the property is bought in by him at that nominal price.

What the Marwari is as a landlord may be seen from the Deccan Riots Commission Report, Appendix C. I wish I had room for extracts here. There is no such superiority in intelligence in the ordinary sowkar as would result in improved cultivation. In all that concerns agriculture the Kunbi ryot is superior to the Marwari moneylender and, if the profits of his labour are secured to him, is by no means wanting in industry or enterprise. By converting him into a tenant at a rack rent, these advantages are lost to the land without any compensation whatever. Some of the Marwaris who had accumulated the largest estates were persons who showed open defiance of the law. In civilized countries the lower agricultural class is very much at the mercy of those above it. This evil is intensified in India. And if the Deccan ryot is handed over to such landlords as the Marwaris of Párner, the last state of the ryot will be worse than the first. It is barely a generation in time since government began to divest itself of the powers of an irresponsible landlord for the benefit of the agricultural ryot. To allow these powers to be retransferred to a class with none of the traditions of the hereditary landholder, and probably the least fitted in the whole world to use them, is to sink the ryot into a lower and yet a lower depth.

In the same Progress Report it is stated--it is the financial commissioner who speaks: "That sales and mortgages take place to a large extent is not to be doubted. It is desirable that the landholders should, if possible, retain their lands and should prosper." Probably. It is in relation to the flourishing Punjab that this remark occurs.

In the Bombay ryotwari tenure the independent small landowners, who ought to be the most prosperous, are the most

miserable. Is England such a plutocracy that everything naturally runs to favouring money?

But let us favour money in the right way. It is little or not at all considered that whatever money there is in India runs to moneylending and not to manufacture or trade. The tacit encouragement given to usury by our existing law tends to transfer land to the moneylender, a transfer by which, as can be shown, the land does not gain. The landlord is still, of course, the usurer, making the hardest terms possible with his tenant, who is also his debtor and often little better than his slave. But not only this; this same encouragement ties up the capital in usury instead of letting it flow into commerce, India's great want. In India *capital creates pauperism, not prosperity* through manufacture, trade and commerce or new industries. No one flourishes but the capitalist and *his* flourishing means power of absorbing other people's property. It means reducing to utter misery and slavery a well-to-do and hardworking peasantry. It means that the enormous interest *guaranteed*, one may say, by our own courts to the usurer--with no risk but that of being murdered and this but very seldom, only when the debtor gets desperate--prevents the moneylender or capitalist from doing anything useful with his money, from putting money into honest enterprise, manufacturing, commercial or even agricultural. It means that the use of riches in India is to make the *people poor*, to make them beggars and even to sell them for slaves.

Does the official network of petty administration require improving? In cases where ryots are said to be unwilling to accept the water for irrigation purposes, *why* are ryots unwilling to accept the water? Because it puts them in the power of public works overseers and other minor officials who are all natives. Are bribery, oppression, corruption, bullying the rule, the universal rule with these? They have unlimited power to make themselves disagreeable--almost as much so as the moneylender--and must be bought off with a bribe. In the courts of law, in irrigation works, everywhere, the petty native official steps in and requires a bribe. The cultivator cannot take a single step towards getting justice done him of himself. For instance, our stamp laws meet and baffle him at every turn. He cannot possibly understand them and for every step he has to pay and consult a vakeel (a vakeel is a public authorized pleader in a court of justice), whose dishonesty and cheating is often second only to that of the sowkars. This in itself is almost certain ruin to him. (Deccan Riots Commission: Appendix. See also Mr Pedder's admirable article in *Nineteenth Century* for September 1877. I commend it to the reperusal of those who would see a true picture of this terrible state of things by an eyewitness.)

I come now to individual instances of moneylenders and their victims. The first indication of what led to the Deccan debtors' riots of 1875 is so characteristic that I open with it the saddest series that ever fell to a peaceful periodical to give.

It shows that the victims of the Marwari moneylenders are not limited to poor cultivators. It also seems to show that by the arts of peace the Marwaris might be ostracized and ousted, and the villagers might set up their own shops. This occurred in the village of Karde, in the Sirur Taluka of the Pune collectorate. A deshmuks (district hereditary officer) of good family and some influence, a relative of Scindia, who had made a large fortune, in Scindia's service, settled in this village and "fell among thieves," that is, into the hands of the Marwaris. Two of these, Kalooram and Bhuywadas, got decrees against him and Kalooram took out a warrant of arrest. The deshmuks gave Kalooram personal ornaments and the warrant was not executed. About four months afterwards some ornaments and property belonging to the temple of Vittoba at the deshmuks's house were attached, but at the instance of the villagers Kalooram allowed the attached property to remain in deposit with a third party for two months. It was then taken possession of by Kalooram. A third execution was issued on Kalooram's decree and the deshmuks's houses and lands were sold for a song, there being no bidders against the Marwari decree holder.

The consequences as related here are extracted from a vernacular periodical, which we might call the *Nineteenth Century* of Pune, of January 1875:

One of the sowkars of Baba Saheb (the deshmuks), by name Kalooram Marwari, obtained decrees against him from the court at Talegaon, put the deshmuks's house up to public auction and purchased it himself for 150 rupees (£15). Kalooram began to pull down the house, though the defendant agreed not only to pay rent for it but to pay his debts. Defendant "took to heart these proceedings" and collected together the village ryots when they came to a unanimous resolution that, as the Marwaris had begun to ruin them, it would be better neither to borrow from them nor to serve them or purchase anything from them in future. [FN:] (How much better!) This unanimous resolution of the villagers put the Marwaris Sachiram, Pratap, Shivram and one or two others to the greatest inconvenience for want of servants, etc. They therefore proposed to remove themselves to Sirur, with the help of the police, by 5 January 1875. When the Marwaris had loaded their carts with their goods and things, the villagers submitted a petition to the sarkar (government) that, as they had given grain to the Marwaris, these should not be allowed to leave the village until the government assessment had been paid by them. "How this application has been disposed of is not known to me."

One of the villagers has opened a grocer's shop at which all purchases are made: "Mr Editor, if the example of these villagers be followed everywhere and unanimity of the people secured, the pauperized state of our country will, I think, certainly disappear very soon."

So far the Pune paper, but the story does not, alas! end so well. Besides refusing service as water carriers, barbers, household servants, etc.--in which they were undoubtedly right--the villagers threw dead dogs, etc., into the Marwaris' premises and the moneylenders, retreating to Sirur, the taluka headquarters, petitioned the magistrate, representing themselves as in bodily fear of the villagers.

Five months afterwards, the actual outbreaks occurred in the Pune and Ahmednagar districts. But the remarkable part of these was the absence of serious crime. And in one instance at Damareh, where a Marwari's house was burnt and his leg broken, the rioters themselves saved him by dragging him out of his burning house. The object of the rioters was in every case to obtain and destroy the bonds, decrees, etc., in the possession of their creditors; when these were peaceably given up, nothing more was done. When the moneylender refused or shut himself up, violence was used only to frighten him. In every case inquired into, it appeared that the rioters supposed that the government approved of the proceeding, so deep were their injuries, so strong their trust in us. (The story of this would seem too absurd to be believed even among an Indian peasantry. It was this: that an English *sahib*, having been sold up by a Marwari creditor, had petitioned the queen who had sent out orders that the Marwaris were to give up their bonds. Even the more educated believed that, on a report from India, orders had come from England that the Marwaris were to have their bonds taken from them, that the government officers would connive at the extortion of their bonds from the sowkars. The Mutiny of 1857 affords examples of similar beliefs gaining and holding their ground.) And shall we really not help them by reform, by law, by every means in the power of their law-abiding masters? In most cases the movement was a mere demonstration. It was not so much a rebellion against the oppressor as a attempt to disarm him by taking his weapons (bonds and accounts). The law-abiding spirit of the Kunbi peasantry was shown by their moderation under provocations calculated to produce "dangerous exasperation"--it is the government which says this. And the British authorities themselves allege these disturbances as melancholy proofs how intense were the grievances to drive so patient a people to physical force. (Report on the Pune and Ahmednagar Districts.)

For go to the Bombay Deccan for the deepest tragedies. In Ahmednagar a usurer has, like all the rest, made the helpless ryot sign any bond, having scarcely any knowledge of its contents and powerless to oppose any decree. The civil courts in reality back the fraudulent moneylender by assuming the creditor and debtor to be equals, whereas they are master and slave. A man borrowed of the usurer four maunds of jowari (a sort of Indian corn) worth 6 rupees. Two or three bonds followed and in sixteen months the borrower was sued for 72 rupees, which the lender got with costs--£8 or £9 or £10 for 12s. The court considered the

thing iniquitous but there was a bond and so they thought they could do nothing. There are thousands of parallel cases. The ryots cannot read or write, the moneylenders forge what documents they please or enter in the bond the most extravagant terms. And these documents are allowed to pass by the courts as "mutual agreements." The borrower has no protection whatever.

Here is a yet deeper depth in the collectorate of Sattara, where the people are the best off, also reported by a government officer (an assistant collector). At Visapur one Appa Rowji owed money on a bond to Hirachand guzur. (A guzur is a trader or dealer from Gujarat.) Hirachand threatened to sell him up but promised not to do so if Appa Rowji would get one Appa Malli to go bail for him. The good-natured friend consented and passed a bond for 200 rupees (£20) to the guzur, giving as security for payment his whole house and land. The agreement was that Appa Rowji should at the same time give to Appa Malli a bond of 400 rupees with his land as security. Other money was owing by Appa Rowji to Appa Malli, which made the whole amount up to 400 rupees. This bond, however, was never forthcoming. Time after time Appa Malli was put off. But the guzur was not put off. He lost no time in enforcing *his* bond. He went through all proper proceedings in the civil court. This Shylock was entirely within his bond. And there was no Portia to save poor Appa Malli. His house and lands were seized by the law and given to the money-lender who, adding insult to injury, gave them to Appa Rowji to cultivate. Appa Malli, despairing of all redress by law, waylaid Hirachand guzur and murdered him in open daylight before several witnesses. Appa Malli, so far from concealing anything, courted the fullest inquiry into his money transactions and confessed the murder. He was of course hanged.

Is it thought that this is a solitary instance of this class of maddening wrongs? Extortionate usury, its name is legion. Hear the government officer's remarks: *The ryots learn by bitter experience that they have no chance of obtaining redress in the civil courts, as at present constituted, against the more cunning sowkars* (moneylenders). Without fear for the present or hope for the future, they turn upon their oppressors. Year by year the little independence that is left to the ryots is gradually passing away; and if nothing is done to stop the process, in a few years the whole body of the cultivators will be reduced to the position of mere labourers.

The undue pressure of the land assessment has something to do with this. It is almost out of the question for the cultivators to turn produce into silver without the moneylenders. Some collectors think it would be wise to allow the ryots the option of paying their rents in kind, as in former times. "By no other means, I fear, can the power of the moneylenders be broken." (Deccan Riots Commission Report.) If an administration may have unwittingly brought an ignorant peasantry into such a state as this by requiring an assessment to be paid not in kind

but in money, it being utterly impossible for the cultivator to get coin except through the moneylender, it seems rather a sorry jest for an administration to say that it cannot get him out of it--that the results of any fixing of rate of interest by law, of any usurers' act, of any pawnbrokers' act, would be "demoralizing." (See Deccan Riots Commission: Appendix.)

If we have the misfortune to sink a ship with its company of living souls and all its precious freight in deep waters, we do not say that any attempt to prevent similar terrible accidents and to save what can be saved of this would be "demoralizing," that "painful experience" will teach them "prudence," that "the suffering is justified by the results of its teachings upon the sufferers." We hold inquests and inquiries, and we do not rest till we have discovered the causes and how to remove them. Here is a shipwreck, utter, disastrous, of some not hundreds but millions of souls: it is a shipwreck which is repeated every year. No hand is stretched out to save. It is a shipwreck which will be repeated, more disastrous, more complete, if that be possible, every year. It is not a famine or storm-wave induced by the elements, which comes once in a period. It is the utter demoralization of two races: the race that borrows and the race that lends. But no one holds the inquiry. Yes, one commission holds it: the Deccan Riots Commission. But none ask for the report. No one Englishman in Parliament or press has asked the result. There is not a single member of Parliament who has called for it. We do not care for the people of India.

I proceed with the account of the shipwreck. In the collectorate of Dharwad a very large proportion of the cultivators have parted with their occupancy rights: like Esau, they have sold their birthright for a mess of pottage and are now cultivating either as sub-tenants paying high rates, or upon, to them, the most ruinous system of "kore tenancy," under which the ryot cultivates the land and hands over to his creditor the bulk of the produce. The moneylender is in fact becoming the small grasping zemindar of the Bombay presidency, so proud of its ryotwari settlement, so contemptuous of the Bengal zemindari settlement. But the moneylender, or in other words the extortionate usurer, is become the occupant and owner not only of the land, but of the ryot.. It is not only by rack-renting but by constantly drawing on the debtor-tenant's labour in addition to his rent that the moneylender lives. He is worse and more exacting than the more powerful Bengal zemindar.

Take all the villainies and frauds of the preceding and following instances, multiply *ad libitum* and add to the sum the crowning villainy of all, now to be recounted, and you will have the history of the man the murder of whom is now to be told. In Gujarat a moneylender was murdered on the high road in open day by hired assassins at the instance of his debtors, two of whom were headmen of villages. But besides the quite common villainies he had committed, it was proved in open court (the Sadar court in

their criminal capacity) that the price of staving off the creditor's demands had been the dishonour at his hands of the wives and sisters of the peasants who were indebted to him. This is recorded by the court in passing sentence. In the Solapur collectorate, at the other end of the presidency, a moneylender was murdered by some of his debtors, exasperated beyond endurance by the usual grinding oppressions, in the midst of his village, in broad day, among a crowd of his neighbours. All these murderers were of course hanged. The remark of the Revenue Survey commissioner upon these two cases is that they are but aggravated instances of the usual relations between moneylender and cultivator. The cultivator, proverbially long-suffering, accustomed to ill-usage at all times, yet is goaded at last, having lost all hope of redress from our law or our government, to redress his wrongs by murder and be hanged for it. Even his patient and peaceful nature is roused to desperation by the deeds of such men as these moneylenders. This is the government officer who speaks, not I. (Report of the Deccan Riots Commission.)

What is another and most common means of oppression in certain parts of Bombay presidency? Thousands of instances might be given, resulting from the relations brought about by the action of the courts of civil justice (or injustice) between the moneylending classes and superior holders cultivating by hired labour, and bheels [hired tribal labourers] and members of other rude tribes indebted to the former under various forms of obligation.

Guzur has a bond on stamped paper, purporting to be executed by his servant, acknowledging loan of a sum of money the man can never by any chance repay. Awtya (Awt or aut or aoot is a plough) shows a disposition to leave [the] guzur's service. Instantly his master files a suit against him in the civil court for amount set forth in bond. Awtya, knowing he has no chance of success, does not appear to defend the suit. The court accordingly decrees against him and a distress warrant follows. The poor wretch's few household goods are seized, his wife's little ornaments are taken and he himself is carried off a prisoner to the munsif's court. There his master, having made him utterly helpless, offers him his choice of returning to work or going to the Dhulia jail. He returns to service with his liabilities increased by costs of suit, of his own arrest, etc., and with no proper agreement with his master. It is no part of the court's duty even then to see that his master is bound down to treat him fairly. He serves on for a few more months, or perhaps years, on a pittance of grain and the smallest covering of clothing until, tired out, he again strikes work. Again his master rushes off to the civil court and this time the bheel is not even invited to have his say; another distress warrant is issued without further inquiry. The first the bheel hears of it is from the sepoy come to arrest him. And so it goes on from year to year. What is this man but a slave? He cannot appeal to the judge (not to mention that the judge's court

is eighty miles away and months must pass before his complaint can be heard) as, even if his friends did provide the money, he did not defend the suit originally brought in the munsif's court. He is a mere chattel, to be disposed of whenever his master may want money. It is a common occurrence--hundreds of instances could be produced--for one guzur to sell his awtya to another under the pretence of a transfer of the awtya's debts. A well-encumbered bheel, with a decree of the civil court out against him, is a more valuable commodity in the West than one whose liabilities are smaller. (Report of Deccan Riots Commission: Appendix A.)

Here is a very common instance of another and most fatal form of moneylending to bheels. A guzur advances forty rupees to a bheel to buy a bullock, on the understanding that bheel and bullock are to work on the lender's farm, bheel becoming a partner (gowandya) to the extent of half a plough. A bond is made out for the amount advanced, plus 25 percent premium, plus a further amount on account of old debts unjustly claimed. Interest at the rate of 24 percent is charged on the whole amount entered and at the rate of 50 percent on the grain advanced for bheel's food till harvest time. The guzur takes the bheel's labour free for his share of the plough. He keeps the accounts and manages the sales and cheats bheel to his heart's content in the division of the produce. So much so that--it is an assistant collector who reports--this gentleman remembers but two cases in which a gowandya's debt was not *increased* at the end of the year, according to the guzur's accounts, though no one of the bheels ever had more than food and clothes from his partner the guzur.

At the end of the year there is a pretence of adjusting accounts. The first year bheel is put off with the argument that he has to pay for his bullock; next year, too, he gets nothing but clothes and food, and is told he has still something to pay. He asks for a settlement of his account and as a preliminary he is sent for a new stamped paper. His master and two or three "respectable" "*patels*" meet and talk his affairs over. (A patel is the headman of the village who has the general control and management of the village affairs, is head of the police and--this is not ironical--exercises to a limited extent the functions of a magistrate. In some of the cases of fraud I give, the biggest villain was himself a patel. At all events he generally takes care to be "in with" the patels.) A few soft words are said to him. (Of all natives the bheel is the most trusting, the most easy victim. No matter how badly treated, a little present, a promise, puts his neck in the noose again. In former times these same guzurs, after a bheel raid, invited the whole party to a dinner and debauch, as a preface to a settlement, and murdered them all in cold blood when helpless from intoxication.) The bheel is given money to buy his wife a new *sari* and a little liquor for himself. A new bond is made out, the contents of which he does not understand in the least, and he goes back to his

work, hoping for a bumper crop and better luck next year. He struggles on for another year or two and then, feeling that the state of things is very unlike partnership--his is all the work and none of the profits--he resolves to leave. Then for the first time he finds out that his partner, or rather his master, has his acceptance for two hundred rupees or more; that the bullock he had toiled for all these years is not his; and that he and all he has are at his master's mercy. The civil court is resorted to and, as in the case of the awtya, all his little goods are seized and sold, and the bheel becomes the guzur's slave.

Are instances of gross oppression of bheels, awtyas and gowandyas by guzurs and others wanted? Again their name is legion. I could fill not only this article but this number and all the numbers of this year of the *Nineteenth Century* and the nineteenth century itself with them. As many labourers, so many oppressions. As many moneylenders, so many frauds, multiplied by an unknown quantity. But room, not subject or inclination, fails me to give more than three typical cases:

HOGA BIN GAYTYA, BHEEL; EERJEE PATEL, GUZUR; PATEL OF MARWAD, TALUKA TALODA

Hoga says he has served for fourteen years and received only ten rupees and his food. Eerjee says that Hoga has worked for him for thirteen years; that he gave him thirty rupees when he first came and nothing since but food and clothes. He now holds his bond executed in 1868 for 175 rupees and has obtained a decree for that amount. The guzur says that his agreement with the bheel was for food only, so he has charged against him every year the cost of his clothes and that these charges, with original advance and interest at 24 percent, mounted up in 1868 to the amount entered in the bond. On its being pointed out to the patel (rather forcibly, I suppose) that slavery is not allowed by the British government and that thirteen years' good work is a very sufficient return for an advance of thirty rupees (£3), he was forced voluntarily to give the bheel an acquittance. This method of compelling voluntary agreement reminds one rather of an English mother who, upon being told that she ought to make her child go to school voluntarily, addressed the infant, stick in hand, thus: "If you don't go to school *woluntally*, I'll bray your brains out." But one very much wishes the method were oftener had recourse to on the moneylenders in the Deccan by government.

The British government does "allow slavery," though not by act of Parliament, nor by act of Legislature of the Government of India, nor of the Viceroy-in-Council, but rather by *want* of act. And the instances where the "slavery is" discovered and "*not* allowed" are the exception, and the instances where it reigns rampant are the rule.

BOODYA BIN KAGRA, BHEEL; RAMDAS PATEL, GUZUR OF NIZUR, IN NANDURBAR
Boodya is now about thirty years old. He has served Ramdas Patel all his life and his father served before him. When he was a boy the patel spent about forty rupees on his marriage. Beyond this

amount he cost the patel nothing but food and clothes, and served him for some twenty-five years, first as cattle-herd and later as awtya. Some five years ago the patel agreed to take him as a gowandya and advanced him eighty rupees wherewith to buy a pair of bullocks. At the same time he made him sign a bond for 200 rupees and held a lien on his bullocks and on the whole share of produce that might come to him in the course of his partnership until the amount were paid. Three years ago the patel sold Boodya to Nana Nundram, guzur of the same village, for 200 rupees and next year bought him back for the same amount. Ramdas now holds his bond for 172 rupees with interest at 24 percent, and the same lien on his cattle and share produce; and on his refusing to remain partner longer, seized his bullocks and grain, and threatened him with an action in the munsif's court and imprisonment in the Dhulia jail. Boodya then went to the first assistant-collector and on his remonstrating with the patel, Ramdas was obliged to allow that Boodya had been a good and very profitable servant and eventually restored him his bond and his freedom.

To show the extent to which bheels are cheated of their just shares of produce by their guzur partners, the patel's account for the current year as entered in his books (but not paid to the bheel) and the amount as admitted by the patel himself before the assistant collector, are given in the table below.

The assistant collector states that "this is by no manner of means the worst case of cheating in account that has come before him, that he rather gives it (query, as an example of the best) because the patel did admit the facts as stated."

My third instance will give the enormous expense to a defendant if, his case being so good that he seems sure of winning, he ventures to meet one of those suits in which we are told the aggrieved party is always sure of finding justice; the account is from the vakeel of one of the parties.

[table p805]

Value per As Entered in Ramdas Patel's As Admitted by Patel

<i>Maup</i>	<i>Account</i>	<i>before Collector</i>
Rupees		
25 15 3/4 maups	wheat	21 maups wheat
32 1 "	grain	2 " grain
19 1 "	linseed	1 " linseed
21 2 "	toor	5 " toor
6½ 2 "	aniseed	2 " aniseed
60 bundles	tobacco	80 bundles tobacco
16		11 maups bajri
16		4 " rice
12		1 " badli
		7 maunds hemp

NURYA BIN CHAMBARYA, BHEEL, OF SUMSHIRPUR, TALUKA NANDURBAR had

executed a bond for forty rupees in favour of gunputsing, sowkar and judoo bin hurjee, patel of the same village. He died some time in August last owning some land. Immediately on his decease his wife (his heir), being unable to cultivate the land, transferred it to Mittya bin Fukera, bheel, a connection of hers. The patel and sowkar brought an action on the bond and the crop (*bajri*--*bajri* is a smaller Indian corn) growing in Mittya's field was attached in satisfaction of the decree. It was alleged on the other side that the deceased Nurya had sown it and the court eventually decreed that such was the case and sold it for the benefit of the plaintiff, the defendant obtaining nothing from the court for all his labour in tending, weeding, watching, reaping and stacking. And besides he lost his market. The price of *bajri* during the season was 16 rupees. When the crop was sold the price was but 12½ rupees, and besides he was ruined. The unhappy defendant had thus to pay by decree of court nearly £16 on a bond of £4 and we say that we want to induce the bheels to cultivate!

I have given only three instances, taken as three types, but almost at random. There are cases so much worse that "it is perfectly sickening," as the principal bheel agent in Khandeish reports, "to sit and listen to them."

Some few more observations: We are invariably told of the "hopeless" "recklessness," "improvidence" and "extravagance" of the Deccan ryot as constituting a bar to every improvement. His recklessness is necessity, necessity induced by a rack-rent assessment and by the sowkars, backed by our own civil courts, making him forever roll his stone, like Sisyphus, uphill. His extravagance is limited to an occasional marriage festival, said rarely to exceed fifty rupees and never seventy-five. And these occasions occur seldom. His imprudence is no more than that of all uncivilized races who live only in the present. And does the peasant or even the artisan of our civilized race rush spontaneously to lay by in a good year to meet a bad one? And do we consider him "hopeless" or do we multiply government savings' banks, co-operative stores, coffee public houses and the like to save him--though not so much as we ought?

	Rs.	Annas	Pie
Original claim, principal and interest	40	0	0
Costs in the case	11	0	6
Durkhast stamp		1	0
Batta for executing warrant	1	0	0
Security stamp	0	8	0
Auction notice, first time	4 annas;	0	12
second time	8 annas		0
Cost of guarding <i>bajri</i> after seizure	16	0	0
Revenue assessment (one instalment)	12	4	0
Managing Karkun's pay	8	0	0
Threshing the <i>bajri</i>	9	0	0
Carting <i>bajri</i> to the Court	9	0	0

Brokerage 8 annas; cart-hire of bajri from			
threshing-floor	2	0	0
Storing of bajri, guards' pay after bajri brought			
to court	18	0	0
Defendant's expenses in defending suit	28	0	0
Total	157	9	6

The results of the commission's inquiries show that undue prominence has been given to the expenditure on marriage and other festivals as a cause of the ryot's indebtedness.... In a course of years the total sum spent in this way by any ryot is not larger than he is justified in spending on social and domestic pleasures.... The constantly recurring small items of debt for food and other necessities, for seed, for bullocks, for the government assessment, do more to swell the indebtedness of the ryot than an occasional marriage.... *Ancestral* debt is a chief cause of the ryot's indebtedness. (Report of Committee on Pune and Ahmednagar Riots.)

We are told that education will raise the ryot out of this Slough of Despond, out of this Shylock's hands. At the rate at which education is going on now, it will be a long time first, about as long as it takes to create out of a nebula a world. Do we supply the means of education so fast that we expect anything else?

This was already written when important evidence by a collector in the Bombay presidency unhappily confirmed every previous misgiving. He says that in his collectorate:

The general condition of the people is, as a rule, at the centres of trade, satisfactory. In the agricultural portions the reverse is the case, the cultivators being more or less involved in debt which, with high rate of interest charged--the result, too often, of *fictitious bonds*, combined with the facility with which *civil courts decree against* them--are fast tending to their holdings or land being alienated from them, and they merging into the position of mere serfs; they being permitted by their rapacious creditors still to cultivate their lands, on payment of rental, barely sufficient to support them and their families. The state of these classes of the population was urged some three or four years ago on the attention of higher authority and the adoption of remedial measures suggested for their protection. The question though was stated to be one which *education* alone can in course of time overcome; *when* the remedy may be expected to reach these classes is evidently still a future uncertainty far distant, *if the measures taken to impart education* to these classes be regarded. Unless some other more feasible remedy be adopted, there is little doubt but that the land tenure in the course of years in this district will largely assume that of rack-rentals. (Appendix to Deccan Riots Report.)

"The remedy is education," which is much like saying, education

is a sufficient remedy because it is not. We give these people laws and institutions fit only for an educated people; and then we say, they are not educated, therefore, these laws are enough. A feeling of pathetic and sympathetic respect overwhelms one when one sees these collectors and magistrates labouring so hard and so well, often with such an insight (which they alone can have) into the condition of their charges and into its causes, and wholly powerless to remove, sometimes even to palliate these causes, while the only remedies urged upon them are those they know to be either none or to be impracticable.

We are told that the ryot has the remedy of English justice; this remedy and that remedy, our courts, and the rest. He has not. A man has not that which he can't use. As one of our noble heroic class of Indian officials well says: "You might as well put a revolver into an Andaman Islander's hand and tell him to take his remedy on a tiger with it. The man doesn't know how to use the remedies he's ironically credited with and if he did, he has no ammunition. What he does is to go with his case to the nearest magistrate, who is obliged with inward rage and shame to tell him he can't help him, and retreats into his tent to shorten the disagreeable interview, while the unlucky petitioner is turned away by the peons, vociferating that there is no justice in the country." (Report of Deccan Riots Commission: Appendix.) And no more there is for him. What is this jargon about "security given by English rule" when there is no security that a man shall not any day be made a slave? The same evidence in this report says that to base a system (in the Bombay presidency) on the principle that "every man can take care of himself" works as would a factory of which the engineers should assume wood to have the properties of steel.

Hear what the government itself says but does not do. Once when a revenue commissioner brought the matter before the Governor-in-Council, the Governor-in-Council recorded the following resolution. He "entertains no doubt of the fact that the labouring classes of the native community suffer enormous injustice from the want of protection by law from the extortionate practice of moneylenders. He believes that our civil courts have become *hateful*" (this is the word of the Governor-in-Council) "to the masses of our Indian subjects from being made the instruments of the almost *incredible* rapacity of usurious capitalists. Nothing can be more calculated to give rise to widespread discontent and disaffection to the British government than the practical working of the present law." Could the greatest orator have opened the matter more forcibly than it is opened by this resolution? "The attention of the Legislative Council on the subject should be requested and"--what is to be done?--"copy of the revenue commissioner's letter forwarded for their consideration." (Report of Committee on Pune and Ahmadnagar Riots.) And so the matter drops.

What are these civil courts which the Governor-in-Council

declares "hateful" to the people, and the "instruments of," not the protectors from, "incredible rapacity" and "usurious capitalists"? The civil courts make procedure the whole question, right or wrong is put on one side. As soon as the debtor has acknowledged his signature, it is all over with him. A criminal court investigating the same transaction would discover that the signature was indeed his but obtained by fraud. It is the commonest thing in the world for a bond to promise the payment of money which never has been, and which both parties very well know never will be, paid to the cultivator; for a man to sign as he thinks an acknowledgment of ten rupees and to find himself condemned on his own signature to pay a hundred rupees "with costs," and even for the creditor to avoid by subterfuge the payment of a single pie of the loan for which he holds an acknowledgment conclusive in court. This is the civil court, or rather the law which that court has to administer. The criminal court is cheap; the civil court dear. The criminal, or at any rate the magistrates' courts, where the procedure always begins, are expected to find out the truth by all means in their power. The magistrate is responsible for justice and no excuse is accepted if he, by his own fault, fails to do it. The magisterial courts work under a system of cheap appeals and constant supervision.

The ruin of the cultivators, the brigandage amounting to open rebellion, the disturbances caused by sheer desperation and almost every difficulty encountered in levying the revenue of government, are caused principally by the sheer inefficiency of our civil courts for the only purpose which gives them a *raison d'être*--the administration of common justice between man and man. (Deccan Riots Commission: Appendix.)

A man said: If an Oxford undergraduate gets into debt, you help him by right of his folly; the courts take his part against the "usurious, grasping moneylender." The court of Chancery, says the report on the Deccan riots, feels itself justified in refusing the help of law to a London moneylender who has taken advantage of the "weakness and necessities of the defendant" by imposing on him terms which would be *moderate* in Ahmadnagar. What are the English young gentleman's "weakness and necessities" compared with those of the poor Indian peasant, guiltless of letters? And how is the ryot served by "English justice"?

In the civil courts the woes of mankind are supposed to be curable by passing decrees.... The pressure of work prevents the judges from seeing how those decrees are executed, while their method of conducting business makes them all but inaccessible to poor and ignorant petitioners who find all other officers sitting at the tent door.... A return of the percentage of processes served by each peon (a peon is the inferior officer of the court; like all others he may be called not an officer but a bride taker) of all committed to him for service would be a surprising

document. (Report of Deccan Riots Commission: Appendix.) On renewal of bonds the creditor bribes the court subordinates *not* to serve the notice on the debtor.

Nay, in two ways we have ourselves been one main cause of the cultivator's miseries, though most unwittingly. The facilities for recovery of debt offered by our civil courts called into existence an inferior class of moneylenders dealing at exorbitant rates of interest with the lower class of agricultural poor. The value of the ryot's title under the Survey Settlements came to be recognized; his own eagerness to extend his cultivation grew; a fresh start was given to the moneylender. Thus a stimulus to borrowing was actually given by our Survey Settlement together with a stimulus to lending by increased facilities for recovery. (Report.)

One more word about the present urgent state of things. The doings of the Marwaris far exceed the limits of fair trading and it is not so much their object to trade with the ryots as to get them by fair means or foul (how often fair?) into their hands, so that they may use them as tools to make their fortunes. (Report of Deccan Riots Commission: Appendix.) This is not I who speak, it is a superintendent of Revenue Survey. "Three fourths of deeds between poor and rich men in this country are false, and the law... encourages fraud and forgery." Again it is not I who speak, it is a high government officer in the Appendix of the Deccan report.

Is it possible to lay bare a more hideous state of things?

1879

"Irrigation and Water Transit in India." Three letters to the Editor of *The Illustrated London News*, 10 May (dated 28 April) 1879, 74: 450; 24 May (dated 29 April) 1879, 74: 495; 31 May (dated 27 May) 1879, 74: 522. [9:844-60]

[1]

28 April 1879

Sir

You have already been so good as twice to admit observations of mine on irrigation and water transit in India in connection with famine-the last time in July 1877, as regarded the Madras presidency and the late terrible famine. May I offer now a few remarks, correcting also two statements then made by me?

That dreadful scourge of famine is now over, it is supposed. Ah, would it were! But scarcity is returning, which the poverty of the people, not yet recovered from the money famine which followed the grain famine, may convert, but for timely rains, into another disaster.

A magnificent work has been accomplished by the duke of Buckingham, extending the east and north coast canals, or rather connecting the canals north and south of Madras, and thus completing water communication all the way from Kakinada on the north, in the Godavari districts, to Madras in the south and south of Madras-a distance of about 450 miles. There was, it is

true, a break of eight miles at Feringhee Dibha, but the canal must now be open all the way. A passenger boat, built at Kakinada, has arrived at Madras. The Buckingham Canal will soon become the main thoroughfare for traffic between Madras and the north coast. When flat-bottomed steamers are placed on the canal, then we shall have speed as well as cheapness. But it seems strange to open the canal without having steamers ready at the same time. Would they treat a railway thus? There will be an immense saving of expense in the movement of troops by the canals.

On 27 January 1879 in the evening a procession of seventy or eighty boats issued from the Junction Canal near the Marine Villa in Madras and passed silently up the Cooum river (a river till lately of most unsavoury and unhealthy reputation), underneath the Government-House Bridge, by the General Hospital and away into Cochrane's Canal. They who saw it say that, in the light of the setting sun, it might well have been taken for a scene on the Grand Canal at Venice. Even the top boats gleamed like gondolas and the boatmen, with their long bamboo poles, might have been the gondoliers. The boats carried 1000 souls and their appurtenances, belonging to the 38th Regiment of Native Infantry, on their way from Trichinipoly to Secunderabad--a great part of the journey to be easily travelled by the Buckingham Canal. (For an account of this see *Madras Mail* of 28 January 1879.) If Canaletti is not here, will not the *Illustrated London News* give us a sketch of this beautiful scene?

And now, not for the picturesque, but for policy. Let us but have the means of moving troops and military stores by water north and south of Madras, and the Coromandel coast becomes almost impregnable, for an enemy could scarcely land his troops without already having a landing place in his possession. In other words, he can land them if he has landed them. The coast canal enables us to send troops and guns to prevent him doing so. For strategy as for commerce, the present water communication is invaluable.

As to expense, it is almost nominal. On the present trip, notwithstanding the small supply of boats available, each sepoy was carried at the rate of seven miles for a penny, each follower at fourteen miles for a penny, while the lowest passenger rate, coolie class, on the railway is four miles for a penny. The canal can now be used where coasting steamers, carts or the railway had to be employed.

It is reckoned that, with steamers similar to those on the upper Godavari, men could be moved at the rate of twenty miles for a penny at ten miles an hour. There is nothing to prevent high speeds on the canals, but we want high speed only for a very few passengers and the mails. As to goods traffic, on the Erie Canal, where they carry two or three million tons a year, the speed is two miles an hour. On the line from Calcutta to the Burhamputra, nine tenths of the traffic go by the river's 400

miles, averaging forty days and, as the direct distance is 130 miles, the average speed is a little over three miles per day. On this coast canal there are only nine locks between the Godavari and Madras, and of these three will be open most of the year, so that there will be no objection to trains of boats drawn by one steamer, which will make the cost at low speeds extremely small. On the Forth and Clyde Canal, at six miles an hour, with twenty locks in forty miles and short trips of only forty miles, the cost of carriage is but a penny for seven miles per ton. It offers the cheapest line of communication between the northern parts and the chief port of the presidency, where the shipping of cotton will be greatly facilitated when the harbour is finished. Guntur, in the Kistna district, is the centre of a large cotton trade; its port is Kakinada, 150 miles off. In the Kistna valley alone are about 100,000 acres of cotton lands; the exports of cotton from Kakinada average about 90,000 cwt a year, besides rice and oil seeds. The trade on the north coast canal was 300,000 tons a year before the Buckingham Canal was opened. What will it be now? Guntur is 250 miles from Madras, the way is now opened by water. A gentleman and his wife arrived at Madras from Guntur, travelling by one of the canal top boats (a clumsy old style of boat worked by men). The journey occupied four or five days and the trip is described as very pleasant with plenty of shooting. The fare for the above journey cost 40 rupees for two persons (of course, with all their servants, goods, etc.).

On cheap water communication depends the vast American trade. Now that Madras has cheap water communication, what the trade will be can scarcely be overestimated. But when the quality and the quantity of the dry crop cotton produced by India is raised by irrigation and improved culture to vie with that of Egypt and America, what may we not hope?

In January of this year, the Buckingham Canal being open from Madras to 200 miles north, where the break of eight miles occurred, three kinds of boats already plied for hire--a small provision of seven or eight cabin boats (budgerows), top boats (that is, with a covered space in the centre) and barges or cargo boats. For the first 200 miles the canal runs within one or two miles of the sea, on the other side a sandy ridge. Pleasant "topes" (groves of mango or cocoa nut or tamarind), good water and supplies for halts, good shooting and fishing (without gamekeepers interfering) for sportsmen and sea bathing in the back waters. But some villages mark "bad water, place feverish" as halts to be avoided. A traveller's bungalow, post office and salt superintendent's cutcherry (court) mark luxury and the great station, as well as the terrible salt tax, alas! And there is the metalled road inland. "Good water *one mile* inland" sounds uninviting. Then comes the Penner River to cross, with its three branches and connecting canal two miles and a half long, and your boat is sailed or poled across. A large village, large bazaars, good tope and camping ground, water good, travellers' bungalow,

treasury, post office, police station and sub-magistrate mark civilization. Shallow rivers and deep rivers, 500 to 600 feet wide, you have to cross till you come to Feringhee Dibha, a wild desolate place, where was a Dutch factory 200 years ago. Here comes, or rather came, the break between Feringhee and the canal eight miles to the north.

Before the work could be completed... to the creek near Feringhee Dibha, information was received that his grace the governor wished to proceed from Bezwada to Madras by canal. Obstructions were hastily removed and two temporary locks built, so that in January 1878 the canal was available for navigation. Subsequently, as his grace's visit was postponed, the locks were removed and the canal run dry in order fully to complete the excavation. (Annual Progress Report, P.W. Department, Madras, for 1877-78.)

The canal now completed, the distances onward are: To Bezwada sixty miles, to Rajahmundry on the Godavari ninety miles, to the port Kakinada forty and from Bezwada to Masulipatam forty-eight miles. On the Bezwada and Kakinada canals the passenger boats have general cabins, sometimes for one hundred persons, and fore and aft cabins for well-to-do travellers. They can do fifty miles in twenty-four hours. It reminds one of old days in England or of Nile "tracking."

There are now 1300 miles of navigation in this system between Sironcha at the junction of the Godavari and the Wurdah and including the delta canals, besides one hundred miles above Sironcha, with only a transfer at the second barrier near Sironcha. On all these lines it is said that at least two large steamers a day each way might at once be run, making nearly 6000 miles of running per day for passengers alone. What the effect of this line of communication would have been in saving life in the late famine-grain being landed at every point of 700 miles and in any quantities-with employment for hundreds of thousands of people in working the boats, one does not like to think. But there appears little hope that it may not yet be wanted for this use. Had the eighty miles to connect this canal with the Tumbuddra canals been cut, 300 miles more, leading into the very heart of the suffering country, would have been open.

The Government of Madras has been blamed for not making this connection from Cuddapah to Nellore for the purpose of navigation. But the engineering difficulties are such as to have caused the abandonment of the scheme by the company and a careful review of the matter by government has not made it look better. It has to be carried through a high chain of rocky hills, to descend to the plains of the coast by a difficult pass. And if the canal were formed it is doubtful if water enough could be had. When it reaches Nellore, its proposed terminus, it is still some sixteen miles (as the crow flies) from the coast canal navigation, which would have required a canal with several locks, needing a constant supply of water for which there was no source

except during the rains.

To return to the coast canal, unfortunately left in abeyance for so long--twenty-five years--shelved and discussed again with every new governor and every new chief engineer; surveyed in 1855, again in 1857, actually begun in 1860, dropped; whole surveying business gone over again, sea level v. fresh water canal; municipality would not help in finding funds; shelved again in 1870. The canal was taken up by the duke of Buckingham government in the beginning of 1876 with the intention of completing it to the Kistna canals in five years. As the season advanced it appeared probable that labour might be abundant and plans were pushed forward and all necessary organization for supervision of extended works prepared, so that when the failure of the monsoon indicated the need for large works nothing more was wanted than to move the companies of sappers to the place to erect the sheds for hospitals, stores, etc., at the previously selected camping places. And an organization was complete, from the superintending engineer to the hospital attendant, before a man was employed and so much in advance of the wants that for three months the staff was in excess of what the numbers coming to the works required. The expectations were that 30,000 men would come. For months the members were not half that.

The reason of this was that, although the people during the famine forsook their village homes to an enormous extent for the chances of finding food and work, yet all these movements were in definite directions. The people from Bellary, where the famine was intensest, and Cuddapah were encouraged to migrate to the Buckingham Canal works on the sea coast of the Nellore district; but this line of migration being out of the usual course and across a barren hill range, without water communication from Cuddapah to Nellore, though the thing was tried, it failed and the trial was disastrous to the people. But thousands migrated with success to the Kistna and Godavari irrigated districts in the north and to Trichinipoly and Tanjore, the great irrigated delta of the Kaveri in the south and found there food and work.

I propose, by the kindness of *The Illustrated London News*, to tell next week something of the glorious part acted by the Godavari, Kistna and Kaveri irrigation during the famine.

The Buckingham Canal, notwithstanding outbreaks of disease amongst the coolies and damage done by the cyclone of May 1877, was successfully carried on and, owing to the careful previous organization, is now a complete water way.

To make up for previous scarcity of labour 19,000 coolies arrived almost unexpectedly in July, causing "great difficulty." The work, "for the most part, was carried out on task at little above normal rates."

All hail to the duke of Buckingham who has completed the gift of this wonderful boon--water communication all the way from Madras to Kakinada--the conveyance of troops and stores, of

native passengers and of heavy native produce by canal at cheap rates, the one thing needful for native trade--enormous increase of trade in cotton, rice and oil, as well as improvement in the article cotton itself, sure to follow the opening of a navigable canal through.

Coals are now obtained at some of the pits for three rupees a ton, so that when the water transit is opened to the Wurdah the cost of navigating the canal will be greatly reduced.

May we venture to give the duke of Buckingham joy, as we give India and ourselves joy, on the noble results which will be twofold and tenfold every year, especially when steamers have been placed on this grand work? Where, too, so much has been done, more may still be done.

To take up speech and time with *what can't be done* is unworthy of Englishmen. "We can't water from the rivers when there is no water in them and we can't water the steep slopes of the mountains." This is the cry. The slothful man says, "There is a lion in the way." The practical man sees *what can be done*. He sees the full rivers, the hundreds of millions of acres of level land. Instead of lamenting that "Water won't run uphill," he rejoices that it will run downhill and that we can get it at any level the land requires.

[N.B.] Since this was written the glad news has come in from Madras, dated 22 March, that "this last week we have had fine rain over a large area in south India. This will rejoice the hearts of the unfortunate ryots, stimulate them to early culture and ease the tightening markets in regard to food prices."

[2]

29 April 1879

Sir, In India famine does not altogether, alas! cease to darken this year's prospects. The Punjab is in great peril and parts of Bombay are only just, if at all, falling short of scarcity. Orders have most opportunely been given to begin earthworks on the Neera Canal as relief works. But it is much to be feared that the condition of Indian finances will check operations. The Indapur people, too, have been petitioning for the completion of their canal.

A plague of rats is the last misfortune, and a very serious one it is, following upon a plague of locusts. Famine consequences do not disappear for years, even if there be no fresh scarcity. In many parts of Madras you see in village after village from one eighth to one third of the huts a mass of ruined walls, with no sign of anybody belonging to such ruins. Of migration--that is, of corresponding additions to villages in neighbouring districts--not a trace.

Nervously anxious about the safety of our frontier, we lay the burden of a war [the second Afghan war] upon our people at the very time that they are perishing by thousands of hunger. God forbid! but we *may* have another terrible year before us. But for timely rains, already was famine again looming in Madras, over a part of the country stricken in 1877; and in the North-West

Provinces, Oudh and the Punjab, owing to the deficient rainfall, the crops stand in imminent peril of failure. There will be but scanty harvests, even if famine be averted. And what with the high price of provisions, the extra taxation which this war will render necessary and the impoverished state of the peasantry, a scanty harvest is equivalent to a famine under ordinary circumstances. The people have no money, no grain reserves, no work. It is little known that starvation won its million of deaths in the last famine in the North-West Provinces. What a fact that is!

The suffering we have inflicted on our own famished subjects by this costly war is appalling. The general seizure of camels has ruined, it is said, thousands of well-to-do families who, being engaged in trade, depended upon these camels for the conveyance of their merchandise to the proper markets. The price of provisions all over the Bengal presidency has risen to a height which has placed the scantiest means of subsistence beyond the reach of thousands. These die and make no sign. In helplessness, in uncomplaining silence, they lie down to die.

1. But what was the result of the irrigated lands in Madras, when tested by the "great teacher," famine? Was the relief afforded by the irrigated districts estimated? Did it suffice for themselves alone or also for others? Here are some of the results as given officially:

The irrigation works in the Godavari and Kistna deltas, besides supporting the population of their own districts and a great crowd of hungry immigrants from the surrounding country, and besides exporting over country roads an amount of food grain which the collector of the Godavari estimates at little less than the amount exported by sea, supplied very nearly one fifth of the food grain imported during the worst period of the famine and 44 percent of the food exported from places within the Madras presidency itself for the supply of the famine demand during the same time. Tanjore and Trichinipoly, like the Kistna and Godavari, supported their own and all immigrant population, besides exporting by road, as well as by sea and rail, but only supplied by these latter routes 9 percent of the food grains imported and 21 percent of the grain exported from Madras ports between 1 August 1876 and 1 October 1877.

For the Godavari irrigation works, after making all deductions for land revenue, charges for maintenance and collection, etc., "the remainder (£110,000), being net amount left to meet interest charges, gives a clear return of 14.9 percent on the outlay incurred up to the end of the year."

The revenue of the district has actually increased by £240,000 more; £110,000 is added *directly* to the revenue by irrigation. But the fact is that about £300,000 is due directly or indirectly to the irrigation, making 40 percent on the outlay. "In like manner," from the Kistna irrigation works, "10 1/3

percent clear interest on the capital outlay to the end of the year" is obtained.

It will be seen farther on that the "clear return" or "net revenue" from Godavari and Kistna irrigation works is put considerably higher by the "Annual Progress Report" "after careful calculation" and "special investigation." But so much the more reliable are the subsequent statements in the official paper, because clearly *within* the mark.

The Godavari returns are given by the "Progress Report" at 21 percent, which on £750,000 would be £150,000 a year. General Strachey's calculation, several years ago, was 28 percent and Mr Thornton, of the India Office, calculated 40 percent on the outlay. But when it is a matter of discussion whether an irrigation work returns 21, 28 or 40 percent, we may rest well content as to its success.

It is given officially that the gross value of the rice raised by means of the Godavari and Kistna canals during a year of famine when, to judge from the condition of neighbouring districts, there would not otherwise have been an acre ripened, "may be taken at 495 lakhs of rupees (£4,950,000) or *four times the whole capital outlay to the end of the year on the canal works of the two deltas...* the deduction for dry crops watered being considerably in excess of the reality and no account whatever having been taken of the value of these crops." (The italics are not mine, but those of the government writer.) These official statements of the export of grain and value of the crops raised are of the highest importance.

The united population of the two deltas of the Godavari and Kistna is assumed at about 1,800,000. But that of the Godavari district (not delta) alone was, in 1871, 1,600,000 and then rapidly increasing. And numbers of people during the famine flowed into a district where there was not only plenty of food but also plenty of money, enabling the landowners to make improvements. Overflowing funds and overflowing labour are the strongest inducement to private improvements. And the prosperous Godavari people had before this paid off their money lenders.

In 1871, the year of the census, the population of Kistna was 1,450,000. That of the whole districts, Kistna and Godavari, cannot now be less than 3,000,000.

If Godavari exported by sea and land together 250,000 tons of grain, it must have saved the lives [of] about three millions of people at a pound a day for 200 days.

2. As to water transit in the deltas of Godavari and Kistna, by official statement, "In the Godavari delta 425 miles of canal are now navigable and 495 miles will be navigable on the completion of the works. In the Kistna delta 286 miles of canal are now navigable and 320 will be so on completion of the works.... The canals of the Godavari and the Kistna are united by the Eluru Canal.... A large proportion of the Kistna produce passes down the Godavari canals to the port of Kakinada."

"During 1876-77, 108 passenger and 2093 cargo boats having a registered tonnage of 45,874 tons, plied on the canals of the two deltas. The ton mileage was equivalent to a goods train carrying about 76 tons net run along the whole length of open canal on each day of the year."... "The total cost of carriage would be $4\frac{2}{3}$ pie, or say even 6 pie, per ton per mile." (A pie is less than a halfpenny; 4 pie make an anna, which has a nominal value of $1\frac{1}{2}$ d; 16 annas make a rupee, which has a nominal value of 2s.) "The cost by cart on the bad roads of the deltas would certainly not be less than 3 annas, and by pack-bullock $4\frac{1}{2}$ annas per ton per mile, so that the saving effected by the delta canals during 1876-77 on carriage of goods alone must have amounted to at least 30 lakhs of rupees (£300,000).

All these are official statements, not mine. No wonder that the official paper adds: "Schemes for extending and developing the Kistna and Godavari works deserve the heartiest support of the Government of India."

3. Again, the government officer says:

The remissions of the government demand for land revenue form a very correct measure of the condition of a district during a year of drought. In the Godavari district, where the irrigation works are nearly completed, the percentage of remissions on the gross demand of ryotwari revenue during 1876-77 was 1.9; in the Kistna district, of which the irrigation channels are still very incomplete, 15.6; in Chingleput and Bellary, which are dependent upon rain and tanks supplied from local sources, the percentages of remission were 70.4 and 61.4.

Taking famines merely from the financial point of view, it is not only the cost of maintaining the famine-stricken through one or more years of drought-maintaining, did I say maintaining?-when, in spite of all our efforts, public and private, the deaths from starvation are counted, not by ones or by hundreds, but by millions. It is that money is not only going out from the imperial revenues but that money is not coming in. Think what a cutting off of 60 or 70 percent of revenue from the famine districts means! It is docking the revenue at both ends. This is what "remission," necessary, inevitable, means.

4. Still continuing on the financial question, it has been hotly discussed what interest, what profit can be rightly attributed to irrigation works. Secretaries of state and governments of India, as well as the public, have differed upon this and a system of accounting has been ordered, which shall really solve this question. The "Annual Progress Report," Public Works Department, Madras presidency 1878 is the first official document which gives us the result. It says:

It is only as regards the deltas of the Godavari and Kistna, and that quite recently, that a settlement has been made distinguishing between land assessment and water rate, but even here the principle of the settlement was a consolidated

wet rate, of which an arbitrary and uniform portion was called the water rate....

The question, apparently so simple, is really a complicated one, and wends its difficult way through "consolidated wet rates," "land and water gross assessments," "charges against works," etc. The "Progress Report" sums up:

The necessity for ascertaining with as much accuracy as possible the profits on such enterprises as the irrigation works in the deltas has been long recognized and special investigations have been instituted and are in progress, which have for their object, on the one hand, the summing up of the charges against the works, on the other the determination of the revenue due to the outlay incurred. For five out of the eight systems approximate accounts have been prepared, and the following abstract shows the results which are for the present accepted.

These follow and they give:

		Percentage of net revenue on capital outlay	
Godavari delta	- - - - -	21.25	
Kistna delta	- - - - -	15.48	
Kaveri delta	- - - - -	85.81	
Palar Anicut	- - - - -	1.01	
Srivaikuntam	- - - - -	3.65	

22.59

"No credit is allowed on account of land revenue."

The years given are years previous to those of the famine, when Godavari and Kistna works did such twofold and the hundredfold good service. God bless their author!

525,000 acres are under "wet" cultivation in Godavari delta, 246,000 in Kistna delta. 906,000 acres are under "wet" cultivation in the Kaveri delta.

Harking back to the official statement of June 1878, we find,

while the whole of the works in the Godavari and the Kistna deltas are being carried out at the cost of the British government and aim at the economical distribution of the available

supply on the most approved principles, besides providing inland navigation throughout the deltas, the Kaveri irrigation works in the Tanjore and Trichinopoly districts merely regulate, in a more or less imperfect manner, the distribution, broadcast over the surface of the country, of the freshest in the Kaveri river. The water is for the most part turned into spill channels or artificial cuts of such antiquity as to have assumed the appearance of natural channels, while private interests and vested rights of the most virulent type start up on all sides to oppose any but the most cautious attempts to improve on existing

arrangements.

The irrigation works in Tanjore and Trichinipoly have cost up to the end of 1876-77, Rs 1,353,430; and it would be very desirable to spend another fifteen lakhs of rupees on their improvements (£150,000). The remissions in Tanjore amounted to 5.5, and in Trichinipoly to 3.2 percent of the gross demand of ryotwari revenue during 1876-77.

This official paper discourages "calculations of interest upon outlay" in the case of the "Kaveri works, of which the capital account includes no allowance for the labour expended, in some cases centuries ago, on constructing the various channels of distribution, such as they are."

This, however, need not discourage us from spending another £150,000 on a district where the results have been so admirably large, the remissions so small.

Reverting to the same "Annual Progress Report" previously quoted, we see:

The Kaveri delta has the largest area of irrigation in Madras.... Across the Coleroon (a branch of the Kaveri) a weir called the Upper Anicut was constructed about the year 1834 and was one of the earliest of the great works planned by Sir Arthur Cotton. Its effects on the government and on the people of the Tanjore district have more than fulfilled the anticipations of the projector by securing a reliable supply of water and obviating the necessity (this must never be forgotten) for collecting annually or, in some seasons several times during the year, several thousands of the cultivators to form temporary works for the diversion of water down the Kaveri. The head of this river is 1950 feet wide and the bed level is regulated by a dam....

For full particulars see the "Progress Report" above mentioned and No. 561, Revenue Department, Madras, dated 9 April 1878. These two papers, if compared together, show the net return on irrigation works fairly chargeable to those works under the loan system, as distinguished from the gross return—that is, gross assessment on land and water, "dry" and "wet."

The proportion of revenue fairly attributable to irrigation is given from careful calculation, and the "resulting average rate of water cess per acre" is:

	Rs	Annas	Pie		
Godavari delta - - - - -	-	-	3	1	7
Kistna delta - - - - -	-3	2	1		
Pennair Anicut - - - - -	2		10	9	
Kaveri delta - - - - -	3	0	2		
Palar Anicut - - - - -	-	3		13	8
Srivaikuntam Anicut - - -	3	8	7		

The regular water rate in Godavari is 4 rupees. A great extent of land belonging to the *rich*, it is said, is watered free. We cannot deal, it appears, with a man possessing 5000 acres as we do with a man holding five acres.

Under the old works the tax on irrigated land is from 8 to 12 rupees. It used to be 20 in some places. This includes 1 rupee or 1½ rupee for land tax.

In the last "Report of the Public Works in Bengal" there is an account of the ill-conditioned people they have to deal with in Berar--so different from the sensible, practicable Tamil and Telugu people of Madras presidency. A great portion of the trouble they have had with Berar irrigation arises from this difference of race. But do the worst of them show such perverseness as the English did about the Suez Canal?

5. Shall we not by all means work out the deltas and the river margin where it is to be had? These are sure. These will pay. The development of the great deltas, richly, as we see. Shall we not also choose projects of inland storage and channel works, examine them thoroughly and cautiously, to the very bottom, but with the determination to do them justice and even risk those which are much needed, putting up with the temporary loss, if loss there be, for the certain good and future profit, remembering that not only are the people thereby secured from famine, but they also contribute to support famine districts? And not only this, but the government are secured from having to make enormous remissions of revenue. Even were the works slowly done, even did they last twenty years, it were right to do them. Some of the greatest works in the world have been done by the patient cumulative industry of a couple of generations (ten governors).

6. Statesmen will understand that the execution of public works is a perfectly distinct subject from the state of the finances. The finances are one thing, the investment of money is another. These two must not be jumbled together in one account. The more defective the finances the more urgent are public works, which alone can enable the people to pay a higher revenue.

It were impossible to touch upon the famine question without a burst of admiration for the heroes who inch by inch held the famine at bay for long months. Alas! if they were worsted, if it carried off its millions in spite of us, at their door cannot lay the blood of our fellow creatures. But some account of the famine heroes must be given elsewhere. The question is here how to deal with future famines and how to avert them.

The Famine Commission have now concluded their investigation and their report will be presented this year. If the investigation was undertaken, as there can be no doubt it was, not to quiet us by making a show of inquiry, but with a resolution to sift matters to the bottom and then to discover the proper remedies to be applied, and if the Government of India is willing and able, as there can be no doubt it is, to apply the proper remedies, we may confidently expect the greatest strides towards solving this great problem--how to meet, how to prevent famine-famine, not the result *only* of drought from the skies, but, perhaps, in some measure the result also of some drought in wisdom, never in good intentions, wisdom in our legislation and

government. Good intentions alone will not pave the way to prosperity. There must be good action too, not hasty and changed viceroy by viceroy, but action steady, continuous, to remedy blunders, if any such there be, in our land laws, in our civil procedure-blunders in keeping up instead of keeping down our too expensive army; blunders in governing India by departments instead of encouraging civil native professions and studying not only to admit the natives more and more into our administration, judicial, financial and professional, but to raise them out of corruption and oppression of their own poorer fellows; blunders in making our government education a training school and nursery for government clerks instead of returning our scholars to their own lives, improved for, and able to improve their agriculture and their trades; blunders in making the land pay all the school cess, so that the ryots pay, the richer classes profit. (In Bombay and Madras the poor agriculturists who can afford neither time nor money to send their children to school pay for those who can afford to pay for their children's schooling.)

We may confidently expect from the Famine Commission not to ignore but to point out abuses and how to remedy them. May God speed the work of the Famine Commission!

But, inverting what Mr Gladstone said last night in the House of Commons, with even more than the fire of his wonted eloquence, as to "what this nation (England) will do in considering its own interest and in making provision for its own fortunes," let us never forget that India can neither consider her own interest nor certainly make "provision for her own fortunes." She *must* look to us.

[3] 27 May 1879

Sir, The Indian plot thickens, and a fire is lighted which, God be thanked, all the efforts of all the world will not be able to put out. I do not allude to the Pune fires--sad witness of our broken promises to the indebted ryots of the Deccan, when these rose up, four years ago, against the oppression of the money lenders. God forbid. We are now going to redeem our promises, to fulfil our responsibilities to India. We English have to learn a new language to India. Her day is come. The true friends of India have not only convinced the House of Commons, they have convinced the government also. But government ought not to have wanted convincing. They ought to have known it all before and taken measures to meet and remedy the evils which they now so fairly admit. At last they have spoken out the truth.

But to our business. It is little known that in 1877-78 above four millions of acres less than the ordinary were cultivated, or about 20 percent, in Madras. Agricultural prospects are now there improving, owing to the late good rains. One more instance of life saved by irrigation during the famine. One more instance of returns from irrigation works, not only during the famine, and I have done.

1. Kistna, Trichinopoly, Tanjore and Tinnevelly are composed

of irrigated and non-irrigated taluks [districts]. In the *irrigated* taluks the trial census was taken and these areas showed, as was to be expected, an *increase of population*, aggregating about 8 percent in five years. But the *dry* parts of the districts suffered severely from famine, as may be seen from their death rates *registered*. (The *registered* deaths in Madras presidency may be estimated at about one half of the actual deaths in ordinary years and considerably less than that in famine years.) Thus:

Non-irrigated taluks	Death ratios 1877	Average of five years
Trichinipoly - - - - -	66.6	- - - - -
	- - - - -	19.7
Kistna - - - - -	25.2	- - - - -
	- - - - -	16.9
Tinnevelly - - - - -	40.4	- - - - -
	- - - - -	18.9
Tanjore - - - - -	37.4	- - - - -
	- - - - -	32.3
Mean death rates	39.7	19.7

2. Lord Napier and Ettrick, formerly governor of Madras, draws attention particularly to

"the Srivaikuntam Anicut (weir) in Tinnevelly, as a representative delta work on a small scale." At present it only gives 3.65 percentage of net revenue. And people cry, It hardly pays. But see how shortsighted is this cry. It is, on the contrary,

an example of the profits which may be expected from irrigation works of a very simple character in the present times under present prices. The work is to irrigate about 32,000 acres in an ancient irrigation district on either bank of one of the venerable old Indian rivers, Tambrapani, used from time immemorial as a bread winner. Acres, 30,000 under cultivation; outlay up to April 1878, 919,947 rupees. But there are improvements contemplated. We may assume that the whole work will be perfected and completed within eleven lakhs, perhaps for little more than ten. But let us be *liberal*. Add to this sum a round sum on account of interest due for money borrowed and unprofitable for eight years, in whole or in part, during the construction-say (£10,000) one lakh. Total outlay from loan for expense of management, repair, etc., net revenue of return for an outlay of twelve lakhs, one lakh or between 8 and 9 percent. But there are still about 2000 acres to be brought under water. It may be fairly affirmed that, in round numbers, the return on capital expended will be 9 percent. But the capital is borrowed at 4½ percent; 4 3/4 are therefore available to

extinguish the capital debt.

When this is done "the Srivaikuntam Anicut will therefore pay the government of India a net increase of revenue of £10,000 a year for ever, besides all the indirect revenue accruing on the secured prosperity of the people living on and cultivating 32,000 acres of wet land. There will be very little charge for repairs and no risk of injury, the work being so familiar and simple."

The moral to be drawn from this is plain. But the day is come when many a new and old moral has to be drawn for India by us English at home--at least by those of us who are neither hard-hearted nor selfish. May we be guided aright.

"A Missionary Health Officer in India." *Good Words*. Part I: July 1879: 492-96; August 1879:565-71; Part II: September 1879:635-40
[10:265-96]

A MISSIONARY HEALTH OFFICER IN INDIA

PART 1

I For years he did duty as the minister of the laws of God for life and death: the last year was the year of the great famine.

"Was there a man dismay'd?

Not tho' the soldier knew,

Some one had blunder'd."

Throughout all the blunders, these soldiers of the cross indeed--that is, soldiers of the famine--stood to their posts, or rather rushed from post to post; if any thing went wrong in the famine relief machinery they flew at the place and worked with a will: yes, through illness ending in death, or infirmity worse than death. They died of fever, hard work, and jungles; they were invalided for life; but, as long as breath lasted, they stood to their work. And the Mamlutdars, the native magistrates, and Public Works overseers, the native gentlemen, inspired by their devotion, helped them. That was the best part of it. The missionary spirit spread.

He never gave himself more than three hours' sleep at night: in weariness often, in watching often; often without food, always without tents.

He swam the rivers on an elephant: that was after the rains set in. The tracks were one marsh; they could only travel on elephants; no carts were possible; there were no bridges. He used to travel on an elephant for twenty hours, from ten in the evening to six in the evening the next day, swimming two rivers perhaps on his way; then made his camp at six o'clock, called the camp people at half-past ten, and off again. The mahouts used to say, "Elephants can't stand this." He enjoyed it highly--in painfulness often--he liked it; often no biscuit, no grain of any kind; in fastings often. He would have been glad of the famine diet--millet.

Englishmen behaved like Englishmen, worked like Englishmen, and carried the native officials with them.

In the beginning, while the drought still lasted, he set out

in a *tonga* with ponies, no roads, crossing rivers by fords; the first thing was to stick fast in the ford on a stone; they had to get out and push the *tonga* through; the native servant said he was touched by the sun, and could do nothing; the master had to cook his own food and make his own bed. Then nothing but dust.

His reports he had to write under a tree, or on his *tonga*, with the dust blowing in his eyes.

He used to travel from midnight till six in the morning, then till nine or ten at night; prepared his own meal; slept for an hour or two, then off again at midnight. A hard time of it--"highly enjoyable"--the day was never long enough.

II. The Mahratta peasantry, in the Deccan, is one of the finest peasantries in the world; resolute in the spirit of self-help and self-management, in fortitude and patience, frugal and industrious; they neither expect nor come upon relief, public or private. Englishmen look down upon them; they might look up to them in many respects.

To this peasantry came the almost utter destruction of their whole crops for the agricultural year 1876-77, and the jeopardy of their following harvest for the two critical months of 1877-78. Yet, notwithstanding this vast loss of crops, the mass of the ryots or peasant proprietors, "the real backbone of the agricultural community," supported themselves, their old people, and their children *or died* and never came upon relief at all. No peasantry in the world could have behaved better. Without help from Government they imported for themselves grain enough to keep the markets supplied for several millions.

[How much of this was done by the money-lenders, and how much it has therefore tightened the grasp of the money-lenders on the people, we have yet to learn.]

Of the eight millions who suffered--five millions who suffered *severely*--under drought in the Deccan, only one in ten was in the receipt of any kind of Government relief. This is not much.

In Pune, a district where money-lending has reached a virulent pitch, the proportion was nearly one in four. In Kaladgi, a district more remote than any other of the distressed districts, and where food prices rose excessively, the proportion was little more than one in five. And when the rain came, at last in September, 1877, "the rapidity with which the people of Kaladgi left the relief works was most creditable to all concerned."

Read Sir Richard Temple's too brief Minute on the "Famine of 1876 and 1877 in the Bombay Presidency," dated December 24th, 1877, for an account most interesting, in spite of its necessary absence of detail, of these transactions.

In this "large and grave case" those who received relief were chiefly of the humbler castes of the Hindu community, and field labourers, rude artisans, and village menials. "The anxiety

f the authorities to exact work from all who could perform it, and to prevent any one receiving relief in idleness" made the numbers on gratuitous relief much smaller than the numbers on public relief works.

The public works for relief were of two sorts: those under Civil Agency--little works, consisting of cross village roads or village tanks--not of very great use; those under the Public Works Department consisting of irrigation and trunk roads and one railway.

Sir Richard Temple states that the irrigation works were of the highest utility. These were artificial reservoirs, called tanks, with their channels for irrigation, and three large canals--the Moota, the Neera, and the Gokak. The Moota draws its supply from Lake Fife--called after its author, General Fife, R.E. (The Kharakwasla Lake). This magnificent reservoir has an area of about 7 square miles, and is nearly 90 feet deep at the deepest part. The dam is of masonry; its greatest height is 107 feet; its length is 5,036 feet. There are two canals, 99 and 14 miles in length, to distribute the water for irrigation. It also supplies water to the military stations of Pune and Kirkee, and to the city of Pune by means of pipes. Useful Lake Fife availed itself of the stream in the larger canal to pump water to the higher levels by means of a Poncelet's wheel. Turbines are provided at the dam of the reservoir to utilize about 150 horsepower generated by the passage of the water through the sluices--another use of Lake Fife to make its water-power available for mills. General Fife may well be called the father of the storage-tank system in the Bombay Deccan. He is also the author of the Ekrook Tank, 7 1/2 square mile, which, besides irrigating, supplies the large town of Sholapore with water.

The famine work was for extending the canal on the banks of the Moota River near Pune.

The Neera works are on the Pune and Sattara borders.

The Gokak works are in Belgaum.

All these will be remunerative--they will permanently improve agriculture and protect against famine, says Sir Richard Temple, if only they *can be finished*.

In the Bombay Deccan where, as will be seen, so much death arose from there being no water to be had but what was unfit for drinking, this was of paramount importance. Railways may do much in transporting grain, where there is grain sufficient in India to supply India, but railways cannot *produce* grain as canals can. Railways cannot make money for the cultivators. And the famines from which India suffers are at least as much money famines as grain famines. And can railways carry water to drink?

In Madras, at least, the rains of May, 1877, were lost, because the tanks were left unfinished in the autumn of 1876; the order having been issued for the stoppage of all public works. And millions of tons of precious water so ran to waste.

Sir Richard Temple says that the roads rank only second in

usefulness to the canals. Over three thousand miles of the roads were made, chiefly of earth-work, sometimes of metalling; many were left unfinished. These roads were to connect the eastern and outlying parts of the Kaladgi and the Southern Deccan (Belgaum and Dharwar) with the great Indian Peninsula Railway and with the passes leading through the Western Ghat Mountains down to the Konkan, and were to act as feeders to the railway.

We realize the want of transport and of roads in war time as affecting almost our Imperial power in the present Zulu war. We cannot realize the want of cheap water carriage, of roads, of communications, dear or cheap, in peace time, if we can call that peace which is war with famine--as affecting markets, as affecting life or death, as affecting almost our Imperial power in India.

In the Northern Deccan, roads were less wanted, but irrigation more.

Not to be wearisome with a list of names, besides the three canals mentioned, and one other, fourteen tanks or reservoirs--plans and estimates for which had previously been prepared by General Fife, and were in readiness--with an area of about twenty-two thousand acres, with a length of canals and channels of about five hundred miles, and an extent of irrigable land of nearly seven hundred thousand acres, were (not completed but) in various stages of completion. "The means of providing the money hereafter for such completion is being separately considered in connection with our provincial finance."

But such are the financial exigencies of the Government of India that, in obedience to orders from thence, all public works have now been stopped, hundreds of thousands have now been thrown out of employment, with, if not tens, fives of hundreds of thousands, that is, including their children and old people, always religiously supported by the Hindu (and without a Poor Law), given up to want, and no employment--no natural employment to be had till July or even August.

"It will be seen," says Sir Richard Temple, "how large a foundation has been laid by the relief operations for the protection of the country by means of irrigation against famine in future."

Alas! How large a foundation! How little to be built upon!

And we must not say, these Deccan Irrigation Works will have no water to give just when it is most wanted. The Deccan canals are not, it is true, like the canals of Northern India, supplied by the regions of perpetual snow, but they are supplied by rivers from the Western Ghat Mountains, where the monsoons (or periodical rains) never fail. The large tanks only become empty during the third year of continuous drought--a calamity possible, indeed, but never known, never probable.

Without supervision by Europeans, says Sir Richard Temple, relief works are most demoralizing: the abuses prevail, the good fails, and the very lives are lost which the Government is

striving to save. Let this never be forgotten, in the hurry of marshalling our forces to meet the enemy, famine, pressing on.

The famine relief labourers liked petty works close at home, disliked making roads under professional supervision, and hate being put on the irrigation works, because they hated the control and discipline of the organization which was essential to these. "Their dread of marching on command to any distance from home" was such that they often preferred starving rather than submit to the most simple order.

And this was the case too with the peasantry and yeomanry. Rather than have "to fulfil tasks, to march about, to bivouac on the plain," they would starve.

But how little is this to be wondered at. These poor people do not know us, excepting as the Jews knew the Romans, as their publicans or tax collectors, and as their civil courts, aiding and abetting the oppression of their money-lenders. They do know their own headmen, accountants, native petty officials. And these almost to a man set their faces against the works, and propagated false reports to set the people against them. One must know India to understand how these false reports could be believed. The patels (village headmen) oppose any system, all relief works, which take the people away from their homes. The headmen found their own interest in doing so, their own petty profits, and they have been known even to bring their people to the brink of starvation in order to create a "row," an alarm, so that malpractices might continue undetected and undisturbed.

The people who deserted from the relief works had leaders of their own, both from among themselves and from among the petty native officials whose employment lay in the village works and ceased when these ceased.

The people thus went "on strike," as we should call it, except that their object was not so much to have wages raised as to get back to the village works where control was slight and work easy.

Many of these poor people after wandering about returned to their own villages, and their fate can hardly be recorded here but in a few words. The simple village works which can always be opened without any preparation were opened for people urgently needing help, "strong enough to do light work near home."

If they be permitted to have their own way, and to labour on petty works not properly controlled, their work will be nominal, and they will become almost much demoralized as if they had been granted relief without work."

Irrigation works, the most essential, could not always be created near the famine districts.

They must be where they can be. To march relief labourers to a distance from their homes is, as has been said, the thing they most dislike. Then, for seven months, from November to June, in Bombay Presidency, there is no rain: the people can be marched about; and their employment on good public works is comparatively

easy.

But from June till November, although there may be drought, rain may come at any moment, and the people must be ready to begin work again in their own fields. And then also the ground is too damp for encamping.

The deaths were not so much under-registered during the Bombay Deccan Famine as they were elsewhere. For the patels thought they could not have deaths enough on their registers. They said, "All the Sahibs, the first thing, directly they arrive" (on the tours of famine inspection), "say: 'Show us your registers: show us the deaths.'" They thought the Government wanted the people to die; they were frightened lest their registers should show sufficient deaths.

As a rule, natives are as slow to understand our actions as they are quick to observe them. They cannot in the least trace the connection between what we do or say, and what we think, or intend, or wish in doing or saying it.

III. But, in taking a cursory general view of the famine, we have left our Health Missionary, or rather Life and Death Missionary, not wrecked on the stone in the ford--we may be very sure he was not wrecked there or anywhere--but away, away, away--cheerily dragging his tonga through, or urging it along, night and day: inspecting, organizing, reporting, overcoming--never overcome--on his famine relief tour. Let us attend him on his way.

Here is a young engineer, riding up and down, directing his five or six miles of works. If a breach of his sanitary rules were allowed by his native subordinates, he finds it out at once; down upon them he is directly, singling out the offending subordinate, and remedying the neglect.

The consequence was that, instead of cholera or smallpox breaking out, the people are actually healthier on the works than in their own homes. The sanitary rules are so splendidly enforced that the natives are better off than they are in their own unventilated, undrained huts, often without good water.

And this brings us to a terrible feature of this famine.

In the 1874 famine of Bengal and Behar--alas! that we must name the years by famine in India--there was no disease or death from want of good drinking water. The streams of ever living, ever pure water came down from the everlasting hills, the eternal snows of the Himalayas; one wonders why these are not more turned to account to prevent by irrigation famines altogether. Every part of the drought-stricken tracts was intersected with streams, and, though the people hungered, they did not thirst.

Far otherwise in Bombay and Madras Presidencies, want of water aggravated the cruel sufferings of want of food. Out of the half-putrid dregs of dried-up tanks, they collected their scanty drinking water. No wonder they died of disease before they could die of starvation.

In the relief camps, the engineers studied the water

supplies, "followed" the water.

Here is another young engineer superintending his dam, a relief work about two miles long. Mothers, as well as men, are at work. But he has put up grass huts for the babies every three hundred or four hundred yards. The mothers leave their infants here with an old nurse to look after them. (An elephant who can push an artillery field-gun, which twenty pairs of bullocks cannot move, over a bad bit, sometimes does duty, and does it well, as a nurse over infants. But in this case, I believe, it was an old woman who was doing duty.) The mothers pop in for a minute to see the children. We always employed the men by villages wherever possible, so that those should be together who knew one another. And then there was a grass hut for babies to every village.

Here is another engineer who has even provided chupatties to be sold to the people on the works; he had a trader to sell them, that the exhausted people might not have to cook their own food.

The district officers worked like Englishmen, behaved like Englishmen. All they wanted was a word of encouragement, of sympathy.

Here is a young civilian, an assistant collector, and he was only one out of many; he had a famine *talug*. He has not seen a white face for four months; he has been working night and day, and is only afraid he has not done his best; so modest he cannot think but that he might have done more. The encouraging missionary officer at last reaches the place. A spectre meets him at the station. This is the young civilian; he had been a fine, stalwart young fellow. Now he is a spectre, but still unflagging. No thought has he of leaving his work.

England does not know her sons work in India, twice as much as they do in England; as in England we fondly suppose we work twice as much as human beings in any other part of the world.

Another, a young engineer, pays all the people himself on his irrigation relief works, in his strong desire to prevent fraud. But as a rule this was impossible; yet fraud was prevented. There may be as much corruption among the petty native officials in Bombay Presidency as elsewhere in India--we cannot trust with gold untold--but they could not be corrupt, there was too much supervision; such constant English superintendence made native speculation impossible. There was too good an organization. Natives are not good at organizing; they cannot even execute an order to the spirit and not to the letter. It is this same difficulty of theirs in connecting what we mean with what we do; they are not elastic; we must give them the letter.

As for the wage paying, the people were placed in rows, and a Briton or a native gentleman saw the money or food given into their hands. No corruption was possible. Every farthing was paid in the presence of an European or of a native gentleman.

This is a mere glimpse at the Famine Relief Works. The Bombay men worked with a will. More was got out of them than

could have been believed possible for flesh and blood.

In the relief houses, where was gratuitous relief for those who could not work, we were obliged to have the children eat not only out of reach but out of sight of the parents, who would snatch the food from the little ones. If the parents kept their eyes fixed upon the children, the children would not eat; no, not even if they had been starving for days. Love of children died out with the famine.

Many, like wild beasts, were always wanting to wander home to die.

At first the people had no seventh day wage. This was disastrous. But we had "special treatment" for the worst cases. The relief was organized after this manner. First, when they were very low, they might be ordered "special treatment," and many, many were picked up, having wandered about and not applied for relief, mere skeletons, and too far gone even for "special treatment" to do any good.

"Special treatment" gave any food the doctors ordered that could be had: soup, milk, and the like. But it was most difficult to get milk in some places, even for the starving children, owing to the want of fodder for the milch kine--milch kine no longer, for they were starving too.

When a little restored by "special treatment," they were put upon pay with only nominal work; then pay with real work.

Then we had the allowance for all children under seven years; these had nothing before.

The relief was enough to prevent wasting, but some had private stores of their own.

People who came for relief, or were picked up for relief, only when starvation stared them in the face, could not eat or digest the food even when it was given them, and when it was eatable and digestible. These poor creatures were dying when they came.

But it was impossible to pick up all the poor wandering skeletons.

In Bengal every village, road, and even every bypath could be kept under our eye. In the Deccan hills and jungles this is hopeless.

The wandering skeletons would run the risk of death, and the certainty of death, sooner than submit to the simplest system. They would not even go to the relief camps, where food could be had without work. And if they do not understand us, certainly we do not understand them.

One cannot but warmly admire the self-respect which undoubtedly prevented many from going to the poorhouse. And Sir R. Temple himself declared in March, 1877, "the number on charitable relief is large indeed, but . . . I should be glad to see it larger."

A MISSIONARY HEALTH OFFICER IN INDIA

IV. WE have come now to the most painful part of the famine relief in all Indian Famines, namely the relief houses.

The Report by Mr Elliott for Mysore of this same famine of 1876-78 reads like Defoe's "History of the Plague." The people of Mysore are quite as independent and industrious as those of the Deccan, a few of whose sufferings we have told, and a few of the truly missionary efforts made to save them; and there are other similar features in the two cases. But the relief in Mysore was mismanaged, and the loss of population from famine is actually put at one in four, or one million and a quarter out of a population of five millions. But this Mysore tragedy should be made the subject of a separate paper, and it is only referred to here as furnishing a striking illustration, both of the terrors and agonies of the people in the relief houses, and of the unreasoning reasons, the causeless causes which induced them to escape from relief.

"The miseries they had gone through had degraded most of them almost *below the level of reasoning creatures*. The pangs of long-endured hunger; the constant dread of a horrible death kept off from day to day, as it were by accident, but always imminent and near; the anxiety lest in the often confused and disorderly distribution of food they should be excluded altogether, or put off with half a ration, or have their food stolen from them by stronger paupers; the depressing effect of sitting day after day *in a row to be fed*; the feeling of degradation through beggary, and of loneliness in a crowd; all these influences combined to destroy the morale of the famine-stricken mass, and to reduce them *a prey to the wildest rumours* and the most causeless panics. There was no feeling of gratitude or allegiance to those who were feeding them at such expense of labour and money--only an ever-present distrust and suspicion; *their hatred of themselves* reflecting itself, as it were . . . upon the officials who dealt with them, and who tried (often, no doubt, imperfectly, impatiently, and even roughly) to reduce them to order and discipline. The prevailing belief was that the Government meant to deport them to the Andamans, and the slightest circumstances served to awaken and give colour to this delusion.

"On one occasion, when the Chief Commissioner drove down to see them fed, followed by his mounted orderlies, the noise of the wheels and clatter of the horses broke suddenly upon them as such awful import that they rose up in terror, leaving their meal, and rushed to the gate to escape, *crushing several of the weaker ones to death* in the flight. On a latter occasion, when the Viceroy visited one of the largest kitchens, the same panic seized them. They did not then attempt to flee, but sat in long lines weeping loudly, *and large tears rolled down their cheeks* into the food they were eating. Such a sight was sufficient to convince any one that it would not be easy to control or to reason with people so miserable."

This was in Mysore.

It is feared that in some outlying districts of Bombay Presidency, scenes somewhat similar could at one time have been seen. But where they were the officials were changed or set right. If it was found that the relief did not reach those who were to be reached officers were removed.

Relief did not always reach the mouths of the intended recipients; nor wages their hands. Native pilfering and speculation reign. Everything depends on how far these can be prevented. These cannot be prevented unless the superior supervision, native as well as European, is large enough, is absolutely devoted, and can absolutely be depended upon.

In a sister Presidency the petty native official has practically placed in his hands the collection of the taxes, as well as the assessment of those very taxes he collects. He is also the returning officer for the census and property estimates. He *may* also be the money-lender. The corruption resulting is something quite appealing; while the revenue and judicial duties of the collector are such that he has little or no personal acquaintance with the state of the cultivators in their homes, and is often never known or seen by these, whose only impression of the English Government is derived from this petty native official.

The Deccan people did, however, ask the Missionary of Health to send their thanks to Government for what had been done for them during the Famine. Nevertheless, suspicious and mistrust were to be found cropping up everywhere.

Did the money-lenders suffer from the Famine? I am afraid they did not. They are the curse of our Deccan.

V. But corruption was not universal. The native gentleman were enlisted and helped us greatly: not only in the tasks of superintendence, but by their private benevolence.

They subscribed, they formed committees for relief, and managed relief camps at some of our largest stations, or established relief houses of their own. Europeans and natives co-operated alike. "Reverend missionaries" were among the good Samaritans. There was hardly a town, great or small, where native benevolence was not shown. "Not wisely, but too well," must sometimes be admitted. The princely grants made by native chiefs were not used, but abused, but being lavished on idle Brahmins and professional beggars. The poor starving labourers and artisans often had nothing from these grants; while the able-bodied and those could go to two or three relief houses in a day were demoralized.

In the city of Bombay, where, though there was no famine, famine sufferers flocked in, they were relieved by the charitable organization set on foot by Europeans and natives, without any aid from Government.

As has been explained, it was impossible always to have European supervision over the daily pay or daily relief. But the

higher native officials are men of honour. They would as soon take a bribe as we should. To these we could intrust the supervision.

The Mamlutdars (the native magistrates) rank after the deputy-collectors, who are generally natives. They are native gentlemen. They acted exceedingly well in managing relief houses.

The Public Works overseers (not the petty Irrigation overseers) are educated men.

We were afraid of the petty native officials taking a bribe from the people for going on works, and for receiving relief--indeed, for everything. But we made the native gentlemen look after this well.

But for all we could do, many, especially of the low-caste Mhars and Mangs, would sooner live on carrion than go upon relief works or be fed in relief houses. Even when put into carts, with cooked food in their hands, to go to a relief house, they would crawl back, or attempt to crawl back, to their villages. A collector, after having tried to induce some Mhars to go to a famine relief work close by, who refused, looking over a wall saw two of them devouring a dead dog.

Many owners of cattle wandered with their cattle, seeking fodder and finding none, into the jungles and died there, or on their road there, or returned so reduced by fever that they only reached home to die.

(These journeys in search of grass, as much else in Indian life, remind one of the old patriarchs in the Bible.)

From the native states the destitute people used to flock in, past doing anything for, past all chance of recovery.

It is well again to point out how wide was the difference between the result of the Bengal famine of 1874 and that of Western India in 1877-78, as following on the difference in character between the people and races. In Bengal the country is one unbroken sheet of inhabited and cultivated land. The people stand thicker on the ground than perhaps in any part of the world. There is scarcely an acre without its men, women, and children. It is a country of villages, close together. You look abroad, and all around you are clumps of trees--under each its village. The people are stay-at-homes; and if the people can be kept at home, the prevention of sickness and starvation is a mere matter of good administration.

In Bombay and Madras Presidencies it was far otherwise in the hills or jungles, among the scanty or scattered population. In Bombay they are independent, self-helping, or wanderers, not stay-at-homes. They escape from the hands of those who would help them and give them work and food. The peasantry and yeomanry are too wandering and disorganized, and preferred refuse to relief.

We have the highest official evidence that the sick, infirm, cripples, and bed-ridden did not come upon our hands early in the distress, but were fed by their friends as long as possible.

Every man, woman, and child in India has silver ornaments.

It is their way of hoarding and cherishing wives and descendants. They do not put into savings banks. And savings banks are few, and far between. But these cherished ornaments were parted with in the famine. Before 1876 the tender of silver ornaments at the Bombay Mint is stated as averaging 600 pounds a month. In November 1876, it reached 7,000 pounds, and in December it increased to 100,000 pounds. It then rose steadily until September 1877, when their value is stated to have been 189,754 pounds. In 1877 and 1878 the value of ornaments tendered at the Bombay Mint alone is given as 1,946,158 pounds, and the value of ornaments and disused coins together as exceeding two and a quarter million sterling.

But the people had now parted with everything: they were without fuel; they had sold even their poor little cooking-pots. They ate, raw, grains unfit for food; they drank the foulest remains of water, when water was water no longer, but putrid mud. And when the thrice-prayed-for rain came, it came with such violence that abominations were stirred up, and fatal fever followed.

Causes enough of death indeed there were, and death came.

In July and August there was a serious recurring crisis of distress in the eastern parts of the famine districts. And the state of the relief houses for a time came near to what has been described as happening in Mysore. But then came inspection--rushing on the mission of mercy from post to post, travelling day and night, swimming rivers on elephants, and the wrong was set right.

For instance, when relief works had to be suspended on account of the rains, no relief houses were ready. Dysentery and ulcers had been all heaped up together. But matted huts were now run up, roof ventilation and cleanliness enforced, good water provided. Soon we shifted the sick, and matters improved. But even their own Hindu overseers fail sometimes to meet their prejudices. A Hindu overseer, a most intelligent man, put up some capital huts for the labourers, but because these were made of the brab-palm, the labourers would not occupy them. Date matting for huts they consider unobjectionable.

Gratuitous relief was given at home to those who were unable to move. But this could only be done through the village headmen (patels), though the village headmen special inspector, an European officer with his native subordinates to patrol the villages, and among other things to see that the village headmen did bring forward every one who really needed it. Over the village headman was placed the village inspector the native district officer, over him the European district officer. For, from the village headmen, some had had nothing, some too much. Altogether the patels did not justify the position we have assigned to them under the Ryotwari settlement.

But the famine was now well in hand.

Such were a few of the difficulties with which our famine

heroes had to struggle. Such were some of our heroes who had to struggle against odds so overwhelming. Such were a very few of the terrible famine sufferings which all but destroyed hundreds of thousands of our poor natives--would have annihilated them but for these heroes. I could tell much more.

Only one Presidency has been taken here. A neighbouring Presidency, where the difficulties and the area affected in 1876-78 were greater still, where famine overtook twenty millions of people, and seventeen millions severely--this claims a history to itself. Its heroes must have their own tale, and meed of honour for such labours.

VI But first we must ask a portentous question: Where is this enduring Mahratta peasantry now? have we heard of Deccan agrarian crime? Even while I write a terrible commentary is going on--a second scarcity--a second riot.

Four years ago, ground down by the usury and oppressions of the money-lenders, the cultivators, chiefly in two or three Deccan collectorates, rose against them. Of these Deccan riots I have given an account elsewhere.

The Deccan is the great central plateau of India: the Bombay Deccan forms a large division of the Bombay Presidency, which has nearly 125,000 square miles under the direct administration of Government. In this Presidency as in Madras the proprietary body is no mere class out of the people. The peasantry is the nation, or almost so.

Nothing even in France can compare either with the general distribution of land, or with the subdivision of farms in the Deccan. What is more, our revenue is chiefly dependent upon the land, whether we call it rent, assessment, or taxation: and without a well-affected peasantry or body of cultivators (ryots) we could not hold India.

The riots which occurred in 1875, when the peasantry attacked the obnoxious money-lenders, burning their bonds, were the first since the Deccan came under the our rule; indeed, with one exception, the Sonthal rebellion of 1855, the first in all India. The pressure of indebtedness had never before shown itself either by attacks on the Sowkars (money-lenders), or on the Government authorities.

During the Sepoy Mutiny of 1857, the peasantry were our last friends, and without them we could not have won. Have we now, instead of finding the peasantry on our side to bring up soldiers to prevent them from joining the Dacoits, the armed gangs of robbers?

It is true that in some parts of India debtors who had been evicted by our Courts made profit of the Mutiny, by taking possession again of their ancestral fields, of which they were considered the true proprietors alike by themselves and their neighbours. But they considered this a doing of justice, and they stood by us manfully and served out people on many cases from annihilation.

These are those well acquainted with India who believe that the desperate state of things prevailing in the Deccan prevails also in other parts of India, and will if not changed produce some fruits: that "agrarian riots will become the normal state of things throughout India." And what will it be some day to keep down discontented millions, where formerly our strength lay in this, that the millions were all for our rule? The ryots feel that they are being sacrificed to the money-lenders. And so they are.

What is this desperate state of things? We have granted, in Bombay Presidency, of which we are now speaking, from the highest motive, our desire for the prosperity of the petty landholders, "absolute proprietary rights in land, with corresponding responsibilities." But our gift has been a fatal one. The village banker (Sowkar, money-lender, call him what we will) was before our rule a valuable and indispensable member of the community. He was the community's purse. His object was not to ruin but to raise the agriculturalist. If he were inclined to extort, he stopped to consider what his prey could afford to pay from the profits of the land. The prey could not be deprived of his land, on which alone he lived. We changed all that. "We gave to men unfit to manage their money matters the absolute rights of property," but we took from these men--men who were children in all these things--what was of infinitely more value--what was their sole protection against extortion--their "nonliability to ouster." Now, the money-lender and the agriculturalist are no longer allies but enemies. They have no longer a common interest. Indebtedness is no longer a friendly transaction; it is a bondage. Supported by our justice, our courts of law, the injustice of the money-lender robs the ryot of all he holds dear--his land. Famine has made this bondage harder, and evictions have very greatly increased. We have allowed the landlord powers of Government to be "retransferred to a class with none of the traditions of the hereditary landholder, and probably the least fitted in the civilized world to use them." Is the Deccan ryot to be handed over to such landlords as the Marwari money-lenders? Can it be that a bankrupt nation, a starving people, plotting against each other, are to be the future of India? Or else that the land is to be "in the hands of a succession of paupers?" "And so silent are these people in their distress that the Settlement Officer, who had been two months encamped on the land, had not observed any particular poverty, nor had become aware either that the people were in a state of famine, or dying of it." I quote Mr Caird, though writing of a different part of India. I will give one or two typical instances of Deccan cultivators from the Deccan Riots Report.

Rowji Soocraji Kowray's grandfather was patel of Parner. Rowji's father had 80 bighas of land, all gone into the hands of money-lenders. His own share of 40 bighas was sold under a decree by Rajmull Marwari. He borrowed 200 rupees from Rajmull eleven

years ago; paid on the first bond 150 rupees; passed a second bond for 100; paid 24 yearly for three years; then 64 rupees. Was sued, and a decree for (he thinks) 388 rupees passed. Paid 50; but the decree was executed, and his land, house, etc., were sold. Having nothing left, he went away with his two young sons and his wife's mother to his village, where he works his livelihood.

Awdaee, widow of Baba Kowray. Her husband borrowed 20 rupees from Toolaram Marwari, and used to give him his produce. The widow gave him her bullocks of 30 rupees, a field of 15.4 rupees assessment, also half of a house. ["They devour widows' houses."] She borrowed 250 rupees from Vittoo Marwari, mortgaging her land and house, and gave it to Toolaram, 350 rupees, besides bullocks, etc., The woman repays 100 rupees to Vittoo, who gives her no receipt. She pays the interest--24 percent; yet Vittoo got his decree for possession of the mortgaged land, and took possession, having previously taken her produce without account.

It is said that this indebtedness is the result of heavy assessments, but this hardly appears to be the case.

It is more the result of the high rate of usury.

In many places the amount of interest paid by the ryots to Sowkars exceeds that of the whole amount of land revenue paid to the State.

It is also the way in which assessments are recovered in bad years, though not increased in good years (but that outlook is beyond the ryot's horizon), more than the rate of assessment, which bears so heavily on the ryot. He is compelled to have recourse to the village banker to pay: and then farewell to independence. He is bound hand and foot for life, and in the Sowkar's power.

The two, the cultivator and the money-lender, are not on an equality, the fiction of our Courts of Law.

Cleverness, education, arithmetic, or rather the abuse of arithmetic, are altogether on one side, the money-lender's. And the ryot does not know when he has a defence.

Then all the payments made by the ryot's wife at the village shop, which is generally the village banker's (oh, for a cooperative store!), are always made in the kind. And of course the ryot is always a loser in payments made in grain; and the wife is always cheated at the truck shop.

Thus fares it with the "Sowkar-ridden" peasantry.

Yet there is so much that is fair in their lives.

The ryot is always generous and simple about his grain, which he grows himself.

A poet might write "Idyls of the Deccan"--how the ryot has never to hire labour, his wife and children labouring with him in the field, his neighbours help him, and are helped by him in turn; his children tend the cattle; his cattle give him milk, manure, and fuel (for unhappily in India cow dung is burnt as fuel), and butter and ghee (clarified butter), which fetch a good

price in the neighbouring town, where this is not a ruined one; he grows cucumbers and vegetables in his fields, which his wife sells. He sells his young buffaloes, and I have not reckoned the straw. In cotton districts his wife picks cotton, and is paid in kind. She spins the cotton and sells the yarn, and clothes the family. Not much clothing is needed. Every woman and child has a bangle.

Whoever has seen in the glorious light of an Egyptian sunset--where all glows with colour, not like that of birds and flowers, but like transparent emeralds and sapphire and rubies and amethysts, the gold and jewels and precious stones of the Revelations--the herds wending their way home on the plain of Thebes by the colossal pair of sitting statutes, followed by the stately woman in her one draped garment, plying her distaff, a naked lovely little brown child riding on her shoulder, and another on a buffalo, can conjure up something of the ideal of the ryot's family life in India.

But, alas! under and over all this lies the frightful usury: "frightful" is not too strong a word--converting the necessary and useful village banker into an engine of untold oppression, untold by its victims, unknown to us, though not to English officials in India, who are, however, helpless to prevent fraud, because of our law of justice, not equity.

In the Report on the Deccan Riots of 1875, cases whose name is Legion are given officially, and repeated till one's heart sinks, of bonds forged by Sowkars, accounts falsified, old bonds, discharged and over-discharged, tendered as new.

As for evidence (which is of course false), that may be *contracted for* to any amount by the money-lenders.

As for receipts given for repayment by the unfortunate borrower, they are almost unheard of, except where they are given for sums infinitely less than the sums repaid.

It is not uncommon for a money-lender to keep a debtor, and his wife too, working without payment for life for sums borrowed which have been repaid over and over again.

While we make a boast of our justice and our civil courts, we have absolutely failed in one of the first functions of government, the prevention of fraud. We have failed to protect the borrowing classes against robbery and extortion.

While we make a boast of our education, it is bitter irony to suppose that we can wait for it to remedy evils--that more than one in ten say of the boy ryots goes to school--the school cess is entirely upon land. And less than that of the father ryots can read or write. They put their mark to bonds of the contents of which they have no more idea than the Fiji Islander has of Aristotle. The ryot executes a deed of which he has no explanation, no copy, and, where the value is under 100 rupees, no registry. No registration system then tells him what he has done. And of course money-lenders can easily have separate bonds for separate sums each under 100 rupees. He signs a contract

which he does not and cannot understand. And these children--children in fact if not in law (and they ought to be considered minors in law)--are held to be equal contractors in the eyes of the law which knows no equity, with the sharp-witted, highly educated money-lenders, highly educated in the knowledge of fraud, as in the knowledge of law.

The law merely asks the borrower, "Is that your mark?" perhaps a hook. If it is, the law can do no more; it hands him over to the Sowkar, even though he may have only received, as often happens, say, 10 rupees instead of 50, and offers to prove it.

These are our civil courts, instead of the old village Panchayat, or Council of Elders, before which in former days disputes concerning land, money-lending cases, etc., were settled, which, being on the spot, could hear oral evidence on the spot and distinguish between true and false. Universal compulsory registration of money-lending transactions before the Panchayat, none being legal but those so registered, and proof of receipt of consideration, this in itself would, it is said on high authority, make a wonderful difference.

It is stated that in 1877, out of 144,412 suits in the rural districts of Bombay, 128,261 were for money, and of these 80 per cent were on written obligations or accounts involving sums less than 50 pounds.

The fees of these courts, it is stated, exceeded 100,000 pounds in the same year.

And the costs of litigation amount in many cases for the unfortunate peasant to almost as much the original debt.

Fleeced in every way, in 1875, then, these poor exasperated sheep rose at last against their wolves and torturers, the money-lenders.

On our promise to look into their, alas! too just grievances, to redress their wrongs, only too visible, audible, and palpable, they "were cajoled into submission." Their wrongs were inquired into, and it was made too an Imperial, not a local, inquiry. This was three years ago. For three years they patiently waited the fulfillment of our solemn pledges. But nothing has been done.

The people were afterwards, as usual, declared "prosperous," and the country "flourishing." So of course nothing has been done.

But since then, poorer and more oppressed than before by money-lenders, who, emboldened by our delay, did not shrink of course from becoming yet more extortionate, famine following upon money-lenders, and a plague of rats devouring the granaries, as debt devours the people, following upon famine, they rise again, and in a wider and fiercer riot than before, against the oppressive money-lenders. In fact no such rising as this of the year of grace 1879 has been known since the Mutiny, which was purely military.

Close to the Bombay Deccan capital, Pune, the seat of the old Mahratta power, the Dacoits, or armed gangs or robbers, send a manifesto to the Government of Bombay in the name of Sivaji II. It speaks of the great distress and threatens that "unless extensive public works are at once opened, employment provided for the people, native trades encouraged, taxes reduced, and the salaries of highly paid Europeans cut down," they will not cease to plunder, but will extend to Europeans what they have hitherto confined to natives; that they will stir up another mutiny.

It is very naturally suggested in the House of Commons that "there was a great deal more than mere Dacoity here." The magistrates' court in one palace, and the Government High School and Education Department offices with all the books of the Government depot in another, and all the records in both are burnt by incendiaries. This in one of the largest military cantonments in India. We are horrified at the Communists' destructions in Paris. But what is this?

It was hinted, indeed, that those Pune fires light up with an awful light our broken promises to the poor, indebted people who rose four years ago, not against our rule, but against that of the money-lenders enforced by our civil courts.

However, this may be, we promised to redress their grievances, and we have done nothing--nothing but report and lay fresh ones on.

Those who knew and prophesied that when the Public Works, essential to employ the people, now in this second scarcity, were stopped, and there is no work--no agricultural work--to be had before July or August, the people would squat in despair before their huts, then they would join the armed gangs. And those who were unsuccessful as robbers would starve or come upon famine relief. So the last state would be worse and more costly than the first.

It was prophesied that it would be so, and it *has* been so.

It signifies little if an assessment be light or heavy, if they have nothing to pay it with. They *must* go to the money-lender to pay it. That makes them bondsmen: literally enslaved by bonds.

But such were the revenue necessities of the Government of India that, whereas the "remissions" in collecting revenue in the Famine were enormous, and necessarily so in Madras Presidency, in Bombay the Government boasted that it would make no "remissions," only "suspensions," and that it would finally collect most of the revenue. And it *has* done so.

Upon the back of this came the licence tax--worse than any income tax--screwed out of incomes down to a 10 pounds a year--not to pay for famine, but for war. And had it been to pay for Famine, are the famine-stricken to pay for feeding themselves? Are paupers to pay the poor rates?

More going to money-lenders to pay it.

And not only this, but the salt tax was raised 40 per cent,

and just in this scarcity time. More money-lending to pay for the necessities of life--higher usury.

It was prophesied by those who knew that, if this were done, the ground-down people would rise at last. And this much-enduring, patient Mahratta peasantry have risen at last--twice. This is the second time.

In parts of the Bombay Deccan the ancestral cultivators are almost dispossessed by the money-lenders. These men know nothing of agriculture, care nothing for it or aught but rack-renting; and their acquired estates are worse farmed than by the ryot. They have no agricultural enterprise, though they have capital.

Are we so very sure that we shall never have another mutiny? Then God help us, if the Mahratta peasantry--the peasantry all over India were our staunch friends--join against us.

This has been prophesied by some, and in the House of Commons by a right honourable member who has not only been in the able member who has not only been in the India Office but in India, and who has seen with his own eyes "serious disaffection" in the Deccan. This is prophesied. But Englishmen learn wisdom in time. This will not be so.

Truth is told about our errors in the government of our Indian empire, not because that government betrays signs of decay or instability; rather the contrary, because our errors betray our impatient vigour in doing good. This is why Englishmen always dare to tell the truth to themselves, and, characteristically, tell perhaps a little worse than the truth to others. Englishmen would not be Englishmen if they did not grumble furiously at their own shortcomings in their zeal to do right, and publish their grumblings over the world.

This is one result of their "pluck," one secret of their capacity for progress.

Least of all can we despair, least of all can we avoid hopefully telling the truth, when John Lawrence lies dead before us--the man of truth and of all the manly virtues, the resolute Indian statesman, the saviour of the Indian empire, the defender of India's poor, highest of our day as a leader of men, the righter of wrongs--John Lawrence, who died in harness, working for India till three days before his death.

He beckons us on to follow in his steps; he, being dead, yet speaketh. "Who follows in his train?"

Is not the day star of the East rising in the West for India?

A MISSIONARY HEALTH OFFICER IN INDIA Part II

We have seen our health missionary doing duty during the famine; with what effect in God's service has been told too briefly. We must now give a yet briefer sketch of his work at his ordinary duty.

What is the work of a health missionary? To raise the people; to save life; to educate the people to know and practise the first elements of living a sound and healthy life; to indoctrinate the people with something like a new moral sense; to recreate them, in fact--it is not too strong a word--that is the business of a sanitary commissioner; that is the work put into his hands by God. These are "good words." Can they be made good deeds and facts? How can he enlist the people to raise and recreate themselves according to God's laws? To conserve water, keeping it from pollution--even in the second capital of the British empire, Bombay itself, cesspools are allowed to defile the drinking water by percolation--to enforce ventilation--to keep up surface cleansing--if all these and similar measures be taken, cholera never touches us. This is one great element in recreating the people.

In the rural districts, at first the people thought it all a caprice of the English Sahib: the English Sahib did not like to see the dirt, they would sweep it into a corner. This was all that came of it at first. The native is personally clean. Inside his hut is very clean. But just outside there will be a great steaming cesspool. Now he is learning.

Cholera, as has been said, never touches the places, the towns, or villages, which are really conserved. In cantonments, as soon as a case occurs, march the men out.

The sanitary commissioner educated deputy sanitary commissioners to help him--men of several years' standing. "I and my boys," as he used to call them. In cholera he would make them travel fifty miles of a night. They flew at the spot where the mischief was. Out of six two died of fever, one was invalided for life, one left because he was too slow in cholera. More sprang up to take the place and the dangers of these nameless men. "O gran bonta de Cavalieri Antichi!" exclaims the poet. Here are the antique times of heroism come again inspired by modern sanitary knowledge. Who shall say that the heroic ages are a thing of the past?

This was an awful time, but just such a time as real Christian chivalry delights to cope with. The day was never long enough for him. He always liked to have a little more to do than he could do--often without food. Truly his meat was to do the will and to finish the work of the Father.

I. But how in the great towns?

We cannot give a sanitary treatise here; there is not room.

Let us take one or two of the great old famous cities where he did his work, either as health officer or sanitary commissioner.

Bombay has for years done everything to drain itself, except doing it. In the meantime he, the most vigorous of health officers--now, alas! no longer at that post--did, at a quite incredible cost of time and energy, organize and personally

superintend an immense system of hand labour. He was, as it were, the constantly present head of this enormous organization of hands, in exactly the same sense that one's head directs one's two hands. He saved Bombay from cholera epidemics, and did that for them single-handed, or rather single-headed, which should have been better done by the civilized hand of engineering and machinery. He has been a sanitarily engineered city in himself: the reports of his work are his best witnesses.

When the health missionary began, the death rate was 28 per 1000; then it was brought down to 14 or 16 per 1,000. But it has been up at 34 per 1,000 since; for Bombay is dirty now, perhaps dirtier than ever. People cannot sleep on their roofs for the smell. He used to go up the gullies himself, never later than half-past three in the morning, on the daily cleansing work for the health missionary. The death rate was halved. Is it too strong a word to say that this was a recreation of the people according to the laws of God?

When he began, the people did not care if there were a hundred or two of Cholera Deaths a week. They thought it all right. Now we have taught them this: if there are one or two Cholera Deaths, people come--it is all wrong--what is to be done? Bestir yourselves, gentlemen; don't you see we are all dead? They begin to connect cholera with uncleanness. They had no idea of the connection before.

There is now a drainage scheme suitable for Bombay city, after some fifteen years' wrangling. There was some difficulty in settling the financial part of the plan, but the work has begun, and will advance in due course. And the increased water supply, so much needed, is in progress.

Ahmedabad, the ancient capital of Guzerat, a walled city, river on one side, railway now on the other--how many vicissitudes it has gone through! a Mussulman burial ground, two and three tiers of graves deep, ruined mosques and tombs, recall to us the time of the Muhammadan rule, when only Mussulmans were allowed to reside within the city: the Hindus were compelled to live in hamlets outside. Inside the city beautiful trees give an idea of luxuriance; but through the western gate you see one of the saddest sights in India: a constant stream of women painfully toiling across the heavy sand to fill their water vessels. About two square miles are enclosed within the walls, and about 112,000 people.

To give an idea of the overcrowding--in London there are 41 persons to an acre, in Bombay 52, in Ahmedabad city 83, but in its walled hamlet of Saraspur 99.9 to an acre. And in one division of Ahmedabad 114 persons to an acre.

About 70 per cent of the population are Hindus, 20 per cent Musselmans, 10 per cent Buddhists. And how many Christians to these 112,000 people? Nominal, or otherwise, the Christians, the rulers, are only 264. And even this is a large proportion. Taking India all over, is not one British official to 200,000

inhabitants the average? Truly it may be said that England's attempt to govern India is the greatest fact and the greatest experiment in modern history.

But we must descend from the regions of political history to the lowest details of sanitary work. The *khalkoowa*, which holds a large place in Ahmedabad history, although deep below the earth and never seen--and this is the peculiarity of sanitary history: that which we never see or hear of or touch but only smell, gives death or life--commands the death rate, as it is supposed God only can, is the supreme arbiter of fate, as kings and emperors cannot be. But it is this by God's laws. What is the *khalkoowa*? An evening angel? A Hindu goddess? A force of nature? It is a pit, three feet in diameter and twenty feet deep, dug under or beside the house for the night-soil, and cleaned out only once in thirty or forty years. The well-water throughout the town had become so bad, as we shall not be surprised to hear, that positively it cannot be used for gardens, for flowers watered with it die. And do not the children die? The terrible death rate speaks louder than we can of the awful havoc the contaminated subsoil is making in Ahmedabad. And it was the native secretary to the municipality himself who said that it was the filth accumulated in the *khalkoowas* which caused the epidemic which depopulated the ancient capital of Guzerat, *this* being the offended goddess to whose wrath Hindu traditions ascribed the calamity. And surely such an epidemic will again sweep through Ahmedabad if we do not take action to prevent it.

Ahmedabad is, after Bombay, the largest city in the Presidency. Its death rate from fever is three times that of Bombay, where our missionary health officer had been for years at work; in fact, it is higher than the Bombay rate from all causes, and the total death rate is nearly double that of Bombay. And we must never forget the amount of sickness, the feebleness and degeneration of the human being which such a death rate and gradual depopulation of the city represent.

Why, as the sanitary commissioner asks, should forty-five or forty-six persons die in Ahmedabad in every thousand when only twenty-three die in the much greater city Bombay? In ten years 26,690 lives have been lost in Ahmedabad, not to speak of health and strength sacrificed in vain, which would not have been lost with even the common sanitary precautions of Bombay, which has so much less natural advantages than Ahmedabad.

The old proverb of Ahmedabad says that it hangs by three threads, meaning that it is dependent on the weaving in cotton, silk, and gold. Alas for the poor weavers! *Their* fate does not hang over their heads by a thread, but is beneath their feet. Forty years ago a water supply was given, drawn from the worst place that could be found in the river below the town, polluted by cantonment people, by steeping of hemp, by ashes of the dead, by washing of clothes worst of all by percolation from *khalkoowas*, by offensive trades, jutes and dyers included, and

during the monsoon by unspeakable contamination and dead bodies washed out of their graves. The amount of salt and sulphuric acid in the water would be incredible if it were not impossible that it should be otherwise. The filthy water ran through jute and human manure. What wonder if the flowers watered with it died, that the people should die too! And there was excellent water a few hundred yards off. The conservancy and surface cleansing system is now very actively carried out on under the secretary to the municipality already spoken of. But essential reforms are: the provision of a pure water supply, the abolition of the deadly khalkoowa system, the prohibition of the burial of the dead in the river bed, the removal of certain trades from the walls, and several others.

All these reforms have been "earnestly asked," and schemes pointed out for executing them by the health missionary, who is unfortunately no longer at that post. Let us trust that a succession of health missionaries will save Ahmedabad.

II. And this brings us to the great part which municipalities should play and do play in the health reform. It cannot quite be said that they all yet do their duty. Native gentlemen are too much frightened at seeing themselves in the newspapers; they will not always do what they think right. You must have a great man up before the court, if he breaks sanitary rules, and fine him 200 rupees. It is the only way. He will offer you 1,000 rupees to let him off; but have him up before the court, he will do right for ever after.

India seemed scarcely ripe for municipalities. Was it a capital error making health officers municipal appointments? As long as the health officer neglects his duty, and calls for no expense, is he retained? But, if he makes himself disagreeable, he can be dismissed without appeal to Government. Should not these appointments be at least so far Government ones as that the holders cannot be dismissed without Government sanction? There are, however, grand exceptions of zealous municipalities and their secretaries; and we cannot quite say that the evil above mentioned is wholly absent in England.

Space fails us to tell of Ahmednuggur or Bijapore, with an old Muhammedan dome larger than that of St. Paul's.

We must say another word about the rural districts. How can the people be enlisted to raise and recreate themselves according to God's laws?

III. Should not the Secretary of State for India *order* local governments to see after the sanitation if the country--the domestic cleanliness? Should not he make local governments responsible for the high rural death rate? Should not local governments charge the collectors, the district officers, with this care? They can, if they will. And what higher or greater charge than this raising of the people, than that the people

should live? It has been found that, by the Village Police Act, the village patels, or headmen, can be made use of to enforce various sanitary measures, to conserve water, to enforce ventilation, to keep up surface cleansing. By the Village Police Act fines can be inflicted for neglect. It was intended, had the sanitary commissioner remained at its post, for him to go round to selected collectors--these to have selected patels--and to try the experiment with these select headmen, how they could be made responsible for the domestic sanitation of their villages. There is this law, enforcing it by penalties, by which they could be made so. We were to have tried the experiment. It is said and it is true that collectors and high officials are so overworked that they cannot attend to these, or, indeed, to what seems higher things. But people must live in order to be governed. And what higher thing is their than life, to save life from death?

Our health missionary says, "Systematic endeavours should be made to teach the people to help themselves. The patel should have authority given him by law to compel the people to clean the village." He then explains, for the collection and removal of night-soil, "the shadow earth trench system," which has been "successfully worked at every famine relief camp where it has been properly supervised." He shows that "there is nothing to interfere with their caste prejudices." He gives other instructions, and adds, "I have seen this done in villages near Ahmedabad; and if it can be done in Guzerat, why should not the order be enforced in the Deccan?"

In an admirable resolution of Government upon this, dated Bombay Castle, 7 January, 1878, it is acknowledged that "this is certainly a matter which closely concerns the public health and safety," and that "it cannot but be that in many villages the patel is an intelligent man, who might with great benefit be entrusted with powers under the Bombay Village Act of 1869." Then have these powers remained in abeyance? "The governor in council desires that all collectors will cause careful inquiries to be made in their districts with a view to ascertaining what patels can be invested with these powers, and hopes that the experiment will have a full trial at an early date. There is no class of men in the whole country so well qualified as the village patels to advance sanitary reform, if happily they be favourably disposed on this behalf. It should be the object of every collector to persuade and to convince them of its importance."

Since the health missionary's departure, has this all--important "experiment" been carried out? Will it be thought too serious if we speak of the "earnest expectation" waiting "upon the manifestation of the sons of God," as the Dean of Westminster said, in his noble funeral sermon on Lord Lawrence, that our "earnest expectation" waited on the heroes who were "manifested" in the mutiny of 1857? And can any "manifestation" be more godlike than that of recreating the people to health and decency and morality?

Alas! is it known how great is the immorality among these people, and how terrible is the effect upon the "rising generation," which is said to be "very rapidly deteriorating from the effects of this poison"? "Dispensaries" are recommended, and "the Grant Medical College is year by year sending out highly educated young men, who are beginning to establish themselves in towns in the Mofussil." And "to their exertions," it is said, "we must look for aid."

IV. The Hindus are either high caste or vegetarians, middle caste or flesh-eaters, low caste or carrion-eaters (no Hindu will eat beef), low castes, not out of castes.

The Government makes us divide them into Hindus, Muhammedans, Christians, "all others." The health missionary wishes Government to let us divide the Hindus at least into high caste and low caste. The low castes are fine intelligent fellows, but they drink. They live outside in the suburbs. They are not allowed to come within the towns, and must not enter the villages. Their death rate is very high indeed, from the horrible conditions under which they live--bad water and the rest. Now this ought to be shown. Let us have the death rate of the low castes registered, separately, and then amend their conditions.

V One word upon tree planting as a supplement to irrigation.

Irrigation is the present necessity; but it is not too much to say that with tree-planting properly carried out there would be *equalized* rainfall. We are so stupid, so like children: we go on cutting down wood without replacing it, and for great part of the year the heavens become as brass, and roads are not wanted in India during the dry season, for the whole country is a hard road. Then the rain, which is sure to come, destroys everything. This was the beginning of scarcity in Madras, followed by the want of rain for many months, which stopped production. But there are other consequences of equal importance. The relation of this irregular rainfall in Madras to the enormous fever and cholera death rate can be shown by statistical facts. Scarcity, as was said before, is but one of the death causes in famine times. Plants die, animals die, and men die. But it is not all from want of food. Tree-planting would do much both to bring rainfall and to arrest floods. Has not America been denuding herself of wood? And already people are beginning to scent the coming end.

VI Full sixty-six thousand persons are at this moment receiving relief in the Bombay Presidency, though the present monsoon is favourable.

I recall the indebted condition of the Deccan ryot, which occasioned the riots of 1875. I recall which occasioned the riots of 1875. I recall how the rioters submitted, on our promise to look into their grievances--how nothing was done till this year, 1879, when the riots blazed out afresh and more seriously; how Mr

Hope's Bill, now before the Government of Simla, is based upon the proposals never acted on, which were made by the Deccan Riots Commission, appointed in 1875, and upon the Secretary of State's dispatch which dates from last December only. Indebted Deccan does not wait for Secretary of State or Viceroy. Agrarian discontent is not impatient, but sure. All history tells us that it may smoulder, but will not be extinguished till it blazes out in fire and sword, or till its causes are removed. Our promise to them to remove these causes never was fulfilled. And referring to these causes in the last number for August, we shall be able to understand and to rejoice in some of the provisions in Mr Hope's Bill.

1. That no bond should be valid unless written by or under the superintendence of the village registrar, and attested by him; that he should endorse on the original whether consideration was paid before him.

2. That the money-lender should be required, under a penalty, to grant the debtor written receipts, annual statements of account, and a pass book, to be written up from time to time. Further, non-judicial officers, to be styled "conciliators," should be appointed. No litigation without a certificate from the conciliator of having been called in and failed. "Panchayats," or arbitration by non-official bodies, to be considered.

In parts of Bengal it is said that "the every men who in court take up the position of partisans, and deliberately tell whole strings of falsehoods, would in their own villages settle the disputes in a perfectly fair and proper manner." "A native who will lie to any extent in court will act most fairly as an arbitrator." (This is true for all India).

Further, law courts to be made more absolute, less technical, less dilatory, and less expensive. Competent village headmen to be village "munsifs," with final jurisdiction in money cases up to 10 rupees.

"A more efficient insolvency law is also necessary; and before applying English principles it must be remembered, that while in England fraud by the *debtor* was the chief thing to be guarded against, the danger here lay rather in *fraud by the creditor*."

"It is made obligatory on courts in all contested cases to *go behind the bond* and inquire into the whole history of the transactions between the parties; and even where the debt was admitted, the court might make this inquiry if it suspected collusion." [To substitute some degree of *equity* for *law* is indeed a grand thing].

It must never be forgotten that these bonds are always a nominal, never a real transaction; *no money passes at all* between money-lender and borrower. But the bond, representing a fiction, is produced as evidence. The Sowkar's business is not really money-lending; it is barter. The Sowkar is not a money-lender; he is a produce--buyer and seller.

Mr Hope's Bill proposes that "all implements of husbandry and such cattle as might be necessary to enable the debtor to earn a living as an agriculturalist should be exempted from arrest, and imprisonment for debt would be abolished, except in cases of proved fraud." It "exempts land from attachment and sale, unless specifically pledged for repayment of debt."

May it not be that the bill does not go far enough, and, on the other hand, that one or two provisions in it are useless? 1. Village Registration. May this not only be another arm in the Sowkar's hands? Suppose a bond of the Sowkar to give the ryot 125 rupees; if for greater security a zealous village registrar makes the Sowkar give the money in his presence, the ryot has to give it back once they are outside the door. Then it appears on the registrar's records, against the ryot, that he has received nothing. 2. The village headmen to be "munsif." Now we know that, if he owes anything himself to the Sowkar, he will give judgment in favour of the Sowkar.

I wish I had space for more. God speed all real remedies is all we can say at present.

VII. And who can forget, in writing of sanitary heroes, him the greatest hero of all, foremost in all defence of life, John Lawrence, to whom was due the appointment of the first sanitary commissions to initiate the work advised by the Royal Commission of 1859, before which he gave his evidence on the importance of Indian sanitary reform. On the appointment of commissions, which dealt not only with military but with civil questions of health, and began the great improvements in stations and towns, necessarily followed the framing of Acts for the creation of municipalities having sanitary powers all over India. The last year (1877) of which the returns have come in shows a death rate among troops in India of 12.71 per 1,000, the lowest yet attained. He organized it all when he went out as Governor-general in December, 1863, and other men have entered into his labours as he intended.

How little is he known in England! We are to raise him a monument--as little unworthy of him as we can. But when his work is made known, this will be his true monument. Oh for a Macaulay to write of him a "biographical essay," imperishable as his own labours! But his work should be written by those, above Macaulays, who were sharers in those great deeds. Yet who survives to tell us? How are the mighty fallen in the midst of the battle! Who is there to show us that last great man, that he may not be the last, while we still as it were discern the path of light left by the "chariot of Israel and the horsemen thereof" bearing away our "father" from us into the immediate presence of his and our heavenly Father? Upon whom has the mantle fallen? Upon whom? It shall not be: "her last great man" sad India now deplores. Who will tell us of the spirit which inspired those great deeds of his while his name may still be made one of

England's and India's *Good Words*? his name not only to history for all time, but not to be our "Household Word."

We reverence in our hero about the last of the great race of statesmen who came out of the old Company's service: we reverence him most of all in these days of danger, when statesmen seem to form themselves on strange elections of constituencies, and to dabble in unheroic squabbles--misnamed politics.

Those were not John Lawrence's politics. To deliver and raise the subject--to subdue the oppressors; and not only this, but to bring them over to be themselves the stoutest defenders of the right--these were the politics, this the work of John Lawrence. This was the missionary statesman, the ancient Roman in mould, the Christian servant of God in spirit.

"Can we Educate Education in India to Educate *Men*?" (the third article adds to the title "*and Women*?") *Journal of the National Indian Association*. No. 104 (August 1879):417-30; No. 105 (September 1879):478-91; no. 106 (October 1879):527-58 [10:634-76]

Part 1 Primary Education

"Education alone can raise the Indian peasantry out of their poverty." "The remedy is education." "Education will remedy the fearful evils complained of, and we must wait till it does so." Having repeatedly seen and received this good advice, both in print and manuscript, I set myself to ask a few questions, and among these how long we shall have to "wait," that the advice should not become a bitter irony, and, taking primary education first, methought it might help us in the quest to ascertain:

1. What proportion of the boys in our government schools are the children of ryots, and what of other classes? And

2. What proportion do boy-ryots at school bear to the actual numbers of boy-ryots who ought to be at school?

In this vast, vast India of 200 millions of people which we are trying to govern, Bengal only has answered these two questions. (It is needless to remind the reader that in Bengal the ryot holds his land from the zemindar, his landlord, under the Permanent--zemindari--Settlement. In Bombay and Madras the ryot holds his land directly from government for a given term at a stipulated money rent. This is called the ryotwari settlement.)

1. In the year ending 31 March 1878, the latest for which complete returns are ready, out of 638,510 pupils in all colleges and schools in Bengal 269,940 (or in round numbers 270,000) are returned as children of "cultivators, gardeners, small ryots." This gives a proportion of about 42.3 percent. The great majority of these pupils will be found of course in primary schools. These schools have 446,522 out of the 638,510 scholars mentioned.

From the annual reports on education for 1876-77 and 1877-78 will be seen how small is the number of girls at school, so that for practical purposes we must call the scholars all boys. <id = kl>

2. Now for the second question. How many of the boy-ryots who ought to be at school are at school? In 1872, the date of the last census, there were 17 millions of cultivators (men and boys) of all ages. Reckoning the number of boys of a school-going age (or between six and fifteen) as one fifth of that number, there should be 3,400,000 sons of cultivating ryots at school. What is the number? Not 270,000 actually at school, that is, only about one boy-ryot out of twelve or thirteen who ought to be at school.

To go farther. In the same year there were 33 millions of men of all ages in Bengal, giving 6,600,000 boys of a school-going age. There are 638,510 boys of all classes actually at school, that is, about one in ten of those who ought to be at school. Eastern Bengal is the farthest advanced and accordingly there about one in six of the boys who ought to be at school is there. We anxiously ask: what classes of the people take so little advantage of the government education? And the answer is, as might be expected, the poorest, the most money lender-ridden, the most zemindar-ridden, those in fact who want it the most to show them how to live.

There are certainly whole classes of the people of Bengal who come little if at all to school. Putting aside those large numbers, which belong to impure or degraded castes, the people's poverty in India is so extreme, notwithstanding their frugality and industry, that to most of them how to live and not to die is the only question. They have no time, no energy, for anything that does not directly bear on how to keep alive, and the labour of their children is too valuable to be spared to go to school. Yet how eager is the desire for education all over India. And all over India no races in the world need it so much, whether it be the ryot of Bengal, who without education is at the mercy of his zemindar, or the cultivator of the Deccan, who is at the mercy of his sowkars (money lenders), backed by our civil courts, in which case he is yet farther at the mercy of his vakeels (pleaders) if he can neither read nor write, but can only put his mark, perhaps a hook to any bond he knows not what, or whether it be the cultivator of Madras presidency who is at the mercy of a dishonest man among the headmen, or of our petty native revenue officers immediately above the headmen, who levy a blackmail from the poor ryots said to be almost equal to the revenue paid to government. (We trust this estimate is exaggerated.)

There are schools now all over Bengal in which a cultivator can--it is not said he always does--learn what puts it in his own power to learn his rights, and each one that goes to school becomes a source of light and power to those who do not. Even primary education may enable these minds which are locked up and the key lost to find it--the key to progress and to honest independence. They have wits enough and to spare.

It is delightful to be able to give an instance in Bengal, and in what was one of the poorest and darkest parts of Bengal--a district in Bihar--where two years ago it was shown that the

cultivator need not be so wholly at the mercy of his landlord as might be supposed.

Landlords are, in accordance with the provisions of Sir George Campbell's Road Cess Act, required to file in the magistrate's court statements of their lands and of the rents paid to them by their ryots. It was of course of importance to the landlords for their own purposes that their receipts from rent should appear at as low a figure as possible,

thus making a profit out of the road cess, for the sums paid as road cess by the zemindar to government and by the tenant to the zemindar, being in proportion to the sums *realized* by the zemindar as rent from the tenant, the entry of a smaller sum as rent than the actually realized sum has for consequence the payment by the zemindar of a smaller sum as road cess than the sum actually realized from the tenant as road cess.

In Mozaffarpar one and then another of the ryots of the district came to learn that the record of rent filed by the landlord could be used as evidence against himself in any rent suit between landlord and ryot. Then for the next three months from every part of the district ryots came trooping into Mozaffarpar, paid their inspection fee, got a certified copy of the rent at which they were said to hold their lands, and from that time refused to pay the zemindar one rupee more than that amount, which, it need hardly be added, was not in all cases identical with the rent actually paid by the ryot up to that time. (The rule that one half of the amount of the road cess is to be paid by the ryot and the other half by the zemindar is often infringed in practice. Sometimes powerful zemindars realize the full amount of the road cess from the ryots, saying in explanation that a separate officer has to be kept for collecting the road cess from the tenants, that unless the latter paid the officer, whence is he, the officer, to get his pay? and that if they are unwilling to pay the whole amount of the road cess, let them go to the court and there pay up their tax. In some cases the ryot pays three fourths and the landlord the remaining one fourth of the amount of the cess. Small landholders and petty zemindars and talukdars do as a rule pay half the amount of the cess, the ryots paying the other half. The ryots individually cannot cope with the big zemindars with any chance of success, but they can when combined, profiting by their newly acquired education, very easily resist unjust demands on the part of petty landholders, and a big combination can resist a big zemindar.)

This was a phenomenon in Bihar; in Eastern Bengal it would have caused no surprise. Education then *has* a direct bearing on how to live.

And now we are eager to know, having heard much of the rent leagues in Eastern Bengal: (1) are they the leagues of educated ryots? and (2) do they do more good or harm? and (3) what instruction do we give in our schools so as to enable the future

ryot to know what he is putting his signature to? to know what legal arms he has to use (not rioting, nor murdering obnoxious zemindars, nor burning money lenders' bonds, although often forgeries)--legal arms both as regards leases and illegal cesses and any kinds of illegal exactions, and as regards documents which bind him hand and foot to the sowkar? What do our government schools teach the boy-ryots as to these things? It would seem really as if nothing but education could guarantee the cultivator against exactions by his own countrymen.

The answer to these questions is, the rent leagues of Eastern Bengal are leagues of all ryots, whether educated or not. But, as we have seen, primary education has made remarkable strides in that quarter, and very many of the ryots, compared with those of other districts, have been to school. Of course all need not have been educated in order to join in a league, for every popular movement has its leaders of higher capacity and education than the mass. It is a satisfaction to know that instead of the ryots being always at the mercy of their landlords, it is possible now for unjust landlords to be at the mercy of their ryots. If the zemindars venture nowadays to return their rents lower than the reality, they must in that case put themselves completely at the ryot's mercy.

In Bengal the revenue is permanently settled and they have, unfortunately, no fear of an increase of revenue. Where the revenue is not fixed, it seems almost impossible to get a true return of the rent. They frequently put it lower than the truth. Or, which is very common, if the rent is really low, they make up by heavy cesses in addition to the rent. No doubt where such are levied the whole road cess is often levied with those illegal cesses. The illegal cesses have become so universal as to have a sort of sanction of custom, and as long as the zemindars keep within the accustomed bounds the ryot is very apt to submit in a good-natured way.

When these illegalities and excesses are carried to extremes, the ryots can only resist the zemindar by combining. A small combination may defeat a small zemindar. It requires a large combination to defeat a big zemindar, but such large combinations do exist and not unfrequently do defeat the big zemindar in Bengal.

For the first year or two after the imposition of the road cess the belief was that the zemindars were in a sort of dilemma. If they put the rents too high, that involved a certain and immediate payment of tax; if they put them too low, the ryots might take advantage of their statement. (The zemindars in the road cess returns were sometimes tempted to enter a larger sum as the rent paid by the ryot, while in fact the ryot paid a smaller sum as rent; e.g., where the rent actually paid by the ryot is 10 rupees, the zemindar might enter 15 rupees as the rent paid, thus making the entry a documentary evidence, with the help of which he succeeded or hoped to succeed in raising the actual rent. But

generally, as we have seen, the temptation was to enter a lower rent than that actually paid by the ryot. The device of nominally raising rents by an agreement with particular ryots, and then using the result as a ground of enhancing the others, is doubtless a frequent one. "Secret treaties" and "secret trusts" are common among a people often accused of an universal bad faith, yet they seem to keep illicit agreements among themselves marvelously well.)

And so it was understood that in this difficulty the strange and unprecedented course of telling the truth was often followed. It is certainly the case that the ryots very largely took advantage of the returns to obtain authenticated copies of their rents, as put in by the zemindars. It was anticipated that such would be the result of the system, and it was arranged with that object.

But here comes the most important question--important also and essentially as regards the ryot's truest interests. What are the dangers of leagues, the danger of committing murder, of using illegal means? Do the rent unions in East Bengal tend to do more good or harm by putting legal or illegal weapons into the ryots' hands to sustain their just rights? The ryots have risen of late in Eastern Bengal again, and a zemindar in one district (I could give all the names, but for obvious reasons I suppress both names and details), who was a real tyrant, was brutally murdered by his tenants, goaded to madness by his exactions. They were afterwards plundered and their houses burnt down by his successor. In September last a Muhammadan zemindar, in another district in East Bengal, was murdered by his oppressed tenants. In West Bengal a zemindar met with a similar fate the year before last.

If these combinations had been led by men of true manliness, of high principle and real education, what immense good might they not have done! But such crimes as these of course injure the cause of the ryots more than anything else. The ryots must fight for their rights by lawful means.

In fact, you must educate education to do real good, to teach the ryot his best course, to teach him to be a man. Let us try to see what this is. If the leaders of the unions are, say, village accountants, who know the A B C of letters and arithmetic--this is not education--but who know not the alphabet of morality--the very A B C of a *man*--the great laws of honesty, truth, humanity, not plundering our fellows, not telling or loving a lie, respecting the lives and interests of our neighbours, doing good not only to our family or caste but to all, for all are our brethren--if they know not these things, how can they lead others, except to harm rather than [to] good? I have mentioned the village accountants because those ryots who can neither read nor write appear to depend on the village accountants for the protection of their interests and rights.

What is needed now is that education should explain to the ryots, among other things, the real advantages of a village

union, the nature of the documents they have to sign, also teach them the industrial arts. Boys may learn to read and write and to keep accounts and it may do them little or no good. It may, as often happens with the petty or village officials, only teach them to oppress their poorer neighbour, instead of helping him. It may, as constantly happens, teach them to regard any manual occupation, such as agriculture or manufacture, as degrading. As one of India's own people has said: "It is a great misfortune in India that labour is not reckoned honourable. He is regarded as the most respectable who does nothing."

To this question of industrial and moral education pray let me return in another number.

I will now only add two or three extracts out of the report on public instruction in Bengal of 1877-78 as some sort of guide to the *quality* of education given. In one division, Orissa:

The introduction of the system of payment by results has led to a remarkable increase in the number of aided or registered schools.... The expansion of primary education has reached its utmost limits as far as mere *number* goes, but the results have been achieved by *lowering the standard* of instruction to a considerable degree, namely, to the level of the indigenous pathsalas (schools) of the province.

And the magistrate reports:

The quality of instruction hitherto imparted in the indigenous schools of this district is remarkable for its *badness*. Children are only taught to scratch letters on palm leaf, to read letters so scratched and to practise a method of composition almost incredibly crude in its conception and awkward and troublesome in its use. A boy thus instructed cannot read a printed paper or even a manuscript; *he cannot write out a pottah* (deed of lease) or *kabuliyat* (written agreement), and he fails to answer the simplest question in mensuration. Primary schools therefore, so numerous in this district, *do not even supply* a standard of instruction sufficient for the very moderate *requirements of the peasant's daily life*.

The joint inspector, himself a native of the division, entirely confirms these remarks and adds that "the people of this province are just as keen" as those of the rest of Bengal "in their appreciation of elementary learning."

"The want of books of every class, a subject which has now been taken in hand," is strongly spoken of.

In another division, Chota Nagpur, the experienced deputy-inspector remarks:

In most places the village pathsalas are old institutions, only subsidized by government, or brought under inspection with the view of improving their status gradually and raising them to a certain standard, while more than 80 percent of our aided primary schools in this district are new institutions, which would never have existed but for the

help of the government. I do not mean that there were no indigenous schools before the introduction of the primary school system. Maktabas and pathshalas there were, and in pretty good numbers too, which the children of the rich and well-to-do men generally attended. The poor cultivator however had neither the means nor the ambition to claim any share in them. I can state, from my experience of eleven years in this province, that, before the introduction of Sir George Campbell's scheme, one might go from village to village without meeting a man or boy *who could read him a letter* in Hindi. But what changes have been wrought in the short period of five years! Wherever you go now, the first thing that attracts your notice is the rural pathsala, and there is scarcely a village of average population in which you have not the institution, and in which you may not come across at least five or six lads who are able to read and write.

Only "five or six?" "But for the care and expense of government these would never have seen a book or worked a sum."

But we are eager to know what is the state of education in the districts of Eastern Bengal, where rent leagues have ruled. After giving particulars of the Dacca division the report says of one of its districts, Dacca, whose population is 1,853,000, primary grant 10,000 rupees:

All this shows how little encouragement is needed to bring schools into existence in a district like Dacca, and how fine a field is thus presented for the extension of primary education on a liberal basis.... The efforts of the local officers seem to have been directed to weeding out incompetent gurus (teacher or spiritual guide), that is, depriving of stipends those who fall short of a somewhat high standard.... Under the present system the aided schools in this district are probably surpassed by none.

"What seems now to be most needed is some scheme for fostering and liberalizing the indigenous schools of the country, between which and the aided schools a gulf is fixed that grows wider year by year." Steps are taken to make it "an easy matter to introduce a system of payment by results in strict accordance with the *merits* of the pathshalas and the *proficiency* of the pupils, the goal to which by whatever road all our efforts should tend."

In another district--Firopur--of this thickly peopled division: "Constant exertions are made to lay upon the villagers the chief responsibility for the support of the pathshalas," without which they cannot really succeed. In another district--Mymensingh, population 2,350,000, primary grant 11,000 rupees--it is stated: "There is more vitality in these pathshalas than is often supposed, or at any rate there are very active causes at work in bringing them into being." In another well known district--Tipperah: "The classification of pathshalas and their teachers has been vigorously carried on, with the result of

weeding out the least competent gurus, and it is now said that two thirds of the teachers are competent."

In the famous Pubna district, in another division--Rajshahye: "Pubna was one of the districts in which the old system of improved pathsalas was most largely introduced," it is said; "its effects are conspicuous at the present time and distinguish Pubna among all the districts of the division." Durhunga, in the Patna division, population 2,196,000, primary grant 10,000 rupees, gives a good account of itself: "Mr MacDonnell, the magistrate, has the primary schools well in hand." "The maktabas [schools] of Durhunga have long been remarkable for their enlightenment and for the great progress they have made in subjects of liberal instruction."

In the same division we come to our Muzaffarpur, which has shown such a resurrection of vigour out of feebleness, population 2,188,000, primary grant 11,000 rupees: "The large increase of pupils in aided schools, confirming a largely increased return of private income, may be regarded as a very healthy sign."

Such are some few extracts from the Bengal report, a report which, though necessarily written for the government rather than for us, should be generally read for the lessons it teaches. In a succeeding number of the *Journal* we shall continue the quest how far we are educating education to teach the ryot his real interests. We shall have then to speak about primary education in Madras and Bombay as we have in this number about that in Bengal, and to continue the subject as to all three--Bengal, Madras and Bombay--chiefly and always with a view to asking what is the effect of education on the moral and material condition of the people.

At this moment, thoughts must crowd into every mind in earnest about education--thoughts of the great proconsul, the soldier-statesman of supernatural strength for the right, who is gone into the presence of the Almighty Father of all races, whom he served so well--Lord Lawrence--how he educated the Punjab in the very highest sense--educated them into *men*, to be trusted to the last drop of their blood--how he pressed forward the cause of primary education in Bengal--and his last hours of work, only three days before his death, were given to an institute designed for Indians.

In our thronging thoughts of the hand which swayed alike the "rod of empire" in India, and the small details of the London School Board, we exclaim, in the dean of Westminster's words [Arthur P. Stanley]: "Where shall we look in the times that are coming for a disinterested love and an abounding knowledge of India like to his? Where shall we find that resolute mind and countenance which seemed to cry to us,

This rock shall fly

From its firm base as soon as I?

P.S. In writing about Dacca and the zemindars it is impossible to take no notice of the news arriving by the last

mails of the disastrous scarcity prevailing in Eastern Bengal. The collector of Dacca has made an appeal to the zemindars by name. He refers

to the present high price of food and to the deplorable condition of ryots of the poorer classes, some of whom are said to live on one meal a day, while others are said to live on kumra, mangoes and fruits and vegetables, for want of rice, which they cannot procure.

2. At this juncture it is the duty of every zemindar to come forward to assist his ryots and save them from falling victims to starvation and death, thereby showing his generous nature and public spirit.

3....The mahajan (money lender) having failed them, it is clearly your duty to fill his place as regards the ryots.

The *Hindu Patriot* of 16 June says that several zemindars have made noble exertions in answer to this call. "The public-spirited Kundu family, of Bhagucool, have given a prompt and generous response to the appeal of the collector. We are informed that they have opened relief houses."... "We believe other public-spirited zemindars are also coming forward liberally."

The *Brahmo Public Opinion* of 19 June says that:

The Kundu family have already opened three centres of operations, where they are selling rice below the market rate and are also freely distributing it among those who cannot pay for it.... In Manickgunge, Babu Brajender Kumar Ray is doing the same good work. He has remitted the rents due to him by his ryots and is helping them with rice and money to save their lives.... We hope their example will be followed by other zemindars and merchants, and that the zemindars of East Bengal will combine and meet the famine in a way to make their names gratefully remembered.

A private letter from a native of Manickgunge says: Scarcity is threatened here. Dacoities and theft cases are of frequent occurrence. Men and women are half starved, and there are some very pitiable instances of suicide committed by females on account of failing to feed their children properly. But relief works to some extent have been opened here--to an extent too inadequate however for the demand.

The Dacca people's association have recently appointed a sub-committee to ascertain and report the extent of suffering prevalent.

The *Brahmo Public Opinion* says that East Bengal is on the eve of a terrible famine. But the other Eastern Bengal districts are not suffering so much as Dacca. The *Hindu Patriot* says that "failure of rains" when rains were most wanted, viz., from March to May, "succeeded by sudden floods" towards the latter part of May and in June, "has caused the destruction of the harvests throughout Dacca, Backergunge, Commilla and Mymensingh."...

Our commissioner, Mr Pellew, in his last tour through the

Manickgunge sub-division, while returning from Goalundo, found about 2000 people crying for want of food. He returned to headquarters and directed the magistrate to proceed in person to the scenes of distress. He has authorized him to open works for the distressed people in the way of metalling the road between Goalundo and Manickgunge and to distribute food for the relief of the actual sufferers.

I could not coolly write about the schools without noticing the scarcity. But there is nothing desperate here. The public spirit of the zemindars, the inquiries, the eagerness to help make one hope that good is being brought out of evil.

In the language again of the funeral sermon on the great John Lawrence, whose life was spent till almost his last hour in working for the people of India, whose very name means enthusiasm for education--the "earnest expectation" waits "for the manifestation of the sons of God"--that is, for great and good men to succour us. And it seems as if it might yet be satisfied.

PART 2

Though this second part was to have told the progress of primary instruction in Madras and Bombay presidencies, yet the good news which has just come in from Bengal for the year ending 31 March 1879 leads us to give these new figures first. The number of schools aided from the "primary grant" in Bengal, and therefore coming to a greater or less extent under the influence of the government system, has increased in the past year from 17,395 to 24,354 and the number of pupils in them from 406,000 to 490,000.

What is the average size of these schools? It contrasts curiously with that of English schools. Yet Bengal is one of the most densely populated countries in the world. The new schools have only about twelve pupils each, while on an average the old schools have nearly twenty-four pupils. A small school is by no means however necessarily a bad one, and if the schoolmaster have real influence for good that influence may tell directly upon a few more than upon many. (We learn nothing about any system of monitors, but when we come to Madras we shall give an old and wonderful experiment of the monitorial system which began there.) These are not only schools of primary instruction; still less are they all the schools that the department is concerned with.

The total number of schools, aided and unaided (exclusive of colleges), which have been returned for the year has advanced from 26,191, with 639,000 pupils in 1877-78, to 33,248, with 725,000 pupils in 1878-79. The numbers of girls at school have also increased.

All these "primary grant" schools have sprung from the indigenous pathshalas of the country. The great advance which they mark from year to year shows both how young the system is and what a surprising power of growth it has. For a school to come on government returns is not for it to begin to exist, or not often or necessarily so; rather it means that it begins to receive

attention of a kind that it has not had before, and a new stimulus to progress and a new (and hitherto quite unattainable) standard.

Dating from 1872, when Sir George Campbell first effectively took indigenous schools in hand, the progress has been marvellous. The indigenous schools of the country have their roots in the people's hearts and habits. Rashly to improve them would be (as has often been said) to "improve them off the face of the earth." The education department takes them up, adds the stimulus of rewards to teachers and pupils, and tries carefully to improve and control them, looking to the future for the results rather than to the present.

Will not the educated native gentlemen help? Not only in seeking to increase the number of schools. This they do already. It may indeed be said generally that the enormous growth of the grant-in-aid system of education is due to the efforts of educated persons in spreading education. Wherever the "babu" goes and settles he collects subscriptions, starts a school and applies for a government grant. In Bengal last year, out of a total expenditure on aided schools of £132,700, the people contributed £91,600 and government £41,100. The government contribution is practically fixed, but that of the people increases year by year.

How satisfactory this is. But not in this alone have native gentlemen to help, but they have to help in educating *men*, in educating themselves. We cannot know what has been stated in the last number without praying for the growth of education among zemindars no less than among ryots.

In some parts of Bengal when a ryot enters upon occupation, a "pottah" (or lease) and a "kabuliyat" (or acceptance by the ryot of the lease on the terms stated) are regularly interchanged between zemindar and ryot; in this case the ryot not only gives but gets documentary evidence. In less advanced parts, like Bihar, the practice of giving and receiving agreements is only beginning. In such cases the custom has been to allow evidence from the zemindar's books of the rent paid for three years to be good as against the ryot. And we have seen how even in Bihar the ryot can and does get certified copies of the rent at which he is held to stand, thus ensuring himself against any unjust enhancement. We know however that it is much oftener "customary" oppression--oppression to which the ryot and his predecessors have been subjected from time immemorial, or oppression which his customary fear of the zemindar's power prevents him from resisting--than oppression under legal process which the ryot suffers from.

What a glorious career for zemindars to educate zemindars into *men*!

2. By education we can teach literature; we cannot teach truth and principle, high and honourable feeling and objects. That must come by intercourse with the true, with the high and

honourable, either in books or in life, by a strong conviction developing itself among the "aristocracy," whether in riches--aristocrats not plutocrats--whether in office--aristocrats again, not bureaucrats--whether in intellect or in power and in goodness--the conviction that all this is given them for their brethren, brethren not only of "caste," but all and especially their poorer brethren.

There is no distinctly "moral" teaching in the Bengal colleges, such for example as consists in exhorting those who are to be subordinate judges or magistrates that it is wrong to devour their poorer countrymen or to take bribes. The education is liberal and general: it has its moral side in the association of the students with English teachers whom they respect, and in the study of English history and English literature. And is not this much more efficacious than dissertations on morality and moral systems? Is it not the result of some experience that the M.A.s of our colleges, those from whom deputy magistrates and subordinate judges are chosen, resemble the best Englishmen in all the manly virtues much more closely than do their less educated brethren? Let the best Englishmen be imitated--not the worst--let them be imitated in the good they *have* and not in that they have not.

It is not enough to read Locke and Stuart Mill, excellent as such reading is. We must carry it out in life through life.

As to the moral effect of higher education, Sir Richard Temple, the present governor of Bombay, who has had experience of nearly every province in India, lately gave most emphatic testimony to the good effect the universities had had in raising the standard of official integrity throughout India.

Petty native officials in Bombay presidency learn reading, writing and arithmetic in the government schools, with perhaps a few of the most useful sections of some of the laws. These things are needful to them in their various positions as village patels (headmen), village accountants, peons, etc. (When we come to treat of Bombay, we shall see that many of the village headmen cannot read or write.) But as to their education in any way teaching them to protect instead of defraud their countrymen, we fear little or nothing can be said. A high standard of religion and of truth, intercourse with the High and Holy alone will really do that. Still from what has been seen it may be hoped that some of the highly educated of the upper classes in our Bombay government schools have learnt some higher morality. But in some of the collectorates is this true of more than a few? Many seem only the worse for their teaching.

One hears so much in India--not indeed peculiar to India--of the corruption, the exacting of petty bribes, by the petty native officials from the people, the wretched cultivators, who are in their power, that one cannot but ask, does our education educate them out of this into *men*?

What a splendid race to run for a band of young native

gentlemen in India, not only to be quite inaccessible to every kind of corruption themselves (*that*, no doubt, they are already), but to set their faces like a rock, unwavering, like the bayonets of the British grenadiers at Waterloo, systematically against every kind of corruption, small or great, and probably it is in the universal taking of small bribes by the petty native officials that is the worst mischief--to use every means in their power, not only passively but actively, to establish a native public opinion against bribery--a manly horror of it--to raise the small official out of the habit of "palm grease"--grease, dirty grease indeed--of taking "douceurs" [bribes] from the poor.

What a glorious object! That is the true "competition" race. It is impossible for British officials in India, incorruptible themselves, to check or even to know the bribe-taking in one presidency of the peons from the poor, in another, of the small public works irrigation overseers; in all, it is to be feared, of corruption in one form or another. And if they do find it out in one case, the man denounced and punished is sure to ruin the complainant.

But is it impossible for native gentlemen to speak and work against corruption? And may God speed them!

That they have already turned their attention to this is manifest from articles in native papers. The *Banga Bandhu* of 24 April 1874 has in an article called "What we want from Sir Richard Temple," quoted in this very *Journal*: "6. Attention should be paid to good moral character in officers: bribery should be checked." But this is what India "wants," not "from Sir Richard Temple." She "wants" it from herself.

3. A commission has been appointed by the viceroy to revise the entire Rent Law of Bengal. The men selected for the commission are far from hostile to the ryot. It is to be hoped that they will examine the ryots and ascertain what their actual condition is. Some means must be devised for dealing with this land question, compared with which all others put together sink into insignificance. At the same time, it is to be feared that in any readjustment the men of money who command the lawyers and the newspapers and the native members of council will certainly not lose, and may not improbably gain.

The first thing needful is that there should be lawyers, noble native gentlemen, men who have it *in* them like Daniel O'Connell--honest like Daniel O'Connell--who, "despising the loss" and all worldly advantage, should be generously, as God is generous, at the service of the ryot interest, the weaker interest.

The second thing: that there should be newspapers, newspapers of weight, fearlessly, but with the utmost attention to accuracy of facts, to advocate the ryots' cause.

And thirdly, we may hope that the day will come when the native members of council will not be only in the interest of the zemindar.

But such things must be steadily, perseveringly, doggedly carried out and made, not the interest of a leisure hour, of two or three years, but the interest of a life. Clarkson who, with Wilberforce, Zachary Macaulay, the father of the great historian, and others, among whom was my grandfather, William Smith, member of Parliament for Norwich, carried the abolition of the slave trade, began thus: at Cambridge University, when a mere lad, he was set as an essay for a prize, "the slave trade." He put together his materials and promised himself a boy's pleasure (this he told himself) in writing an effective essay that should bring him honour on so dramatic a subject. But as he continued the subject it so mastered him, so held him in its grip, that all his heart and soul became possessed with it. He forgot his essay, he forgot honours, he *became* the slave trade to be abolished: no writer, but a slave to writing to save the slaves, and henceforward to the close of his long life he worked for that and that alone; he lived for God and the slave. And he lived to see this most momentous of all modern social revolutions accomplished.

Such must be the defender of the ryot: he must not take up the cause because he has small practice and wished to bring himself into notice, to be a tribune of the people; he must not give it up because he has got into practice, because he has become rich. Such has been the end of many an able young man, not only in India. The cause must become *himself*: it must be his life's work; it must end only with his life. And who can tell if such a career does end with life?

It may be harder for the camel to go through a needle's eye than to find a rich man who will be on the side of the ryot as a native member of council: such may have been looked for and in vain, or a lawyer in practice who will be even impartial towards the ryot, however well he may have begun, or a judge who will live and persevere.

Alas! civilization may bring with it the vices of civilization: a man may cease to believe in his own religion without learning to believe in anything better. A Brahmin may cease to have a Brahmin's virtues, without learning to practise the manly virtues of the West. And perhaps in a few years he falls away. But such is not the stuff of which reformers are made.

In the West such things have been known as young men patiently working their way up to riches, or at least to honours and influence, *not* for their own sakes but for the sake of their poorer fellows, of the people's cause, till at last they were elected to representative political life, to rise to high official post, or even to the Cabinet, there to carry on their high and holy objects. Were Indian native gentlemen to fit themselves for representation, representation would as certainly become theirs as time would run its course. But what native representation there has been hitherto has certainly not been on

the side of the people. *Disinterested* political, not party principle--how great, how divine that quality is. "It blesseth him that gives and him that takes."

Might not such be the way that, were Christ or a Buddha to come again in our days, he would perhaps act to help and to save his people?

4. What tendency is there for Brahmins and the higher castes to monopolize education and subsequent government employment resulting from it? What proportion of the agricultural classes compete with the Brahmins and the higher castes for the university examinations?

The question whether Brahmins and other higher castes monopolize government education and the employment resulting therefrom touches on a different set of questions. Caste means nothing in relation to government schools: all boys are admitted on equal terms who can pay the fees. Numbers of cultivating ryots in Bengal are of course Brahmins and rajputs, while many men of wealth and high social consideration are of very low caste. Still the vast majority of pupils in our colleges are Brahmins and kayasths [literate persons], the explanation being that it is traditional with these classes to seek a literary career, and that since they form the backbone of the middle classes in Bengal they are generally able to pay for their education.

The distinguished ones rise to judgeships. Do they persevere on a great career? May it unhappily be that some fall into evil ways? God forbid that we, who belong to a nation disgraced, alas! by the drunkenness of its lower classes, should cast the first

s but in our own merits.

In Bombay the tendency of Brahmins and similar castes to monopolize higher education and the higher government posts has often been noticed. The tendency is natural enough, as the Brahmins are the most intellectual caste, and their original occupation as priests, etc., becomes year by year less remunerative. The lower castes, too, find it difficult to qualify for employment. It is not that the government is averse to employing them. There are very few English officers who do not try to encourage the lower castes, e.g., if in Bombay a Brahmin and Maratha compete for an appointment, the Maratha (*ceteris paribus*) is pretty sure to be selected.

But the Brahmins and higher castes naturally monopolize most of the education: firstly, because they can best pay for it; secondly, because they see its benefit better; thirdly, because it benefits them at once in a pecuniary point of view more than the agriculturist, as they gain their living in government service and such ways. If however the agriculturist knew his own interests, none should be more anxious to learn than he, as the ability simply to read and do plain arithmetic would save him from two thirds of the impositions of his money lender.

May we appeal to the higher castes? What truer "high"-ness can there be than for the higher castes to raise the lower?

We return for a moment to primary education. The Brahmins are the schoolmasters, but sometimes, often, the schoolmasters are not above their scholars in moral courage and goodness--in all that constitutes in the higher sense a *man*. The government schools are open to all castes, but it is said that if the children of lower castes were to come all the other children would leave.

In a Bombay collectorate a Mhar father brought to the collector, in much distress, his little son to say that he had begun his education and was getting on well, but that he, the father, having had to change his abode, the master of the government school in the new village where he had settled refused to admit his son because he was a Mhar. The collector took up the case and got the boy admitted. His exclusion was quite illegal, and had the collector pressed the matter and found the charge established, doubtless he could have had the master punished.

But as nearly every master is a Brahmin, it may easily be supposed what obstacles they throw in the way of the sons of low castes coming to these schools. Practically it is to be feared that they are still almost excluded. Nor can we force the change too much before the country is ready for it.

In one great town of the Bombay presidency many Mhars are seeking education, and the American missionaries are doing much to meet the want. If low castes were to attend in government schools it is true that all the high castes would in many cases leave, but it would only be for a few weeks, and then all would come back again, or nearly all, and everything go on as before. The thing has been tried more than once in private schools in India. Will not a Brahmin soon ignore his caste prejudice if he sees his worldly prospects would suffer by it, or if he has to pay for it?

Then why, O fellow subjects of the same sovereign, and O brothers and sisters, children of the same supreme and perfect Father above, should not that be done out of brotherly love and pity and charity which is done out of greed and love of money? We appeal to you all not to let caste interfere with your duty to all your fellow creatures. Reclaim, but do not cast out. Can no way be found to this in India's ancient civilization, the mother of the West's? Do we not hear the Vedas say: there is no distinction of castes? <id = fo>

But what do I say, WE appeal? God appeals to you all and to us too. We are very sure that the soul of a single Indian is of more value to the Supreme than all the castes and all the commissions and all the churches and all the creeds in the whole world. In India Hindus and Muhammadans alike, to our shame, support all their poor, except in times of famine, and without a Poor Law. We spend many millions every year, bad and good, in poor rates. Hindus and Muhammadans alike support their sick and their old and their infirm, and much better than we could do it for them.

That shows how strongly God has implanted the feeling of pity and charity in their breasts. And will you shut out the child from education because he is not of the same caste as your own? The low castes or outcastes seldom attend a government school, but a few do, and in exceptional cases, as of bheels, coolies (i.e., kolees), etc., there are at least in one or two of the Bombay collectorates special government schools for them. Missionaries also do a good deal for them, where there are missionaries.

It is not meant that no children should be excluded. In Bengal, where caste is becoming less and less day by day, the question of admitting children of dancing girls (an altogether immoral class) into general schools has lately been opened and discussed. The general opinion was that there was no objection to the admission of sons of a dancing girl, but that if the daughters (whom no one would marry and who are necessarily brought up to the same profession and prepared for it by very early initiation into vice) were admitted, respectable people would withdraw their own daughters. This is not caste prejudice: it is rather the reverse--it is proper parental care.

The question of admission to ordinary schools of children of dancing girls and of those who make vice a profession is now practically settled. (Must we not say a "profession" and not a "religion"? Is more than a small proportion of the whole number attached to temples?) As regards low caste, harmless girls, there is often the same reluctance which an English gentleman would feel at letting his daughter associate with a low-bred girl at school or elsewhere, perhaps less in India than in England, all things considered. But is there no way to educate these? And may not this tremendous power of caste, if it move to wrong, also "move all together" to right at some day, not far distant?

5. Everyone in India wishes to be educated. But he does not wish to go back to his own life and improve that life by his education. He wishes to be educated that he may become a government clerk. Now, if there were nothing else against it, it is impossible that everybody can be a government clerk. And what a narrow life it is, though not necessarily so! Some of your reformers have been government clerks.

One of your own people has said: "One national prejudice is the dislike of industrial work, and indeed of any occupation which has not been consecrated by having descended from their forefathers." This is the more to be wondered at and deplored because there are perhaps no races on the face of this globe more industrious and frugal, or more apt for the industrial and manufacturing arts, than some of the races of India, though it is true that a big carnivorous English navy will do as much work in a day as a vegetarian Hindu in a week.

This *Journal* advocates the principle that all primary schools for the people should embrace industrial work and training as well as that intellectual teaching which leads, as we

have seen, but too many to seek to leave, not to improve, their own lives. (I have quoted one of your progressive social reformers, Babu Sasipada Banerjee, for this view and shall venture to quote him again in another number.)

I had intended in this part to go into the facts of primary education in Bombay and Madras presidencies, but space compels me to delay to the next number.

In this appeal to the higher castes of Bengal to educate themselves into *men*, as also to follow that grand reforming career which lies before them of raising the lower castes by education to be *men*, we pray them not by our virtues, for none are more sensible of our own shortcomings, but by the common feeling which our common Father in heaven has planted within us.

PART 3

Our two questions--what proportion of the boys in our government schools are the children of ryots, and what of the other classes? and what proportion do the children of ryots at school bear to the actual numbers of the children of that class who ought to be at school?--cannot be accurately answered from existing information either from the Bombay or the Madras presidency at present, but more detailed returns will probably be made at no distant time. (It will not be overlooked that in Bombay and Madras presidencies there is no division of classes into zemindars (landlords) and ryots (cultivators), but the ryots or cultivators hold their land from government direct.)

In Bombay presidency 248,140 children were attending school on 31 March 1878. Of these 207,281 were Hindus, of these 40,085 were returned as Kunbis (cultivators). "Ryots" may be of any caste or race, and of course many who belong to the Hindu castes called Kunbis do not cultivate at all. There were 20,111 artisans, 6786 labourers, 1649 low castes and 6718 unclassified. There were 60,851 Brahmins, the largest proportion of all, 6344 Rajputs (so called), 2830 Parbhus (best known as writers and clerks), 11,714 Lingayats [bearers of lingam, stylized phallus], 13,072 Jains, 29,003 traders, 5886 shopkeepers and 2232 Amils [collectors].

Taking the government village schools separately and including Muhammadans, etc., with Hindus, the children of people holding land were for the lower vernacular schools 99,405 to a total of 157,312, and for the higher vernacular schools 2478 to a total of 5794. These figures give the landholders 42 percent for the higher and 63 percent for the lower vernacular schools.

The question however rests on an entirely different basis from what it does in Bengal, owing to the ryots being themselves the landholders. The far more important question as to the number of children who ought to be at school cannot be correctly ascertained at present, though an attempt will be made further on to make a guess at an answer. In Madras presidency there are no statistics showing how many of the cultivators can read and write, but according to the census of 1871 only 9.3 percent of

the whole male population, omitting Madras, could read and write.

II. The famine told heavily against the Bombay government schools, and still more so against the indigenous schools. For these last--which are opened one day and closed another--there are no trustworthy returns. The loss for government schools was 177 schools, with nearly 16,000 children. The fathers could not pay the cess and so the schools were closed. To show how severe the famine pressure was in some of the Deccan districts, sixty-seven schools with 6334 children were closed in the central and north-eastern divisions alone. The temporary closing of government schools in the famine was both because the people ran away and because the schools are mainly supported by the ryot class, from what are called local funds (school cess), and these could not always be levied during the famine. It would appear as if there were little hope of most of the closed schools being reopened.

In Madras presidency the report for 1877-78 shows a decrease of nearly 1000 schools with upwards of 32,000 scholars, mainly owing to the famine.

III. In the most elementary affairs of a good government a first necessity seems to be that officials, even the smallest, should be able to read and write. But the difficulty of finding even patels (village headmen) in India who can read and write stares us in the face: in registration, in obtaining the simplest village return, above all in making the patel do his life and death duty as sanitary head of his village. And in the now so urgent imperial question of the relations between money lender and cultivators it need not be said what the fatal effect is of this, that not one tenth of the ryots are able to read and write.

"To try and get the people themselves to assist us" in what we would fain do for their good is of course the corner stone of the whole structure we would raise. But "it will be a very long time before we can hope for this assistance from the natives themselves, as the want of even elementary education among the people is one of our chief stumbling blocks. In many villages the patels can neither read nor write." (Read for a vast amount of information the *Thirteenth Annual Report of the Sanitary Commissioner for the Government of Bombay*, 1877.)

1. The Bombay sanitary commissioner tells us of the enormous difficulties of ensuring anything like a "correct registration." "At present a birth or death, even if reported to the patel, cannot be registered until the kulkarni (village accountant) has come, for I have little faith in the patel being able to get anyone to write down the information for him but the kulkarni whose duty it is. The result in a large village can be easily imagined."

Everything that happens is referred to the great festivals of the year. "They can always remember the Holi or Dussera or Dewali, but cannot recollect whether an event took place a month or six weeks ago." They have scarcely any idea of age. One can

fancy what the village returns are, and unhappily what the opportunities of foul dealing, which result from its being so easy to dispose of a dead body, owing to carelessness in registering deaths and to habits of trusting to memory in even (native) officials, and then one can understand how remembering they may forget to remember at convenient times when the English sahib comes.

The sanitary commissioner, after recommending that "all funeral places should be registered in the name of the panchayat of each community, who should pay for the maintenance of a sepoy, ... who should not allow a body to be disposed of until the requisite particulars regarding the death had been obtained," admits the difficulty of "being able to find a sepoy who could write," but hopes that even then there would be much more chance of his remembering the number of bodies than if the patel had to trust to his memory.

Then comes in the question that meets one at every turn, whether each community might not be "too poor to pay for the maintenance of a separate sepoy." In the wild tribes "any improvement is for the present out of the question." The sanitary commissioner recurs again with a sort of desperate hope to the time "when the people may have received some sort of elementary education." And even then we are still as far off as ever from any accurate return of the *causes* of deaths. "But this *must* be so until the day in the far distant future when each village has its own medical registrar."

In England, where the census returns and the returns of births, deaths and causes of deaths are all, thanks mainly to Dr Farr, of the General Register Office, organized beyond almost the possibility of error, we can scarcely conceive the difficulties in India, and above all the hopelessness of making millions of people with hardly the simplest notion of education give information essential for their own benefit.

All attempts at improvement must begin in municipalities. (There is no compulsory registration act for municipalities and towns in Bombay as in Bengal.) The returns from Sind are stigmatized by the authorities themselves as "manifestly absurd," but in other parts we have this comfort that "the ratio of error is about equal," "so that an opinion as to the *relative* number of deaths in districts can be formed," but the *relative* number only.

No reliance can be placed on the population returns in Bombay presidency. The people were so persuaded that they were to be enumerated in order to be taxed that they would not give information. But, were education in any true sense to be spread, they would see for themselves that not taxation but their own benefit is the object of the census, and they would help the government to help them by speaking the truth.

In 1876 the *supposed* population of Bombay registration districts was 16,887,728. In 1878 children attending school were, as we have seen, 248,140. Everyone can make some kind of estimate

from this how many go to school of those who ought to go to school. These calculations are, however, as we have seen, of the roughest nature.

2. One of the most really important, however, of all the functions which could be conferred on the patel, if he had an ordinary amount of education, is what was contemplated by the Bombay Village Police Act of 1869, viz., that he should have authority given him by law to compel the people to clean the village, to enforce ventilation, to conserve the drinking water, in other words to take care of their own earth, air and water. They would have no cholera and little fever then. It is difficult to speak with moderation, it is impossible to speak with too much earnestness on this vital point, which regularly consumes the lives of almost as many millions as are periodically lost by famine.

There is not a shadow of doubt that the great mortality in towns and villages is produced by the people themselves with their unhealthy habits.

(a) It is no exaggeration to say that the subsoil round every village home in India is saturated with human filth or decomposing organic matter. We hear a great deal about cholera being so "mysterious," so "erratic." The "mystery" of cholera, the "mystery" of fever is in the filth-sodden soil. <id = ga> The people themselves feel the misery of having no channels to remove sullage away clear from every habitation. I could tell of towns where on the setting in of the rains streets are converted into sewers, which discharge into the river above where the drinking water supply of the town is pumped.

And the people not only suffer in health from leaving the surroundings of their houses and villages in a dirty state, but they so lose a great deal that the Japanese or Chinese would use. And as owing to the wasteful destruction of forests that has taken place without replanting, the dung of cattle is used for fuel, agriculture in India loses largely, and the people do not understand bone and chemical manures. But this would lead us too far.

There is no money whatever forthcoming for the execution of sanitary works in villages. Sanitary measures are being slowly introduced into municipal towns, but in villages nothing whatever is done. But teach the people to help themselves, educate them into *men*, and the thing is done in a great measure.

(b) "My house is like a box," says the Bombay villager with pride. It is, indeed, Pandora's box with all sorts of evils in it, and no hope at the bottom except from having these things all reversed. Windows are stoutly discountenanced for fear of robbers. So is a hole in the roof to let out the smoke, in spite of sore eyes. The door is tight shut at night. They sleep on the floor huddled together, with a sheet tucked in over head and feet, so as to bottle up all their own foul breath and foul skin emanations for them to breathe over and over again. A better or

more certain source of disease can scarcely be devised. Hermetically sealed in with their own exhalations, they breathe death. Yet simple inlets and outlets are urged, and might be easily provided for the entrance of fresh air, if they did but learn to know the need of it. (While I write, I have received a copy of the rules for village conservancy, etc., which are being promulgated by the Bombay government for adoption in the districts.)

(c) All slops are thrown onto the heap of rubbish in a corner of the courtyard, and this sometimes mounts half way up the outside wall, on the top of which are cow dung cakes drying in the sun. Outside is a sweltering cesspool. The Hindu is clean in his person and sluices himself with water on two or three stones in his courtyard, which water soaks into the ground.

(d) Natives in the mofussil (country) bury their dead inside their enclosures, lingayats and Muhammadans often in the embankment of tanks, or within the very bed of a tank.

(e) Last and most important, the drinking water is but too often diluted sewage. In seasons of drought you may see the poor people digging holes in the beds of nullahs a mile away for water; in happier times you may see native troops and women of course--the saddest sight in India--toiling through the hot sand to carry their water from the river a mile and a half off. Where there is tank water there may be burials in the gathering ground, and a large burial ground, as has been above said, in the embankment itself, and the catch water drains which feed the tank may pass through crowded places where they are soiled with night soil.

Then step wells ensure all the filth from dirty feet and dirty vessels being washed back into the well. Here is a striking fact: in one place the Hindus of caste have a step well and much disease due to foul water. The low castes have a draw well and no disease of that character.

Orders regarding covering wells and fitting windlasses with iron chains and iron buckets round the parapet wall have not been carried out. People say this would be only a waste of money, as Hindus would not use the bucket. By no means. Caste does not override convenience. At the Lily tank at Solapur, from which the worshipers at a temple close by obtain their water supply, the energetic engineer blocked up the steps leading down into the water and fitted two wheels with iron chains and buckets, which have ever since been used without a word simply as a matter of course.

The way the natives will in watering their cattle allow the beasts not only to stir up the mud, but to foul the water--which they are just going to take for their own drinking--in the worst manner, is dreadful to see.

Then there is often no well for the Mhars and Mangs. No one but those who have witnessed it can form any idea of the misery these poor low-caste people suffer where there is only one well

in the village. "I have seen them standing in rows," says a sanitary commissioner, "not daring to draw water, but waiting until some kind-hearted Maratha would fill their water pots for them." Here are the abuse of caste and the love of kind, greater than caste, side by side. In the large town of Satara there are thirty-four water cisterns for Brahmins, thirty-five for Marathas, eleven for Muhammadans, but, until lately, not one for the despised Mhars or Mangs. Even where there is a separate well for them, it is invariably full of filth, and full of disease-cause in consequence, for the patels and native officials always avoid if they can visiting them.

These are only some of the evils which we must educate education to remedy. In most of these the people alone can help the people to save their lives. In others the government must do it. But the government are so ready and anxious to help the people, if only the people would let it, through their own headmen, by every means of legislation, by sanitary manuals, which must be taught in school in such a manner as really to be applied in daily practice afterwards by the scholars. But elementary ignorance stands the mightiest engine of oppression of all, to stop the good work at every turn.

IV. And who is at the bottom of all this? Who? No principalities or powers of evil, no fabled devil, no magic power. Who then? The graceful, timid, affectionate, self-sacrificing Hindu woman. If this noble womanhood, with her powers of self-devotion, instead of being a suttee, were an enlightened martyr, what wonders might she not work? If, not called upon to be a martyr, she were to give her powers to raise her family to the highest and wisest standard, what revolutions of love and mercy might not be made? But instead of this who is in the way of all reforms? The woman.

What do the most intelligent and highly educated native gentlemen say? They wish to set an example to their poorer neighbours by carrying out certain reforms urgently needed in their houses. But they add: "I quite agree as to all this, but if I were to carry out these measures I should afterwards know no quiet minute. The ladies of my house would be so much opposed to any change."

If ever there were a need for the "schoolmistress at home," this is the place. Read, for Bengal, in the education reports accounts, both pathetic and playful, of the ladies being "examined" (O, march of the times!) within the zenana of course, and the husbands giving them private assistance in writing their examination papers And, as we have seen, though the husbands help with the examination papers, they do not help with the great simple elements of life. Where is the help in giving these women the most elementary notion of what constitutes the life of a race, of what makes a healthy home, of home happiness and domestic economy? Shakespeare would say that we are giving them the "mustard without the beef" or, as we should say, butter

without the bread. Are we not giving them the lace without the shirt? the bangle on a lifeless body? First, the necessities and essentials of life, then its ornamental and artificial characters, would seem to be the right rule all the world over.

And we must not trust too much to missionaries. These do a good work in education, especially among poor children. But they *must* have figures to show to their societies at home. And there is slow and sure work of another kind to be done among the women. To whom must we appeal but to the husbands to do it?

Then here is another great need of education: the British government has justly forbidden the widow to be a suttee, but it has left her a slave. We want something more than merely making murder and suicide by fire illegal. We want education to prevent family and custom from making the lot of the poor little widow intolerable.

And the women who will brave suttee are not only the widow, but also the attendant of the widow. What heroism, what power of love and self-sacrifice, what devoted attachment, what sense of honour she must have, if we could but turn it to its true account. But we do not.

Not forty years ago a ranee [wife of a raja] burned herself with thirteen of her women. One was a child of only ten years old. The ranee tried to save her. The little girl burst into tears, "I desire nothing but that where you all go I should go also," she cried. "If you do not suffer me to be a suttee with you I will die in some other way." And the child suttee was burnt alive with her mistress. We have wept over the story of Ruth following Naomi, "Where thou diest, I will die." But what is this? What a sacrifice, so freely, so willingly made!

Self-devotion will never be wanting in Hindu women. Do we think of the "Hindu's love stronger than death," and of "our own cold half-hearted service?" The subject is too moving to dwell upon here. But let us English women just ask ourselves, are we ready to do the same, or rather to live the life instead of dying the death for God?

V. Now for what the government only can and would do for health:

1. A resolution of last year by the Bombay government takes up the recommendation that for cleaning villages "systematic endeavours should be made to *teach* the people to help themselves," and that as the preliminary step "the patel should have authority given him by law to compel the people to clean the village." It recognizes how "closely this matter concerns the public health and safety," but "in many villages *the patels can neither read nor write*." Where the patel is an intelligent man it recognizes with what great benefit he might be entrusted with powers under the Bombay Village Police Act of 1869. There is no class of men in the whole country so well qualified as the village patels to advance sanitary reform, if only they were taught themselves and taught to teach others. "The Governor-in-

Council desires that all collectors will cause careful inquiries to be made in their districts with a view to ascertaining what patels can be invested with these powers," and adds, "It should be the object of every collector to convince them of its importance," and of every native gentleman too, one would think.

2. Much good work in the cause of health has been done in many municipal towns where the Bombay district municipal act is in force. But in the whole presidency there are only ten city and 170 town municipalities where it is in force, and there must be 2000 people to constitute a municipality, whereas India is a country of villages. There are 26,473 villages in Bombay presidency and, unlike Bengal, these are very much scattered. Still, the good of the municipal health work is not limited to the town itself, "for the simple fact of seeing what has been successfully carried out *educates the minds* of the villagers who go in on market days to the large towns." There is much education besides school education to be given everywhere.

But even the higher country natives have not, as a rule, the faintest conception of the connection between health and cleanliness, or that they are living under conditions where health is impossible for themselves and all dear to them. They wish, if they only knew how, to be clean. But I could name two considerable places where the municipal commissioners saw nothing horrible in the living and sleeping and cooking their food in an atmosphere "tainted with their own excrement," in drawing their drinking water supply from the foulest wells or from village tanks soiled with indescribable abominations.

It is difficult to put before the readers of this *Journal*, without telling facts which can hardly be put into plain English, how much must be done to bring the people themselves to know the terrible results of their daily habits, why the simplest laws of health must be obeyed, how they must be obeyed and how they are essential for the immediate and essential good of themselves and their children. Hopeless it would seem to try and teach such people to raise themselves out of their filth or to help themselves in these matters, but that we see how much we have yet to do in giving even elementary education and how much might be done by education in this matter of health.

3. To return for a moment to statistics. Out of 26,473 villages in Bombay presidency it would seem from an administration report that no fewer than 19,132 have no schools where even elementary education can be had. (Of 1875-76, schools have gone "up," and in the famine, schools have gone "down" since then, as we have seen.) And this is reckoning 3330 indigenous schools over and above 4011 government primary schools.

Now if there were a school in every village and every schoolmaster would intelligently teach these matters of life and death, what might not be done?

The educational department derived in that year 58 percent of its income, or 718,334 rupees, from the one anna cess paid by

land on each rupee of the land assessment, but only 38½ percent of the department's expenditure was devoted to primary schools for boys.

The defect in the government system of education is that even were we to leave large towns (municipalities) out of the question, yet even in rural parts the proportion of the children of actual ryots educated compared with those of the higher classes or castes is as nothing to what it should be. This, too, when the ryots pay nearly all the educational cess and cannot afford to educate themselves, whereas all the higher classes can, and many pay nothing direct to the educational cess or even to government. Besides, are not the ryots the class suffering most from want of education?

But far and above all in importance in this health matter are girls' schools, and there are only 233 girls' schools in the presidency. It is impossible to make life life by carrying out the laws of life in the domestic arrangements of the masses of the people until the women know how to do it--are, in short, better educated in what makes home home. And at present they are hardly educated at all, neither high nor low, though the lower classes are frugal and hard workers. Can we educate women to be women, is in this matter a yet graver question than "can we educate men to be men?"

Because England was lately almost as bad is no reason for reconciling ourselves to India being worse. Such reasoning, and it *has* been made, reminds one of the child who was desired not to burn its mouth in eating and answered, "We always burn our mouths in the nursery" or of the young lady who bought an ugly bonnet and said, "There were [two or three] much uglier in the shop." (The lodging houses in parts of London and some typhoid fever cases caused by defective drainage in other parts have actually been adduced in India by distinguished natives as reasons for not improving India's large towns.)

I remember the time when the wife of a labourer in Hampshire, the mother of ten boys, told me with pride that no water had ever touched *her* boys, except their faces and hands. It is still a tradition among miners and colliers here that feet should never be washed nor any part of their bodies but faces and hands. But that very mother, become a grandmother, lived to be seen washing her orphan grandchild all over in a tub; such was her education in her old age. An old friend of mine learnt at eighty years of age to wash herself all over in cold water. She lived till ninety. Mothers have learnt here for themselves and their infants. In India the arrangements at births are still such that one wonders mother or child ever survive. We have seen what the Indian sleeping "box" and village are.

It would take a volume to give even the heads of progress in practising the laws of health made in the last twenty-five years in this country. Thirty years ago these were all but unknown. Now they are all but universally practised in some degree, with what

effect in lowering the death rate let the Registrar General's tables show. There is no space here to write a sanitary treatise.

Let not India lag behind! She may be better than we were in personal cleanliness, but in matters of decency, in every kind of domestic arrangement, in cleanliness out-of-doors, cleanliness of water, air and earth, she is immeasurably behind. And this, when giving the people pure water is a matter of charity, of religion, in the East.

Men of the highest authority have said that if the money spent on teaching your men in India the dead languages were spent in educating girls to be women all over the country, India would be saved in health, life and matters domestic, <id = fm> and that if young men are to be highly educated by government at a nominal expense, it would be far better to educate them into men by natural history and the physical sciences than by Latin. But why not give both?

4. One thing can certainly be done without delay, and that is to make the Health Department in Bombay a kind of normal school, where natives should be trained so as to "supply municipalities, towns and cantonments with skilled inspectors." Thus native inspectors would be made men and would make men.

5. This *Journal* has several times advocated the necessity of industrial schools. Here is a case in point: One of the greatest difficulties in Bombay presidency in curing the filth-sodden soil, the cause of the fevers which decimate the population, is that Indian potters have lost or never found the art of making pottery ware water-tight by glazing. At Bijapur and Ahmadnagar and many other places, the Muhammadans in ancient times executed splendid water works by bringing in water from a distance with common porous baked clay pipes, swathed in cloth dipped in pitch and wax and cased in mortar. Glazed stoneware pipes brought from England are now cheaper. But Sind has the art, though rudely, of glazing pottery ware. The school of art in Bombay is encouraging this manufacture, and skilled instructors from this school might be sent into the Deccan to teach the indigenous potters. If the manufacture of glazed pipes could be generally introduced, the question of drainage and sewerage in country towns and villages would be all but solved.

6. In 1870 the Bombay government published a bill for the regulation of burial and burning grounds, of burning and burying corpses, etc. All these measures are absolutely essential for the protection of the public health. But this bill has never become law, though the present practices are a fruitful source of disease.

7. How a sanitary manual, if really taught and practically understood and applied, would save millions of lives and put to flight cholera and fever.

The Government of Bengal is now arranging for the compilation of a "sanitary manual" for primary schools. It had offered a prize for one, but none of those sent in won it. The

Governments of Bombay and Madras will also have theirs. Sanitary manuals to be taught in schools will therefore soon be in use in Bengal, Bombay and Madras, and each of these governments will watch their start and progress with interest. I shall be proud to report to you of these.

8. No manuals of agriculture of any kind have as yet been used in Bombay village schools, where alone sons of ryots are to be found, but several books are in preparation (one has been published by a native society), and as soon as the agricultural classes lately opened for the instruction of teachers, etc., are fairly established, instruction is to be given in every taluka school (i.e., the chief vernacular school of a sub-district).

The agricultural class for instruction in scientific agriculture has been opened at the Science College in Pune. The government farm is three or four miles off, but is used at present for practical instruction. Arrangements for taking up land near the college are in progress.

Six other classes (each with land) were to be opened last June at certain district headquarter stations. These six classes (the number is to be increased hereafter if the plan succeeds, until every district has a class) will be subordinate to the college class at Pune. It must however be many years before this effort will affect the really agricultural classes. Classes for the taluka (vernacular) schools are to be opened hereafter, as above said.

Though there is no agricultural manual yet in use in the government primary schools, yet there are scattered through the schoolbooks a few child's tales on some matters useful for the ryots to know. Some of the books used were and still are miserable productions.

The old government farms have been kept up mainly for experiments in cotton, cinchona, etc. But at one farm in Khandeish Kunbi boys have for some years past been taken as apprentices. It is under consideration whether this system could not be applied more extensively. Expense is a hindrance to the plan of model farms. But are any of these farms fitted to help poor men with small means to improve their style of agriculture and make the best of what they have? John Lawrence, first in all measures to improve the condition of the people, said that model farms were usually set agoing on wrong principles, with expensive establishments and an undue outlay of money, whereas what is wanted is model farms carried on in such a way as to instruct poor men, or men with moderate means, how to improve their agriculture by thrift and carefulness. Of course, he said, model farms for the culture of valuable produce like tea and cinchona come under a different category.

It is said that Egypt produces cotton of a far better quality and in very much larger quantity than that of India owing to India making cotton a dry, not a wet, crop.

9. But when the manual is ready and the scheme prepared, how

to make manuals into men? In Bombay presidency the schoolmasters are almost all Brahmins; they teach well by rote, but the pupils do not understand; the masters do not understand themselves what they are reading. When the sanitary manual is there and when the agricultural manual is there, they will learn it all off beautifully by heart. But if you ask them how to apply it to their father's house, to their father's land, that is quite another thing. There is no connection in their minds between what is to be read and what is to be done, between what is in their books and what is in their homes. It never enters their minds to apply anything from their books to life. Yet what there is to be applied from books, how their lives might be saved by themselves we have seen. Ryots are too much like parrots, or like clever children.

In the standing orders for Madras government schools, 1878, there are some curious examples of the way in which English may be perfectly written and read, and imperfectly or not at all understood. Even at a matriculation examination the following incident actually occurred: one exercise for the candidates was to render into Tamil the following simple sentence, "Both father and son lived a riotous life." They translated it into Tamil thus: "Both father and son spent their time in farming," "Both father and son lived like ryots," "Lived by cultivation," "Led a righteous life," "Spent their time in performing religious rites." These strange literary performances can only be accounted for by some candidates fancying that "riotous" was derived from "ryot," others from "rites," others thought it meant "righteous." And these were youths supposed to have learnt English and to be going on to matriculation!

It ought to be proclaimed by beat of drum that education can only be judged by its results, by its power of making men into men and women into women. "Results grants" ought to be grants for "results." How can we bring this about? How can we bring it about in England? In England with this new fury for examinations, education is running too much to examinations--to what will tell in examinations. Tutors and schools advertise how many of their pupils have passed such and such examinations as a proof of efficiency. How can we bring it about in India, where education is only beginning?

In Madras presidency the present director of public instruction proposed that agriculture should be made a subject for which grants might be obtained in "results schools," and that the director of Madras government farms should prepare an agricultural class book.

Agriculture forms now part of the curriculum for the fourth standard. But the class book has been only recently finished and it has not yet been published. In the meantime a small Tamil pamphlet, published by the School Book Society, containing the substance of two lectures on agriculture, is allowed to be brought up for results grants.

But what would stimulate young men of spirit to make agriculture a practical career to be learnt? Government deplores the fact that so many natives fit themselves only for employment as *scribes*. But should not a government drawing upwards of £4,000,000 annually from agriculture as rents possess a few agriculturists at least in its establishments for administering the land revenue? From government civilians at the head down to the natives who collect the rent, are all ignorant of even the A B C of agriculture? What would be the result in England if our landowners and their stewards or agents were equally ignorant? In India, were some of the best agriculture college students to be gradually absorbed into the establishments for managing the land revenue, with the view of giving these establishments by degrees something of an agricultural character, this would be the way to stimulate scholars to put their books into the land.

Perhaps government civilians pride themselves on their management of the land and will have nothing to do with those who have been taught the mismanagement of the land. Perhaps this is a chief cause of our recent troubles and the present deplorable state of the country. (Perhaps the best way of seeing Indian farming is not what can be gathered during a rapid journey to the hills, or during some half dozen visits to be paid to rajahs or to places of antiquarian interest, visits made in the company of the usual attendants and of the usual pomp. Perhaps travelling rapidly by rail--chiefly by night--and inspecting towns decorated with flags and newly cleaned and whitewashed, after a long official notice of the intended inspection, is not the best way of getting a knowledge of the real state of the country.)

10. In Madras presidency there are very few government schools, and these are chiefly secondary schools in towns. The rural schools are mainly local fund schools and results schools. In the local fund schools in many districts no school fees are levied, and also in many of the result schools. This eleemosynary [supported by alms] education is, however, of a very poor kind. In government and aided schools generally the principle of levying school fees is maintained, and many boys are obliged to discontinue their studies at various stages from inability to pay the fees. There is much poverty even among the higher castes, and many Brahmin boys support themselves and obtain money to pay their fees by begging.

Government does not directly interfere with the reading books used in rural schools, but do any of the books in use contain lessons on such subjects as the true interests of ryots with regard to farming, to borrowing from government at cheap rates instead of from money lenders at dear rates, to digging wells, to capital, seeds, cattle, etc.? Why do not native gentlemen see to this?

There was an English Cobbett, an English Cobden. Let us see Indian Cobbetts, Indian Cobdens, Wilberforces, O'Connells, Rowland Hills, Indian educational enthusiasts, and in time Indian

Mrs Frys and Indian Sisters of Charity. (It is singular that one of the most famous systems in elementary education originated at Madras. Its author, riding by a Malabar school, noticed the children seated on the ground writing in the sand with their fingers. He desired the alphabet to be so taught, in sand strewn upon a board, in an apparently hopeless half-caste school under his charge. The plan failed. He then "appointed" a *child* of eight years old to teach the alphabet class, "told him that he should hold him answerable for success. And success followed. This mere child effected without difficulty what the class-master had declared to be impossible." Other boys were placed as assistants to the lower classes, under the superintendence of the first named child. The masters were converted into overseers of this monitorial method, which became the seed of our "pupil teacher" system. This was in 1791. This was Dr Bell. "The boys very soon surpassed their former masters, gaining sound instruction in arithmetic, book-keeping, grammar, geography, geometry, mensuration, navigation and astronomy." And this success was with boys of the "weakest possible grade in moral and intellectual faculties." "An eager demand" was made for the pupils "to fill important situations." And Dr Bell wrote three years afterwards that he had "his reward" in "giving to society an annual crop of good and useful subjects, many of them rescued from the lowest state of depravity and wretchedness."

When Mr Edgeworth, the educationist, applied to him to recommend books, Dr Bell answered, "There is only one book which I take the liberty to recommend. It is a book in which I have learned all I have taught, and infinitely more--a book open to all alike and level to every capacity, which only requires time, patience and perseverance, with a dash of enthusiasm, in the perusal--I mean a *school full of children*." Has the monitorial system been applied to the larger schools in India? The rural schools are, it is true, remarkably small, as we have seen. But is there no plan for forming school masters?)

11. The Madras education reports for 1875-76 and for 1876-77 will show the enormous preponderance of the Brahmin element in the university examinations. In round numbers about two thirds of the successful candidates are Brahmins, although Brahmins constitute only about three and a half percent of the population. The number of these men who obtain government employment is very large.

In Bombay the upper (i.e., the Brahmanical) castes always had the chief share in government service under a native or under the British government. All that the government system has done has been to enable the natives (a) to qualify for more important posts than those formerly given them by the British, and (b) to enlarge the area of their trade operations and to compete with English merchants. (Were there space, most curious particulars could be given of how native traders in Madras presidency are discovering the advantages of the English banking system, and

going on to unbounded prosperity, while adhering to the most frugal habits of life.)

With regard to agricultural and low castes, the government system has as yet had no direct effect in the way of enabling them to improve their holdings, but they have the advantage of knowledge being brought rather more home to their doors, and are more likely ultimately to profit by model farms and instruction in agriculture.

During the late famine an officer of life experience, who always maintained that the efforts of government to encourage primary education have resulted in nothing but the loss of the little education the natives had before, was surprised to find common cartmen reading letters giving information about the rainfall and the crops in their home villages 100 miles away.

Sir Rowland Hill, whom, in his ripe old age, we have just lost, invented letter writing, it may be said, by penny postage, among the large masses of this country. We wait for an Indian Rowland Hill.

VI. CASTE. We have spoken about caste in Bengal. In Bombay also theoretically the government schools are open to all. Practically the custom varies in each place. In some places there are special schools for Mhars and other low-caste people. In other places these children are admitted to the classes but sit apart. In other places they are not admitted to the same room. The feeling of the people is gradually changing in this matter. It is not forty years since the principal of a college (an English officer) was refused admission to the institution of which he was the official chief. It was the custom that he should stop at the entrance door and make a few inquiries, of the native teachers, but not cross the threshold.

It is not twenty years since Brahmin students used to purify themselves and bathe after receiving a lecture from an English professor. And it is not ten years since large schools of three or four hundred boys were entirely broken up because one or two Mhar boys were ordered to be admitted. Again, the position of different races or castes changes. There is now no objection to the admission of Muhammadans, of native Christians (possibly converts from the lowest classes) or of bheels. In some places, especially in the town of Bombay, no questions at all are asked, and any healthy and clean children are admitted.

Even in a girls' school, maintained by a committee of the most influential Brahmins in the town of Bombay, outcaste children have lately been admitted, after an inquiry in which the relations had proved that they were leading respectable lives. May the committee reap a tenfold harvest for this. This is true religion, true charity.

Much of course remains to be done in this matter for Mhars, Mangs and others. And away from the big towns the natives often show as much intolerance as ever. But the evil is one that cannot be cured by any high-handed order. Native gentlemen, and may we

add ladies, must educate education to cure it as they have done in several instances.

In Madras presidency government schools are not only theoretically but practically open to all castes. In former times government schools were sometimes almost emptied by the admission of a single pariah boy. Such an occurrence now does not produce the same excitement. Very few outcastes resort however to the class of schools maintained by government. They chiefly attend mission schools, and some mission schools are specially intended for outcaste children.

VII. But after all the one pressing question before which all others sink into insignificance, as in Bengal it is the land question--so in the Deccan it is the relation between money lender and ryot. And here education must educate the ryots to be men.

The ryot is sharp enough. So is the money lender. But the vast difference between them is education--not only school education but real education--the school of practical experience, the "results grant" of life. The money lenders acquire their acute business knowledge and habits in the same school that the workers in brass and wood and ivory, etc., acquire theirs, i.e., in the school of practice. Every man in India is a proficient in his own trade or business after a fashion in his own way, for they all learn it from infancy with their parents. Every man follows his father's business and thus so far as can be with their poor appliances every man attains a really surprising amount of efficiency in some thing or other. It is often true he knows but one thing, and he gives a life to labour at that, but his proficiency in it would often astonish us. But how is it if it is proficiency in ignorance, as it so often is, when a ryot signs away a sum which represents much more than his all and which he can never pay, to sowkars for sums which he has never received? What arms does his trade in ignorance lend the sowkars?

If the agriculturist knew his own interests, none should be more anxious to learn at school than he, as the ability simply to read and do plain arithmetic would save him from two thirds of the impositions of his money lender. But the really agricultural classes or ryots get after all as we have seen very little education. They have little time or money to afford for it and do not half see the good it would do them. Also, schools are too few. And the fact is that the boy ryot is so young and stays so short a time at school that it may not be easy to teach him much.

Still, when we have brought the children of ryots to attend our schools it would be well to try and teach them more, viz., a little about account keeping, civil court procedure, registration, etc., in fact the few things connected with money matters and law which they cannot do without. We may imagine what kind of evidence in our civil courts is that when ryots cannot read or write, and especially when they cannot even sign their name. And yet this evidence is accepted against ryots.

So-called documentary evidence (bonds, agreements, receipts, etc.) are all so much waste paper, and should have but little weight except as proved by testimony perfectly independent of the money lender. Village registration may also be only another arm in the sowkar's hands. Suppose a bond drawn up, the sowkar to give the ryot 125 rupees. If for greater security a zealous village registrar makes the sowkar give the 125 rupees in his presence, the ryot gives it back the moment they are outside the door. Then this transaction appears against the ryot in the registrar's hands, he has received 125 rupees, of which he has received nothing.

What Englishmen do not understand is this: the bond which passes between sowkar and cultivator, and upon which the whole system of our civil courts is based--for once the ryot acknowledges his signature to the bond, no more is asked. This bond is always a nominal, never a real transaction: it is for a fictitious, not actual sum, *no money passes at all*. Then the bond is produced as evidence in the civil courts. Then the lawyers say: "No, if the ryot is stupid and signs that which has no existence, but is a fiction, the bond must stand as evidence in court; he must pay the penalty of his stupidity."

The old Maratha system of accounting was this: an immense long roll or book or ledger; the cultivator has a right to its counterpart. On this was entered all the transactions of years: what the sowkar advances--never in cash; what the ryot repaid--never in money, always in produce. And as the whole village knows the produce of everybody's field, these books were not so far wrong. But the sowkar found that in our civil courts he had nothing to do but produce a bond signifying a wholly fictitious transaction--the ryot never knows, never understands, what is in the bond; the ryot will sign any bond to keep his land and to keep himself out of prison. The bond system was so very convenient for the sowkar, who is uncommonly well "up" in law, that it became the pivot on which all the relations between sowkar and ryot rested. And hence nine tenths of the mischief. A serious effort is being made to protect the Deccan ryot by Mr Hope's bill now before the government at Simla.

If an European official does really go "*behind the bond*" and ask the ryot what he owes the sowkar, the ryot may answer, "Why, he owes *me* 60 rupees." The Englishman says, "Do you know he says you owe him 250 rupees?" And if the English official calls two or three of the villagers to come and sit beside him, as arbitrators, he will find after going over the produce paid, in nine cases out of ten, that the sowkar does owe the ryot not only 60 rupees, but more. But then there is the bond: the ryot acknowledges his signature or mark; against this there is no law to save him. This is the state of things. Education has to educate the ryot into a man who can save himself out of the pit.

Cultivators are in no way directly taught in school better to understand their own interests. But did the cultivator only

receive the education at all, such as it is, that would be a great thing. It cannot be too often repeated that, whereas the cultivating classes are as perhaps 100 to 1 in the rural districts of the Deccan, yet there are probably twice as many children of the non-agricultural classes as of the agricultural classes in the schools.

The money lenders, as has been said, had their very clever knowledge of accounts before there were any government schools. Certain castes are "born" accountants, that is, they are educated from their mother's milk into accountants--observe, not into men--and the capacity descended from father to son for generations. The indigenous school looks only to mental arithmetic (the way in which these people correctly calculate not only their own but their neighbour's produce, and keep the numbers in their heads for years, is astonishing--the native tables go to 100 X 100, and include fractional tables of all kinds), accounts of the Maratha kind and current handwriting, excluding all printed matter, and all such subjects as reading books, history and geography. The money lenders can do without government schools and a sowkar (Brahmin) in a wild place has been known to set up a private school for his children and relations in order to close a government school open to all classes.

In Madras presidency we have seen that less than one in ten of men and boys can read and write. We may judge how much they are at the mercy of money lenders, petty native officials of all kinds. The present director of public instruction in Madras was for many years inspector-general of registration. One of the rules which he framed under the Registration Act, and which is still in force, was the following:

10. Documents executed by persons who are unable to read shall be read out and, if necessary, explained to the parties, and the registering officer shall ascertain that they clearly understand the purport of the document executed by them. Documents written in a language not understood by the executing party shall in like manner be interpreted to him.

What an idea does this beneficent rule give of a maleficent state of things--a state of things where the want of education puts helpless ignorance in the power of clever fraud. This rule was framed because of the attempts made to cheat old women, or both sexes, by making them execute and present for registration an instrument which they imagined to be a mortgage, but which was really an absolute sale.

No rule or government, however, can prevent a ryot from being cheated if he himself becomes a party by evasions of the act to cheating himself. If a ryot admits before the registering officer that he has received 50 rupees when he has only received 10 rupees, or if the 50 rupees are actually paid to the ryot before the registering officer and if, as soon as the parties have left the registration office, the ryot gives the money

lender back his money and takes only what he is willing to give him (and what the willingness of the money lender is we know--it is like the love of the fox for the fowl), no registration act will help him. The courts will consider that there is a *prima facie* case against him.

The power to go behind the bond forms one of the features of the new bill introduced by Mr Hope for the relief of the indebted agriculturists in the Deccan.

We cannot appeal to native gentlemen without also recording their munificence in the cause of education. In Madras the late maharaja of Vizianagram established a large number of schools of various grades for boys and girls. Many of the pupils who attend these schools are poor, but it is stated that all the schools are intended for caste Hindus. The schools maintained by the trustees of Patcheappali and Govinda Naida's charities are to some extent charity schools, although they are also attended by the children of rich parents. The late Chengal Roy Naick has left a bequest of about 400,000 rupees to the trustees of Patcheappali Moodelliari charities for the express purpose of educating poor boys of the lower classes, to which he himself belonged, but the schools have not yet been established.

Space is wanting to speak further of Bombay native munificence in schools as of many other things. And as subjects crowd upon the mind in writing this, in which I should have wished to seek information as well as to bring any to the common stock, and cannot bring before you one hundredth part of the materials--the subjects of school cesses, primary education, female education, remarkable classes of traders in southern India, the whole subject of village headman action, a possible co-operative system in obtaining agricultural machines, the bill for indebted agriculturists, the sanitary commissioner in Madras, as he has been given in Bombay, which would require a paper to itself, etc.--I feel that I should want twenty times the space and one hundredfold the time to do any justice to the subjects I have touched upon, or even to glance at, much more to touch upon these other matters of vital interest.

To conclude: much has been said and done lately about retrenchment, but chiefly, if not wholly, in retrenching public works--the thing which mainly affects the people. Other retrenchments, lately discussed in Parliament, would seem as if more wanted. For local governments to be able to carry out material improvements absolutely necessary and to complete, among other things, half-measures taken for the education of the people is of the first importance. Half-measures are often nearly as costly as whole measures would be, because there is a permanent staff which could do much more work, and because of the waste of capital incurred by the slow and interrupted growth of undertakings.

But what can come of this appalling news from Kabul? Nine short weeks only since Lord Lawrence's death and his terrible

foresight has been justified--a foresight which wrung his heart and ours and but too probably hastened his end--a foresight built on his exact experience and almost unbounded knowledge. And we have no Lord Lawrence now to win over Afghans to right as he did Sikhs. What can come of this new war but a check on industrial and constructive works, on education and what secures the prosperity of the people, with an urging forward of destructive and military and unfruitful works at a fearful cost to look forward to?

Then now is the time, ye gentlemen of India, to step forward more and more wisely and nobly. There is too much of waiting upon government. We need not wait. Let us help the local governments in all good works. Let us work ourselves. It shall not be

Ye gentlemen of India

that sit at home at ease

but ye gentlemen of India that abound in good works, in all wise and great enterprises for the good of your peoples. Soldiers of God, God speed you.

1883

"The Dumb Shall Speak, and the Deaf Shall Hear, or the Ryot, the Zemindar" in Government in *Journal of the East India Association*, June 1, 1883. pp 164-210. [10:548-98]

In opening the proceedings the CHAIRMAN (Sir BARTLE FRERE) said: Ladies and gentlemen,-We are met to-day to hear a paper with which Miss Nightingale has favoured the Association. It is entitled, The Dumb shall speak, and the Deaf shall hear; or the Ryot, the Zemindar, and the Government. The title of the paper, I think, explains sufficiently what the subject is to be. It is to be, not a question of the deaf and dumb in any physical sense, but a discussion upon one of the greatest questions which can possibly interest India or England-the condition of the landed classes and those who hold under them in Bengal. The paper will be read to you by Mr Verney, and I need not say by way of introduction of him any more than to assure the meeting that he will of full justice to the paper of the illustrious lady with whom he is connected. After he has read what can be laid before you this afternoon, I trust we shall have some useful discussion on the subject of the paper.

Mr FREDERICK VERNEY (in the absence of Miss Nightingale, owing to ill-health) then read a summary of the paper which is annexed.

BENGAL LAND QUESTIONS.

INTERESTS SO LARGE THAT WE ARE NOT INTERESTED IN THEM.

THE time has now come. A tremendous wave is rolling over India-India which we cannot colonize, and which, unlike the colonies, has the Land Question in all its intensity. The new Bengal Rent Law Bill is afloat-a measure which will decide the fortunes of the Bengal agricultural classes for the next century

almost as completely as the Permanent Settlement has done for the past. It is from the growing discontent of the country so urgent that we do not care for it. This is no paradox: the interests involved are so enormous that we prefer to turn away our head, saying that we cannot understand them. We will not look them in the face; we shut our eyes; they are too big for our vision.

The Land Question in India dwarfs all others in importance because India, unlike England, is almost solely an agricultural country. (90 per cent of the rural and 80 per cent of the total population of India are agricultural. Estimating the adult men of India at 62 millions, of these 34 3/4 millions are returned as agricultural, or 56.2 per cent, besides large numbers of women and children; besides 7 1/2 millions of agricultural labourers, or 12.3 per cent. Three classes-potters, weavers, and beggars (one million)-with the labourers, numbers of women and children; besides large numbers of women and children; besides 7 1/2 millions of agricultural labourers, or 12.3 per cent. Three classes-potters, weavers, and beggars (one million) with the labourers, numbers 13 millions of adult males, and represent a population of 40 millions or about one-fifth of the whole population. They are always the first to fall in famine. The next class above is that of the small tenants, little better off than the labourers, and only next to fall). The Hindus says the Permanent Settlement, are compelled by the dictates of religion to depend solely upon the produce of the lands for subsistence The suffering of happiness of tens of millions is what we have to deal with when we speak of land in India. For years and years every month has been entangling and increasing the confusion and the problems to be solved; for years and years every month has added alike to. the difficulty and the necessity of solving them. There must be some further step in our relation to the Indian Land Questions-in the relations between the West and the East. They cannot remain stationary. What is to be?

DIFFICULTY BY DELAY BECOMES IMPOSSIBILITY IN SOLVING BENGAL LAND QUESTIONS.

At last the difficulty can no longer be staved off; at last an Act can no longer be delayed, both lest difficulty become impossibility, and lest cultivators, sometimes expressing themselves in agrarian riots, murders, and always in litigation, should altogether take the matter into their own hands.

Now is the hour.

The Viceroy, the Government of India, the Government of Bengal, the Government of India at home-all have their attention seriously fixed on it. Report upon reports and drafts bills on draft bills have been issued.

Everything is ripe.

The English in England have too long said, What is the use of taking up this abstract question? The English in India reply, It has come to the front.

The leader of public opinion here has taken it up (*The Times*

of November 13, 1882, has so masterly article on this subject that we cannot but quote it. It says that we are now "concerned with questions which touch the very foundations of society," "questions of enormous difficulty as well as of enormous importance," and that we "must rejoice that the Government of India is making an honest and earnest effort to settle them." "The British raj will be weighed in the same scales as the dynasties it has supplanted, and if found wanting will share their fate. The impoverishment of the Indian cultivator" is discussed, and it is said "that, in varying degrees, life has been made harder for the tillers of the soil by a Government which has honestly laboured to benefit them, and has, in fact, removed or mitigated many grievous evils formerly suffered by them. . . .Where once land competed for cultivators, cultivators now compete for land." . . .

"But these unavoidable difficulties, inhering in the very nature of our civilization, are aggravated by cause due to, and therefore removable by, legislation.

"The Bengal Rent Bill is an attempt to deal with the evils which have grown during the last ninety years out of one of the most remarkable blunders ever made by well-meaning rulers. When the East India Company sought to place the revenue of Bengal upon an intelligible and satisfactory footing, it found itself confronted with a mass of customary rights of the most intricate kind, based upon a general principle quite incomprehensible to the Englishman of that generation. Between the actual cultivator and the sovereign there was no one possessing rights over the soil. The revenue consisted of the rent, and the occupier, so long as he paid the stipulated sum, had an indefeasible title. A land system without a landlord appeared so strange an anomaly that the first thing the officials of the day did was sadly misused research, they came to the conclusion that the zemindars, or tax-farmers of the old regime, were the proper persons to erect into the missing class. Although, theoretically, these revenue-collectors had no rights over the land beyond that of collecting rent and retaining for themselves a certain fixed allowance, they had, through the laxity or weakness of the rulers, acquired great weight and influence. They exacted, as tax-farmers in the East invariably do, a great deal more than their legitimate claims, and they probably paid in many cases a great deal less to the exchequer than the area under their management ought to have produced. They were able to make themselves heard, and they bore a superficial resemblance to the English landlord. Lord Cornwallis accordingly made them the corner-stone of his system by declaring them owners in perpetuity of the land they formerly farmed. . . .The ryots were known to have rights of an extensive kind, but it was assumed x x that the pleasant relations obtaining between English landlords and tenants would spring up in Bengal, and that a fair rent would be settled by contract. The zemindars very shortly began to employ

the vast powers thus left at their disposal, as well as to sublet their rights to men who pressed them even more harshly, and soon it was found that the condition of the agriculturalist was becoming deplorable. Power had, however, been very carefully reserved, in the regulations by which the Permanent Settlement was carried out, for the Government of India to interfere for the preservation of the ancient right of the cultivators. In virtue of that power attempts were made from time to time to protect the ryots from the effects of unlimited competition; but the difficulty of discovering their actual rights was further complicated by the artificial system grafted upon the old customs, and the principal result of the Acts passed for their benefit has been to make the relations between landlord and tenant more and more bewildering. The Bengal Rent Act now under consideration is an attempt to revert, in some degree, to the original land tenure of the country...It need not be said that such an attempt now wears the aspect of interference with private property. The zemindars are in possession of rights conferred upon them by ourselves, but which were not ours to confer...The Chief Justice of Bengal takes the view natural to a Conservative lawyer. The proposed interference with vested rights appears to him a ruinous policy of confiscation. But the vested rights of the ryots are older, greater, and more important to the State than those of the zemindars. The great injustice of the Permanent Settlement must be remedied under terrible penalties for those we govern and for ourselves."

The spirit of the day is with us.

The spirit of the day all tends to improving the condition of the masses, and above all of those hitherto escaping observation-the peasantry-all over Europe. India, almost as big and as thickly populated as Europe, is nearly all peasantry.

In Europe we have been working up to this climax. Had it not been for the emancipation of the peasants in Germany during Napoleon time would Germany ever have been what it is?

There is Russian emancipation of the serfs in 1861, though as yet it has not done all it ought.

France has vastly multiplied her peasant proprietors. Spain and Portugal have thrown off their ancient customs of entail and primogeniture. Ireland has its Land Act.

ADVANTAGE TO BENGAL LANDLORD OF PROPOSED NEW BILL AS WELL AS TO CULTIVATOR IN REALLY CARRYING OUT PERMANENT SETTLEMENT.

And even in India something has been done. E.G., in Bengal the Act of 1859 and other similar enactments for the ryots, but still insufficient. Could the Land Question but be really well settled in Bengal, could the Permanent Settlement of 1793 but be really carried out, what an advantage to both zemindar (landowner) and ryot. A tenant may be a tenure-holer, a ryot, or a person holding under a ryot. (cultivator): to the zemindar in giving him a contented and thriving peasantry, instead of one often on the verge of starvation, always on the verge of refusing

to pay rent at all; to the ryot in securing him such rights as will prevent the oppressions by which the relations between the landlord and tenant are strained to the utmost degree and the general discontent which will go on increasing still the amendment of the rent laws lays the foundation for a better state of things (To study this Permanent Settlement of 1793, is to receive a revelation of rights we knew not of. And therefore I shall make no apology for giving copious extracts from it in notes. Much of the first part about improvements and security would seem to apply to the ryots now instead of to the zemindars. "We are yours but the land is ours," says the Russian peasant).

(Who is a ryot? The Rent Law Bills' definition is: -A tenant who holds land for purposes of agriculture, horticulture or pasture, or who has come into possession for such purposes. A tenant may be a tenure-holder, a ryot, or a person holding a ryot).

If not, what a future of trouble, ending we know not how, not only for Bengal, but for India!

THE NIGHT IS FAR SPENT. THE DAY IS AT HAND.

And there is not an hour to be lost.

It has been truly said that it is not despair, not utter want and misery, which leads to revolution: it is the gradual awakening from this state to know our higher wants. Education commissions, local self-government schemes, show which way the tide is turning. The ignorant ryot is learning his rights; he is learning that a higher rent cannot be legally demanded than that entered in the road-cess registers.

But abwabs or illegal exactions are levied instead of or over and above enhanced rents. Cesses are not calculated on the abwabs, but on the rent. and in this way the arrangement is used to reduce the Government demand

And what is to come of this?

CORROBORATION AND CORRECTION ALIKE INVITED.

It seems almost an impertinence to lay my facts before any ho have been in India-which I have not-who may even have seen great service in India; but what I have to try to state on these vast questions rests upon a mass of documentary evidence which few in India and very few in England have seen. India has been familiar to me for more than twenty years from documents-the plain unvarnished evidence of plain witnesses.

I do most earnestly beg alike for support and friendly opposition alike for corroboration and correction-for those who know India, perhaps by their own splendid services.

PRESENT CONDITION OF RYOTS IN BENGAL, AND FIRST AS TO LAND TENURE AND PERMANENT SETTLEMENT, OR RATHER VIOLATION OF PERMANENT SETTLEMENT ("In the British territories in Bengal, the greater part of the materials required for the numerous and valuable manufactures and most of the other principal articles of export are the produce of the lands; it follows that the commerce and consequently the wealth of the country must increase in

proportion to the extension of its agriculture. But it is not for the commercial purposes alone that the encouragement of agriculture is essential to the welfare of these provinces. *The Hindus who form the body of the people are compelled, by the dictates of religion, to depend solely upon the produce of the lands for subsistence;* and the generality of such of the lower orders of the natives as are not of that persuasion are from habit or necessity in a similar predicament. The extensive failure or destruction of the crops *that occasionally arises from drought or inundation* is in consequence invariably followed by famine, the ravages of which are felt chiefly by the cultivators of the spoil and the manufacturers, from whose labours the country derives both its subsistence and wealth. Experience having evinced that adequate supplies of grain are not obtainable from abroad in seasons of scarcity, the country must necessarily continue subject to these calamities until the proprietors and cultivators of the lands shall have the means of increasing the number of reservoirs, embankments and other artificial works, by which to a great degree the untimely cessation of the periodical rains maybe provided against and the lands protected from inundation: and, as a necessary consequence, the stock of grain in the country at large shall always be sufficient to supply these occasional but less extensive deficiencies in the annual produce which may be expected to occur notwithstanding the adoption of the above precautions to obviate them. To effect these improvements in agriculture which must necessarily be followed by the increase of every article of produce, has accordingly been one of the primary objects to which the attention of the British Administration has been directed in its arrangements for the internal government of these provinces. As being the two fundamental measures essential to the attainment of it, the property in the soil to Government from each estate has been fixed for ever. These measures have at once rendered it the interest of the proprietors to improve their estates, and give them the means of raising the funds necessary for that purpose. The property in the soil was never before formally declared to be vested in the landowners, nor were they allowed to transfer such rights as they did possess or raise money on the credit of their tenures without the previous sanction of Government. With respect to the public demand upon each state, it was liable to annual or frequent variation, at the discretion of Government. The amount of it was fixed upon as an estimate formed by the public officers of the aggregate of the rents payable by the ryots or tenants from each begah of land in cultivation of the rents payable by the ryots or tenants for each begah of land in cultivation, of which, after deducting the expenses of collection, ten-elevenths were usually considered the right of the public, and the remainder the share of the landholder. Refusal to pay the sum required of him was followed by his removal from the management of his lands, and the public dues were either let in farm or

collected by an officer of Government, and the above-mentioned share of the landholder, or such sum as special custom of the orders of Government might have fixed, was paid to him by the farmer or from the public treasury. When the extension of cultivation was productive of only a heavier assessment, and even the possession of the property was uncertain, the hereditary landholder had little inducement to improve his estate, and moneyed men had no encouragement to embark their capital in the purchase or improvement of land, depreciated its value. Further measures, however, are essential to the attainment of the important object above stated. All questions between Government and the landholders respecting the assessment and collection of the public revenue and disputed claims between the latter and their ryots, or other persons concerned in the collection of their rents, have hitherto been cognizable in the Courts of Mall Adawlut or Revenue Courts. The collectors of the revenue preside in these courts as judges, and an appeal lies from their decision to the Board of Revenue, and from the decrees of that Board to the Governor-General in Council in the Department of Revenue. The proprietors can never consider the privileges which have been conferred upon them as secure whilst the revenue officers are vested with these judicial powers. Exclusive of the objections arising to these courts from their irregular summary and often ex parte proceedings, and from the collectors being obliged to suspend the exercise of their judicial functions whenever they interfere with their financial duties, it is obvious that if the regulations for assessing and collecting the public revenue are infringed, the revenue officers themselves must be the aggressors, and that individuals who have been wronged by them in one capacity can never hope to obtain redress from them in another. Their financial occupations equally disqualify them for administering the laws between the proprietors of land and their tenants. Other security, therefore, must be given to landed property, and to the rights attached to it before the desired improvements in agriculture can be expected to be effected. Government must divest itself of the power of infringing, in its executive capacity, the rights and privileges which, as exercising the legislative authority, it has conferred on the landholders. The revenue officers must be deprived of their judicial powers. All financial claims of the public, when disputed under the regulations, must be subject to the cognizance of courts of judicature, superintended by judges who, from their official situations and the nature of their trusts, shall not only be wholly uninterested in the result of their decisions, but bound to decide impartially between the public and the proprietors of land, and also between the latter and their tenants. The collectors of the revenue must not only be divested of the power of deciding upon their own acts, but rendered amenable for them to the courts of judicature, and collect the public dues subject to a personal prosecution for every exaction

exceeding the amount which they are authorized to demand on behalf of the public and the proprietors of land, and also between the latter and their tenants. The collectors of the revenue must not only be divested of the power of deciding upon their own acts, but rendered amenable for them to the courts of judicature, and collect the public dues subject to a personal prosecution for every exaction exceeding the amount which they are authorized to demand on behalf of the public, and for every deviation from the regulations prescribed for the collection of it. No power will then exist in the country by which the rights vested in the landholders by the regulations can be infringed, or the value of landed property affected. Land must, in consequence, become the most desirable of all property, and the industry of the people will be directed to those improvements in agriculture which are essential to their own welfare as to the prosperity of the State. The following rules, being the rules passed for the guidance of the directors and the Board of Revenue on June 8th, 1787, and April 25th, 1788 with alterations adapted to the principles above stated, have been accordingly enacted).

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(1) In what sense are the zemindars to be understood at all as proprietors, landlords, landowners?

The answer to this question is simple. The zemindars were not originally proprietors or landlords; and it may be shown beyond contradiction that they were not made so by the Permanent Settlement in the feudal sense of absolute owners of the soil.

What were they made? persons empowered, under certain very rigid restrictions, to receive from the occupants of the soil a fixed rental, settled by the Government on ascertained principles neither by the terms of the original settlement and original laws of these provinces, nor by modern laws, are zemindars unlimited proprietors, or ryots without rights or claims to protection. (The Code of 1708 recognized in the "fullest manner the rights of the ryots to hold at the established rates, and to be freed from abwabs, these vexatious imposts over and above the public revenue or rent; and that Code is full of provisions and declarations

making it clear that the intention of the framers was by no means to abstain from interference between zemindars and ryots. On the contrary, the duty of protecting the lower mass of the community- the ryots- was recognized and asserted by the Government of that day in the amplest manner...Rather would it be a ground of reproach to the Government if under such circumstances it should fail to interfere effectually."

(2) What was the contract made, and with whom, by the Permanent Settlement? And has it been kept? (A.D. 1793.

REGULATION 1. *Assessment in former times liable to variation at the direction of the Government.* VII. ARTICLE VI. It is well known to the zemindars, independent talookdar, and other actual proprietors of land, as well as to the inhabitants of Bengal, Behar and Orissa in general, that from the earliest times unto the present period the public assessment upon the lands has never been fixed, but that, according to established usage and custom, the rulers of these provinces have from time to time demanded an increase of assessment from the proprietors of land; and that, for the purpose of obtaining this increase, not only frequent investigations have been made to ascertain the actual produce of their estates, but that it has been the practice to deprive them of the management of their lands, and either to let them in farm or to *appoint officers on the part of Government to collect the assessment immediately from the ryots.*

Motives of the Court of Directors for abolishing the usage and fixing the assessment which is declared unalterable by any future Government.

The Honourable Court of Directors, considering these usages and measures to be detrimental to the prosperity of the country, have, with a view to promote the future ease and happiness of the people, authorized the foregoing declarations; and the zemindars, independent talookdars, and other actual proprietors of land with or on behalf of whom a settlement has been or may be concluded, are to consider these orders fixing the amount of assessment as irrevocable and not liable to alteration by any persons whom the Court of Directors may hereafter appoint to the administration of their affairs in this country.

Proprietors expected to improve their estates in consequence of the profits being secured to them. [But when ryots are left to improve their land, the profits are not secured to them. Ryots are "expected to improve their lands" in consequence of the profits NOT being secured to them.-AUTHOR'S NOTE.

The Governor-General in Council trusts that the proprietors of land, sensible of the benefits conferred upon them by the public assessment being fixed for ever, will exert themselves in the cultivation of their lands, under the certainty that they will enjoy exclusively the fruits of their own good management and industry, and that no demand will ever be made upon them, their heirs and successors, by the present or any future Government, for an augmentation of the public assessment in

consequence of the improvement of their respective estates.

Conduct to be observed by the proprietors of land towards their dependent talookdars and ryots.

"To discharge the revenues at the stipulated periods without delay or evasion, and to conduct themselves with good faith and moderation towards their dependant talookdars and ryots, are duties at all times indispensably required from the proprietors of land, and a strict observance of those duties is now more than ever incumbent on them in return for the benefits which they will themselves derive from the order now issued. The Governor-General in Council therefore expects that the proprietors of land will not only act in this manner themselves towards their dependent talookdars and ryots, but also enjoin the strictest adherence to the same principles in the persons whom they may appoint to collect the rents from them." [How they done this?]

No claims for remissions or suspensions be admitted on any account. Lands of proprietors to be invariably sold for arrears.

"He further expects that, without deviating from this line of conduct, they will regularly discharge the revenue in all seasons; and he accordingly notifies to them, that, in future, no claims or application for suspensions or remissions, on account of drought, inundation, or other calamity of season will be attended to, but that in the event of any zemindar, independent talookdar, or other actual proprietor of land with or on behalf of whom a settlement has been or may be concluded, or his or her heirs or successors, failing in the punctual discharge of the public revenue which has been or may be assessed upon their lands under the above-mentioned regulations, a sale of the whole of the lands of the defaulter, or such portion of them as may be sufficient to make good the arrear, will positively and invariably take place."

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1st point. There are to be no cesses, i.e. no arbitrary taxes levied at the pleasure of the zemindar. (REGULATION VIII. *Further rules to prevent undue exactions from the talookdars. Proprietors not to demand an increase from talookdars, excepting in the cases herein specified.* LI. The following rules are prescribed to prevent undue exactions from the dependent talookdars:-

First. No zemindar or other actual proprietor of land shall demand an increase from the talookdars dependent on him, although he should himself be subject to payment of an increase of jumma (Jumma=amount of rent or revenue payable, including all cesses, as well as land-tax) to Government, except upon proof that he is entitled so to do, either by the special custom of the district or by the conditions under which the talookdar holds his tenure; or that the talookdar by receiving batements from his jumma has subjected himself to the payment of the increase demanded, and that the lands are capable of affording it.

Penalty for proprietors making exactions from talookdars.

"Second. If in any instance it be proved that a zemindar or other actual proprietor of land exacts more from a talookdar than he a right to, the court shall adjudge him to pay a penalty of double the amount of such exaction, with all costs of suit to the party injured.

Proprietors and farmers of and prohibited imposing any new abwab or mhatoot on the ryots, and penalty in case of disobedience.

LV. No actual proprietor of land or dependent talookdar or farmer of land of whatever description shall impose any new abwab or mhatoot upon the ryots under any pretence whatever. Every exaction of this nature shall be punished by a penalty equal to three times the amount imposed; and if at any future period it be discovered that new abwab or mhatoot have been imposed, the person imposing the same shall be liable to this penalty for the entire period of such impositions."

No actual proprietor of land or dependent talookdar or farmer of land of whatever description shall impose any new abwab or mahoot upon the ryots under any pretense whatever. Every exaction of this nature shall be punished by a penalty equal to three times the amount imposed; and if at any future period it be discovered that new abwab or mahoot have been imposed, the person imposing the same shall be liable to this penalty for the entire period of such impositions

What is the fact?

2nd. The revenue or taxes are to be paid by the zemindar, and not out of the rent.

How has this been observed?

3rd. The zemindars are not to raise their rents, and on this condition the revenue or taxes on them are not to be increased.

What do the official reports tell us about this?

4th. The zemindar is to undertake roads, lesser public works, etc. Has he done so?

Does he not rather avail himself of public works undertaken by the Government as a reason for raising his rents?

But, 5th, the ryot was to have redress in case of exaction. He often fails to obtain redress.

6th. The Governor-General promises regulations for the protection of the cultivators of the soil. Were they ever fully

carried out?

7th. The zemindar was to give leases. But are genuine leases granted? Or is there any proper system of sub-letting?

(REGULATION VIII. *Ryots may demand pottahs* (Pottah = Deed of lease) *of proprietors of land and farmers who are also required to grant them. Penalty in case of refusal.*

LIX. *A ryot when his rent has been ascertained and settled, may demand a pottah from the actual proprietor of land, dependent talookdar, or farmer of whom he holds his lands, or from the person acting for him; and any refusal to deliver pottahs upon being proved in the COURT of Dewanny Adawlut of the zillah, shall be punished by the court by a fine proportioned to the expense and trouble of the ryot in consequence of such refusal. Actual proprietors of land, dependent talookdars, and farmers are also required to cause a pottah for the adjusted rent to be prepared and rendered to the ryot, either granting the same themselves, or entrusting their agents to grant the same.*

Restrictions on farmers and agents in granting pottahs.

"No farmer, however, without special permission from the proprietor of the lands, or (if the lands form part of a dependent talook) the dependent talookdar shall grant a pottah extending beyond the period of his own lease, nor shall any agent grant a pottah without authority from the proprietor or dependent talookdar or the manager of disqualified proprietors.

All existing leases to under-farmers and ryots to remain in force until the period of their expiration.

Exception to the rule.

"LX. First. All leases to under-farmers and ryots made previous to the conclusion of the settlement, and not contrary to any regulation, are to remain in force until the period of their expiration unless proved to have been obtained by collusion or from persons not authorized to grant them.

No proprietor of land or dependent talookdar or farmer of land, shall cancel the pottahs of Khood Kasht (Khood Kasht raiat= a cultivator of his own hereditary land=a resident ryot) ryots, except in certain cases.

Second. No actual proprietor of land or farmer, or persons acting under their authority, shall cancel the pottahs of the Khood Kasht ryots except upon proof that they have been obtained by collusion; or that the rents paid by them within the last three years have been reduced below the rate of nirkbundy of the pergunnah, or that they have obtained collusive deductions, or upon a general measurement of the pergunnah for the purpose of equalizing and correcting the assessment. The rule contained in this clause is not to be considered applicable to Behar.

Time allowed to proprietors of land and dependent talookdars and farmers of land to prepare and deliver pottahs to the ryots.

Claims on engagements contrary to those ordered, how to be considered and decided on.

LXI. The proprietors of estates and the dependent talookdars and farmers of land in Bengal are allowed until the end of the Bengal year 1198, and those in Behar and Orissa until the end of the Fussily and Wallaity year 1198, to prepare and deliver pottahs to the ryots in conformity to the preceding rules (but after the expiration of the year 1198 no engagements for rents, contrary to those ordered, are to be held valid); and in the event of any claims being preferred by proprietors of estates or dependent talookdars, farmers, or ryots, on engagements wherein the consolidation of the assul, abwab, etc, shall appear not to have been made, they are to be non-suited, with costs").

(3) Can the restoration of rights of the ryots, whether original or acquired under the present Settlement, be deemed confiscation, as it is often called?

ILLEGAL EXACTIONS BY ZEMINDARS.

The Government accepted the right and duty as Sovereign of interposing its authority from time to time as might be necessary to prevent the ryots being improperly disturbed in their possessions, or loaded with unwarrantable exactions those exactions being any further demand, either by way of enhancement or cesses, beyond a definite prescribed rental decided as the pergunnah rate, and to see disturbances being attempted ejectment.

In No. 46 of the Records of the Government of Bengal November, 1871, we find:-

Not only is it the duty of the Government to protect all classes of the people, and especially those who, from their situation, are most helpless-a duty the performance of which they have specially reserved to themselves as a condition of the Permanent Settlement-but it is also their interest to carry out that duty, because the extent to which the burden, not only of the taxation, which should properly fall in certain specified proportions on different classes of the community, but even of the actual personal expenses of the proprietors, is thrown indiscriminately upon the lowest class, and that the least able to support it, must of course interfere with the legitimate power of Government to impose fresh taxes, and such undue and illegal pressure on the part of the zemindars on the great and indigent mass of the people, must be attended with great and imminent perils of a political character.

It is the Government which says this. such considerations fully warrant the interference of Government in view to correct the admitted insufficiency of the existing laws enacted for the protection of the inferior tenantry of the country.

(Regulation I, embodying the famous proclamation of Lord Cornwallis to the zemindars in 1793.

A.D. 1793. REGULATION I OF PERMANENT SETTLEMENT.

Government to enact such regulations as they may think necessary for the welfare of the dependent talookdars and cultivators, and proprietors: not to withhold the revenue on that

account.

VIII.-ARTICLE VII. To prevent any misconstruction of the foregoing articles, the Governor-General in Council thinks it necessary to make the following declarations to the zemindars, independent talookdars, and other actual proprietors of land.

First. It being the duty of the ruling power to protect all classes of people, and more particularly those who from their situation are most helpless, the Governor-General in Council will, whenever he may deem it proper, enact such regulations as he may think it necessary for the protection and welfare of the dependent talookdars, ryots, and other cultivators of the soil, and no zemindar, independent talookdar or other actual proprietor of land, shall be entitled on this account to make any objection to the discharge of the fixed assessment which they have respectively agreed to pay.

[And this, it will be observed, precedes, not follows, the "Declaration" given in note 2, p. 4. The protection of the ryots comes first.]

All internal duties that may be hereafter established to belong exclusively to Government.

Second. The Governor-General in Council having on July 28, 1790 directed the sayer (sayer=all other sources of revenue besides the land tax) collections to be abolished, a full compensation was granted to the proprietors of land for the loss of revenue sustained by them in consequence of this abolition; and he now declares, that if he should hereafter think it proper to re-establish the sayer collections, or any other internal duties, and to appoint officers on the part of Government to collect them, no proprietor of land will be admitted to any participation thereof, or be entitled to make any claims for remissions of assessment on that account.

Jumma that may be assessed or alienated lands to belong exclusively to Government.

"Third. The Governor-General in Council will impose such assessment as he may deem equitable on all lands at present alienated and paying no public revenue, which have been or may be proved to be held under illegal or invalid titles. The assessments so imposed will belong to Government, and no proprietor of land will be entitled to any part of it.

Police allowances in land or money received by proprietors whose jumma is declared fixed, resumable by Government.

Fourth. The jumma of those zemindars, independent talookdars, and other actual proprietors of land, which is declared fixed in the foregoing articles, is to be considered entirely unconnected with and exclusive of any allowances which have been made to them in the adjustment of their jumma, for keeping up tannahs (Tannahs=police jurisdictions) or police establishments, and also of the produce of any lands which they may have been permitted to appropriate for the same purpose; and the Governor-General in Council reserves to himself the option of

resuming the whole or part of such allowances or produce of such lands according as he may think proper in consequence of his having exonerated the proprietors of land from the charge of keeping the peace, and appointed officers on the part of Government to superintend the police of the country.

Allowances that may be so resumed not to be added to the jummas, but to be collected separately and applied solely to the police.

The Governor-General in Council, however, declares that the allowances or produce of lands which may be resumed will be appropriated to no other purpose but that of defraying the expense of the police; and that instructions will be sent to collectors, not to add such allowances or the produce of such lands to the jumma of the proprietors of land, but to collect the amount from them separately.

Estates of disqualified proprietors not liable to sale for arrears of assessment accruing whilst they are deprived of the management of them.

Fifth. Nothing contained in this proclamation shall be construed to render the lands of several descriptions of disqualified proprietors specified in the first article of the regulations regarding disqualified landholders, passed on July 15, 1791, liable to sale for any arrears which have accrued upon their lands under the above-mentioned regulations for the decennial settlement; provided that such arrears have accrued or may accrue during the time that they have been or may be dispossessed of the management of their lands under the said regulations of July 15, 1791. It is to be understood, however, that whenever all or any of the descriptions of disqualified landholders specified in the first article of the last-mentioned regulations shall be permitted to assume or retain the management of their lands in consequence of the ground of their disqualification no longer existing, or of the Governor-General in Council dispensing with, altering, or abolishing those regulations, the lands of such proprietors will be held responsible for the payment of the fixed jumma that has been or may be assessed thereon, from the time that the management may devolve upon them, in the same manner as the lands of all actual proprietors of land who are declared qualified for the management of their estates, and also of all actual proprietors who are unqualified for such management by natural or other disabilities, but do not for the management of their estates, and also of all actual proprietors who are unqualified for such management by natural or other disabilities, but do not come within the descriptions of disqualified landholders specified in the first article of the regulations of July 15, 1791 are and will be held answerable for any arrears that are or may become due from them on the fixed jumma which they, or any persons on their behalf, have engaged or may engage to pay, under the above-mentioned regulations for the decennial settlement").

In one of those invaluable administrative reports of Sir George Campbell (1873), too little known, or rather not at all known among the ordinary public in England, we find:-

the Lieutenant-Governors attention was prominently called to the subject by the Magistrate-Collector of Balasore, in Orissa, where the system is peculiarly inexcusable, because in that province there is not the ordinary zemindar tenure of Bengal (His Honour (Sir G. Campbell) believes that up to the time of the settlement under Regulation IX, of 1833, many of them (zemindars) had no such rights (proprietary), but were sarbarakrs or managers on behalf of Government, and that only). There all the old ryots have long leases from the Government direct, and the zemindars re till in respect of them mere rent collectors, who have not the shadow of a right of any enhanced rent. Yet it was shown that they exacted eleven different kinds of annual cess, beside seventeen descriptions of occasional tax. Among the former were cesses to recoup themselves for the postal payments, cesses on account of the telegraph wire running through their estates (capture imposition, as this cost them nothing), cesses to reimburse them for income tax, and so on. There were presents exacted for zemindar underlings, presents very compulsory in their nature, on every occasion of a zemindar moving from home, or of a magistrate travelling through the estate, on account of facetious expenses that were never incurred

It is the Government that say this.

So far for Orissa.

In selections from the Records of the Government of Bengal we find, referring particular to Burdwan, Rajshaye, Cocch Behar, Dacca, Chittagong, Patna, Bhaugulpur, Chota Nagpury Assam, and Presidency Division, etc., that it is clear that, in spite of the law, cesses in large numbers are levied from ryots by almost every zemindar in the country; the fact being that owing to the absence of sufficient agency in Bengal, those parts of the regulations which give rights and privileges to zemindars have not only been maintained, but stretched to the utmost, while those parts which restrained them and limited their rights have been utterly set at nought

We read of duress of violence used by zemindars to enforce illegal cesses etc.

Among the abwabs, or illegal cesses we find:--

A charge for providing bracelets for the ladies of the zemindars family

[There is no charge for providing (not bracelets, but) clothing for the ryot and the ryots wife coming out of their close hut, half-starved and half-clothed, into the morning air and shivering with fever; nor for food, nor anything else for the sick.

The charity or relief extorted is from the ryots to the zemindars ladies.]

We find A cess levied by zemindars on their visiting their

estates [What do they do soon visiting their estate for ryots?]

A charge on boats, a sort of landing fee.

Presented to zemindars by washerman, by barber, by sweeper [Do we English in England know what this sweeper who has presents levied upon him?] And all thee are ANNUAL.

NOT HE WHO EATS, BUT HE WHO IS EATEN, PAYS.

One of these is for eating mangoes by zemindars (not by those who pay).

Another, for use of tooth powder by zemindar.

A marriage cess is general (Some of these abwabs, or illegal cesses levied by the zemindars, are "general" others are levied by "some" zemindars; others by "many;" others are levied, one by this, another by the other zemindar, none by none, as one may say).

In selections from Records of the Government of Bengal we find, for the Presidency Division that is, close to the head-quarters of the English powers at Calcutta which created these zemindars under special conditions:--

A contribution made to the zemindar when he is involved in debt requiring speedy clearance.

[The ryot is always in debt often compelled to work all his life in bondage to the usurers for his fathers debts. No one contributes for him.]

soon occasions of religious ceremonies in the zemindars house.

soon the occasion of the audit of his own accounts

forced labour exacted from the ryots without payment

THE RYOT SEEMS ALWAYS TO PAY, NOT OFTEN TO BE PAID.

He pays on his own marriage, he pays on his sons marriage, he pays on his daughters marriage, he pays on his second marriage (if he is of low caste and married a second time), he pays on the zemindars marriage, he pays on the zemindars sons marriage, he pays on the Gomastah (agents) sons or Gomastah daughters marriage, he pays on the zemindars sons birth, he pays on the zemindars sons first taking rice, he pays on the zemindars funeral, he pays on his own ploughing of land he pays to the zemindar on his making a tour through his estates, he pays for being permitted to perform puja or any festival himself, he pays equally for the zemindar performing puja, he pays a tax for presents to fakirs the very drum pays for being beat at processions, marriages, and feasts (When the zemindar goes to this estate, the ryot has to pay for everything, and also to pay for the servants).

When a farmer takes a lease, he does into any a fee: he levies a fee at heavy rates

The ryot takes rice, fish, and other articles of food on occasions of feasts in zemindars house.

Then come the fines

The very hides from the carcasses of beasts thrown away have a tax levied upon them.

The ryot pays:--

For keeping and buying elephants

For court expanses

For keeping establishments

a fee charged on Every oven made by a ryot for boiling the juice of the date-trees and sugar candy etc.

The ryot pays a fee for everything he does himself, and for everything the zemindar does not do for himself or for the ryot, and makes the ryot do for him. And this spaying is often by the most poverty-stricken creature in the universe-a ryot, who is generally on the brink of starvation, and who, when drought or inundation comes, no longer on the brink, falls into absolute famine.

There is a Bengali proverb, The same love that the Mahommedan has to his fowl (he fattens it in order to kill it), The same the zemindar has to the ryot. But the proverb lies, for the zemindar does not even fatten his ryot.

The magistrate of the district remarks that the road cess having given the zemindars a legal power to levy charges, it is reasonable to apprehend that the ryots will be more helpless than ever

THE EXACTIONS ARE FULFILLED. BUT WHERE ARE THE CONDITIONS
There are none fulfilled.

The ryot pays contributions to meet the expenses of district post one of the express conditions on which privileges were granted to zemindars being that they were to maintain the institutions of a civilized country. And he pays for the police.

The ryot has to make annual payments to the agents of the zemindars, payments at the opening of the rent year, payments at the close; payments everywhere; payments every when.

Besides the above, contributions for the support of schools, and for the construction or repair of roads and bridges-the zemindars having been created expressly to make roads, for one thing, among others-are often levied in addition to casual cesses on the occasion of marriage or other ceremonies, or on the occasion of the zemindar visiting his estate

Levy of fines for settlement of party disputes among ryots is also a common practice

The very presentation of a petition to the zemindar is levied upon-from the petitioner, of course.

It is the Government which says all this; and we must not think that the Government is supine. It appears from these very documents that the result of a crusade against cesses...will be a very general move on the part of the zemindars to raise the rents, in which the weakest will go to the wall, and not without a great deal of individual suffering...especially among the harder working and poorer class of cultivators

How few of these measures meaning the best half of Lord Cornwall is great policy the conditions says a famed Anglo-Indian, Sir Bartle Frere, were carried out or attempted up

to our time; how many of them still remain barely attempted and incomplete, may be seen by a reference to the excellent Administrative Reports of the late Lieutenant-Governor, sir George Campbell To the same I appeal. And since that time, while the ryot has learnt more of his rights, what has been done to give them to him, or to raise his condition? Wages are rising a little, but prices are rising much more.

We seem to have confiscated the zemindars duties, while confirming and enlarging his (so-called) rights: we seem to have allowed these fictions of rights-at first only winked at by Governments sleepy eyes-to become settled rights and ownership; to have allowed the duties which we forgot or neglected to require from him to become nil, though he held the land on these sole conditions; to have conferred new rights without conditions or corresponding duties. (*The Government went to sleep.*-Perhaps it would be more correct to say that our oldest provinces, Bengal and Behar, have always been the most under-governed. We set up judicial tribunals and left them alone to do justice between man and man, as if oppressor and oppressed were "man and man." Under the Permanent Settlement, Government divested itself of revenue functions and there were no local administrative officers, as in other parts of India. For half a century there was no local Bengal. The country was divided into enormous districts with no sub-divisions, and the few magistrates had little real control.

In 1834, and indeed up to 1853, the administration of Bengal formed a part of the duties devolving on the Governor-General.

He had to assist him, a single secretary for Bengal, a senior civilian with the usual establishment of a secretary to Government, i.e.; deputy-assistants and clerks. There was a Revenue Board which dealt with questions of Land Revenue and a Board of Customs, salt and opium. All members of both boards were European civilians, as were the judges of the Supreme Court of Control and Appeal in judicial matters.

In each district were usually a judge, a collector and a magistrate-all European civilians, with occasionally a junior civilian as assistant. Over several collectorates administrative machinery for all the millions; and of what little machinery exists all the influential posts are in the hands of Europeans.

Native zemindars exercise all sorts of administrative powers without any sanction of law. But legally till within the last few years, no native of Bengal had by law higher independent administrative authority than a village constable in England.

The Permanent Settlement, as it regarded the weaker vessels, the ryots, became therefore a dead letter, for the Government itself did not attend to it. We left all almost to chance: which means that the zemindars had and have the stronger crying-out power, the press power, the purse power, the greater command of law and lawyers, and therefore carried all before them. In the end the reformed Puritan Mahommedan doctrines have made their democratic way among the Mahommedan cultivators, chiefly in

Eastern Bengal, and these have formed powerful land leagues against the zemindars, and have successfully rebelled against the indigo planters).

The law gives more or less protection to the ryots, but the landlord party cry out against this as an infringement of the rights of property, forgetting that it was the condition on which their right of property, was created.

But if the law is there, why is it not carried out?

INCREASED PROFITS OF ZEMINDARS WITHOUT PAYMENT FOR THEM.

To sum up: who stole the goose from common? The common man. But who stole the common from the goose? The lord

The zemindar has increased profits of the land arising out of railroads, canals, progress of commerce, without paying for any of them. He gains more than anyone by all Government works, towards which he contributes next to nothing, for he has the power, though not the right, of throwing many taxes upon the ryots.

What security is there that he pays anything at all himself?

What security is there that he does not extract the highest possible or more than possible rent from the ryots?

The zemindar does not improve himself, and he does not give the ryot the security which makes it worth while for him to improve. If there is irrigation, the ryot says, and says truly, the zemindar takes the whole profits of the water. Colonel Haig found that, where the Government had charged a rupi or half for water, the zemindar had added three rupis to the rent.

No good laws or education can compensate India if we stereotype a form of society which ought to have passed away.

A MAN MUST EAT AND LIVE IN ORDER TO BE EDUCATED.

It is no use to talk of educating the ryot when he is, as the missionaries urge, crushed and spiritless under the accumulated evils of his position

In a paper on Vernacular Education, signed by twenty-four missionaries, some years ago, we find. The uneducated ryot is utterly defenceless. Detection of forged documents by him is impossible an ignorant people fall an easy prey to corrupt underlings of the zemindars and the courts, who are always eager for bribes. Moreover, if the people speak truly, even the police and petty officers of Government greatly of Government greatly tyrannize over them

It is a mockery to wait for education, though it has done much, to enable the ryots to do away with these evils for themselves. Rather what education we have given has enabled them to feel their evils more. This constitutes the danger of the situation.

We boast, as our claim to hold India, of the security we have give to life and property-to peace and justice. The property is poverty except to a few; the life degenerates every year with the race. The peace and justice are for the usurer and zemindar. The people who used to be murdered under the native raj do not

thank us. The Brahmin regrets his power-The Mussulman his supremacy.

The unlucky experiment as Sir H. Maine mildly calls it, tried at the end of the last century by Lord Cornwallis, has been an overthrow of rights of cultivators. They had clear and solid rights in the land. But modern ideas of political economy made them into a kind of serf.

The weapon of the BENGAL zemindars is litigation, but they want energy, and a large proportion of them have not pressed their claim to extremity.

ILLEGAL EXACTIONS ARE, HOWEVER-NO MORE, BUT ARE-UNIVERSAL.

In 1879 we find a minute by Mr Mackenzie, Secretary to the Government of Bengal, on the appointment of the commission to consider the question of amending the Rent Law of Bengal in which he says that zemindars declare the amended Arrears of Rent Realization Bill to be of little use to them, and it is they who ask for the Commission.

It is something that there should be free discussion and deliberations on the subject; but do we examine the ryots and ascertain what their actual condition is?

ILLEGAL COURSES [HIGH COURT OF JUDICATURE], 1879.

We find much matter to the purpose in the Supplements to The Calcutta Gazette-to the purpose, as showing the things acknowledged by Government. This is not the voice of people disagreeing. It is the High Court of Judicature which speaks.

The High Court of Judicature begins: March 4, 1879. 13. The judges desire to reiterate once more what they have repeatedly asserted before, that organized resistance to the payments of rents by ryots is invariably due to systematic efforts to enhance them with or without cause; that bad relations between zemindar and ryot are almost universally due, either to property changing hands, and to the speculators attempt to augment the yield of his purchases, or to the zemindar allowing some one, a middleman, to come between him and the ryots, the middleman talookdar, or whatever he be called, being left very commonly to raise the profit which he pays by putting pressure on the ryots.

14. The judges desire to express the astonishment that they feel at the observations frequently made on the subject of riots arising out of rent disputes. Zemindars and perhaps officials are apt to think that the ryots are to blame. Now it seems to the Court that, from the nature of the case, the blame must generally rest with the zemindar. Of course the judges do not mean to say that he is not more or less frequently subjected to great annoyance, and perhaps to loss; but so long as he confines himself to legal measures for enforcing his right, there cannot ordinarily be a riot. If rent is refused, he can sue; if he is resisted in distraining, he can apply to a Court for assistance; if he is entitled to measure lands and is opposed, he can do the same. There is a legal remedy in each case, and if there is a riot it can hardly be that it does not result from his impatience,

pride, and preference for illegal courses. An obstinate ryot can be coerced, but he can legally only be coerced by the aid of the Court; if no other coercion is attempted there is no occasion for a riot.

The ryots riots, it is thus said, are the result of the zemindar-of his preference fro illegal courses.

THE JUDGES ADDRESS THE BODY OF LANDOWNERS, AND THE GOVERNMENT ENFORCES IT IN THE GAZETTE.

The blame in riots, must generally rest with zemindars, the High Court says:

The documents following after this, upon which the minute of the High Court is based, are painfully interesting.
ENHANCEMENT OF RENTS [HIGH COURT OF JUDICATURE], GAZETTE, 1879.

The fact is the zemindars seeking enhancement get the best of it, either by open decree, favourable compromise, or other settlement agreeable o the zemindar. The ryots cannot afford to carry on appeals. The zemindar can and does.

This has been forcibly stated elsewhere. But the remarkable thing is-all this appearing in The Gazette, and -nothing being done.

And further on (this is still from The Gazette): it is district judges who speak:--

Zemindars sell out by auction the right of determining, of collecting, and above all screwing up the rents. When the disagreeable task has been effected, the zemindar re-enters on the estate and claims to work on the enhanced rent-roll, for the ijaradars rent collection papers are always carefully stipulated for beforehand. When a substantial but refractory ryot has managed to hold his own against a series of successive ijaradars, then he zemindar or the later ijaradar selects him for the ultimate ratio of an enhancement suit. As Mr Lyall truly observes, it is only as a last resource that a Tipperah zemindar betakes himself to anything so decorous as a suit-at-law in order to obtain an enhancement

Is this system of periodical, usually triennial, ijara auctions an unusual case of trickery?

I is stated elsewhere that here it is the customary method of dealing with ryots even on the zemindars of really worthy gentleman

It is said elsewhere that the zemindar takes to it in almost every district.

One judge goes on (naming some zemindars by name, but their name is Legion): By undisputed rents is meant what the zemindar chooses to describe to the executive authorities as undisputed rents

As a rule, enhancement suits are almost avowedly mere engines for harassing by expensive processes The usual device is to allege all eh possible grounds, increase in area, increase in fertility, increase in crop value, increase in rates payable by

neighbour ryots of the same class, to hop from the one ground to the other, to fence over all of them, and to prove none.

It is a judge who speaks.

As a rule, rent rates even in this fertile district have already been screwed up too high, thanks to the high-handed practices which prevail among ijaradars.

This is from the district judge of Tipperah, but it is not contradicted that these are the practices of zemindars in almost all cases. Combinations to withhold all rents are a legitimate sequel to the customary measures for enforcing enhanced rents. Zemindars and ijaradar substitutes for zemindars, on finding increase in values, have restored largely to the other test--that of the increase in rent rates paid by similar ryots for similar lands. Then in too many cases the result was intriguing and manoeuvring. The standard device was to bribe this or that member of the ryot class to tell a lie that he was paying at such and such rates, when in reality, by secret treaty, he was to pay only at such or such a rate much lower. It was this extremely reprehensible intriguing which called forth combinations to withhold all rents as the only means available to resist improper enhancement of rents

[If this is perjury it would almost seem a case for the Criminal, not the Civil Courts].

There never yet was any sustained combination to withhold rents which was not a perfectly legitimate reply to a challenge thrown down by the rent claimant himself

STATE OF THINGS IN A COUNTRY NOMINALLY GOVERNED BY LAW.

The judge virtually says to the people, We cannot protect you by law; you must protect yourselves by riots!

(Many things come out incidentally from these remarkable official documents, relating primarily to *Eastern Bengal*, but true as to zemindar practices in other districts, which illustrate what will be found in other parts of this paper. One is the internal tendency to village wrangling, only repressed by the external danger. Another, "the collector magistrates" are "naturally impressed by the complaints which they hear from their *zemindars*"-- apparently from want of agricultural education of their own. Qualified experts in agriculture seem greatly wanted to make "calculations." The law says that any increase to the zemindar is to come out of the surplus which remains after the labour and stock have been allowed for; in other words, that the zemindar's rent is not to be taken out of the ryot's wage earnings, or out of the ryot's working capital." . . . Unfortunately for the zemindar, the law has been reasonable enough to insist that the other, or disbursement side, shall also be looked to. There also the values are found to have increased considerably." It is added that "such calculations" are "difficult." And it seems a truism that agricultural "calculations" can only be well made by "officers well trained" in agriculture.

Another, that practical measures "would do more than reams of reports and sheafs of bills to ensure the much-needed agrarian reforms." How true is this everywhere! Another, "It seems easier to cure symptoms than to cure diseases," says to the judge, in reference to "the quartering of punitive police," instead of going to the root of the evil.

As to "agrarian outrage or reprisal."

"That process first of all begins," it is repeated, "in demands for enhancement, and not til thereafter is followed up by combinations among the ryots for the withholding of rent."

There are two curious papers by munsifs in the same *Gazette*, in one of which is an account of how the orthodox Hindus or "respectable people, very seldom, if ever, come to give their evidence" at once, saying: "though served with a summons," etc. Is this because false evidence hired and contracted for is so common)?

These Gazettes and official documents are read by the daily increasing class of educated Hindus (not zemindars), increasing under our own influences at Calcutta, Bombay, etc. ("When a village has gone on strike, the landlord singles out a few of the leading men and bribes them to his side with a false measurement, or he throws in a few begahs of land into their pottahs under some fancy name. These men then go to court ready to swear anything against the men on strike, and in a day or two some of them find their houses burnt down about their ears." This was actually "set as a translation paper" ("appropriately enough") "at the half-yearly examination of assistant-magistrates and deputy collectors." Might not some such examination papers be "appropriately" set to Civil Service candidates for India here in England)?

There is a public opinion rising up now; and whatever they think of us, what must we think of ourselves?

ENHANCEMENT, UNLEARNED INCREMENT [HIGH COURT], 1879

The *Gazette* (the High Court) goes on to comment upon the unearned increment and the absurdity of this. It says, is this profit by the substitution of valuable jute for coarse rice to be treated as unearned? Is the bulk, or even a large share of the profit of that change, to pass necessarily into the pockets of the zemindars? . . . If that is to be so, the ryots will be unwise if they go on introducing new and valuable staples to replace the old ones; that is to say, go on furnishing the means for raising rents on themselves and their neighbours

This is the key to the whole problem. We see elsewhere a zemindar raising his rents on account of the bountiful rain which it has pleased Providence to send We often see that ryots will not take the water provided by irrigation works on account of the absolute certainty of having their rents raised at once.

So far the judge.

That the ryots do say what the judge supposes, viz., that they will not furnish the means for raising their rents, is

unfortunately too true. But it is strange for the judge to have to speak for the ryots thus. In England it would be an agitator a peoples delegate who would say these things. In India it must be a judge; and what is more, a High Court.

And thus the High Court of Judicature issues a document speaking out from the whole body. It used to be a complaint that the 13 or 15 judges would not speak out as a body. But here, where the whole Court has to make such a case, it should surely draw our attention. There are worse things which might be quoted, but it is not often one has judges as witnesses and a High Court as prosecutors.

But where are the native members of Council? Do these members help, or do they join against our own flesh and blood, like Saturn devouring their own children?

It was our lot to hear a Prime Minister of England say, with a gesture of grief, It is enough to drive one to despair referring to the want of help and energy in native members of Council, who should be allies in reforming these things for the cultivator, and who are, on the contrary, hindrances.

I have thus endeavoured rather to put the state of feeling and grievances of the ryots as regards this momentous land question before those much better able than I to judge of what the remedies should be in the Bill now drafted by the Government of India upon the basis of the Bengal Rent Commission Draft Bill, of the Government of Bengal, and of various other reports.

SUMMARY OF THE PRESENT STATE OF THINGS.

THE CONDITION OF THE RYOT.

He is underfed: yet always work hard.

He is helplessly exposed to periodical famines.

He is for the most part in debt.

He is more or less at the mercy of the zemindar, in a country where custom, NOT contract, is the rule, and where he must contract himself out of all his rights-of the zemindar, who can raise his rents as much as he likes-and where there is such competition in land, the cultivator is helpless-of the zemindar, who can impose upon him what cesses or taxes he pleases, and he can only obtain redress by going to law; but he is ruined if he goes to law (unless indeed, he combines in a strong land league against the zemindar).

He is overcrowded and degraded.

He is morally and physically deteriorating, and will be worse in the next generation than in this, if nothing be done.

He is expected to protect himself, and in some measures some have done so of late years by combinations. But he is not protected against the main things: absence of tenant right, meaning that the ryot is always to pay the same rent, and while he pays it not to be evicted; and of illegal abwabs.

That is to say, that the zemindars can impose any rent or cesses which they please, but are guaranteed against any raising of a rent charge imposed upon them. Hence any improvement in the

value of property goes to them instead of going to revenue, public works, etc. (A sample case:- The bailiff of a wealthy landholder in Bengal lately wrote to his law-agent in Calcutta as follows: "His Honour, my mater, purposes to raise the rents on his estate 5 per cent., in consequence of the recent providential fall of rain; and 2 per cent more to meet the cess which the Government has imposed on him, in order to diffuse the blessings of education amongst his tenants).

The arbitrary creation by Proclamation of a class which has not, as it were, grown up in the soil, could scarcely be expected to succeed; nor was the idea that if the English Government created a Bengal zemindar, he would turn into an English landlord, with all his power of duty and traditions of duty, less visionary than would have, been the transplanting of tropical vegetation into the fields of England, and expecting it to flourish there.

The zemindars (about 130 000) have performed perhaps not one of the duties of the landlord class in England.

The cultivators (numbering about 10 000 000 holdings, not numbering subordinate tenure holders about 1 000 000) are in a state which calls more loudly for redress year by year (Between the zemindars and the cultivators come 724 000 intermediary estates, 620 000 being of a rental below ten pounds).

The revenue in 1793, at the time of the Permanent Settlement, was about 3 millions, while the zemindars share was one-eleventh of the revenue (See Bengal regulations II, 1).

In three-quarters of a century the Government revenue has increased 3 millions, while the zemindars rental has grown from about a third of a million gross to more than 13 millions net. We have given away a land revenue of all India; for we have allowed between 25 and 30 millions, reckoning illegal exactions, etc., to be extorted from the occupants of the soil, out of which Government receives, instead of ten-elevenths, which was the rule at the Permanent Settlement, about one-eighth.

The loss to the ryots, six millions of whom have holdings of only between two and three acres, paying less than 10s a year, whose condition is deplorable, and nine millions of whom pay less than two pounds a year, is as great as that to the State. And do the average zemindars, who are supposed to gain, prosper? But few. How can they?> Few do aught which makes men prosper.

Were a prophet to describe this state of things to the Englishman, as Nathan did to David, would not the prophet, on the Englishmen rising in his righteous wrath, point to him and say: THOU ART THE MAN?

You ask whether matters as described in the foregoing pages are so still?

Here is the answer.

As has been well said, though this state of things is now being removed by decentralization, ryots have been toiling in Madras and starving in the Deccan, in order that gentlemen in Bengal may enjoy incomes of hundreds of thousands a year free from taxes

The richest province of India has been to a large extent defended, administered, educated, supplied with roads, barracks, hospitals, railways and canals and relieved in famine, at the expense of the rest of the community

Bengal proper, with 69 millions of people, and 54 millions of cultivated acres, pays 3 663

000 pounds land revenue. Madras, with 31 millions people, and 32 million cultivated acres, pays 3 296 000 pounds land revenue. And Bombay with half Bengalis cultivated area, and one-fifth her people, pays 3 344 000 pounds land revenue. Madras and Bombay together, therefore, with an equal area to Bengal, and a population one-third less, pay nearly double the amount levied on Bengal.

Well may Neirbuhr call the Permanent Settlement one of the most unfortunate but best-intentioned schemes that ever ruined a country

But he was wrong in his word. It was not the Permanent Settlement, it was the violation of the Permanent Settlement that did this.

The mistake arose from describing those with whom the Permanent Settlement was made as the actual proprietors of the land thus the Court of Directors wrote in 1819.

The mistake arose from conceiving that if we described them as the actual proprietors of the land that description would make them perform its duties.

We must not stay to consider the famous Act of 1859, which seems to have done some harm in recognizing a wholly unprivileged class; in fixing 12 years for the acquisition of occupancy rights [as the Bill stood, every resident ryot had a right of occupancy, and three years cultivation of land made a permanent ryot even in lands not previously in their occupation, and for which they had no written lease]; in restricting the right to sit at fixed rents to a very limited class, and in providing how to harass occupancy tenants, not so entitled, in order to enhance their rates.

Landlords and tenants are alike dissatisfied. [A full account of this Act of 1859 may be found in a memorandum by Mr Mackenzie in the Rent Law Commission Report.]

Twenty years afterwards, in 1879, the condition of the tenantry, a blot on civilized administration, is described by officials themselves, as we have seen. As we have seen, the reform which is every year more vitally imperative, and every year more difficult of attainment, has been exhaustively discussed by Government. And their Bill is now launched.

The moment for reconciliation between the classes has been strongly, it is hoped not rightly, said to have passed away for ever.

Something must be done, if only to avert political danger of the gravest kind. There is universal official testimony that nothing is softening down, but all and everything which concerns an impoverished, degraded and rack-rented peasantry becoming more embittered and threatening every day.

Adjustment must be effected, but each year matters for adjustments are becoming more entangled.

So far from matters adjusting themselves, the efforts of the landlords to destroy occupancy rights are, where property is increasing in value, yet more determined and successful (Loss to the ryots, loss to the State. Who gains? Heads I win, tails you lose," might be the motto of the zemindar.

In rent suits and other forms of litigation, possession is nine points of the law. Here is a notice of appeal in a fine case: "Your Honour may be right, I may be wrong; I may be right and Honour wrong; let Honour give me back the fine and then at Day of Resurrection, when all hearts will be open, if I am wrong, I will most gladly, sir, return your Honour with the money."

To shift the burden of proof in disputed rent cases is the landlord's game, and to have money till the tenant proves it is not due.

The zemindars have more publicizing power than the ryots; they can command better

advocates, better representation. There is always the danger that they will get all the proposed Bill will give them, while concessions to the ryots will be lopped off).

And what is the state of things now in Behar, a province of twenty millions of people? We will see what it was in 1878. It is declared that the lawlessness of the landlords, the cruelty of their illegal exactions keep the deep and hopeless poverty of the cultivators at only just above starvation point. In 1878 the Bengal Government thus gives its own testimony:-In Behar, what is most wanted is some ready means of enabling the ryot to resist illegal restraint, illegal enhancement and illegal cesses, and to prove and maintain its occupancy rights. Apart from the backwardness and poverty of the ryot, there are many points in the existing system of zemindari management which seem to call for speedy amendment. The loose system of zemindari accounts, the entire absence of leases and counterparts, the universal prevalence of illegal distraint, the oppressions incident to a realization of rents in kind, the practice of amalgamating holdings so as to destroy evidence of continuous holding, are evils which necessarily prevent any possible development of agricultural prosperity among the tenant class, and place them practically at the mercy of their landlords, or of the thekadars (contractors for a lease), to whom ordinarily their landlords from time to time transfer their rights

It is the Government which says this.

A committee of indigo planters and zemindars have themselves reported that the ryots had lost all their rights.

You ask whether matters as described in the foregoing pages are so now?

Here, then, is the answer.

BENGAL RENT LAW COMMISSION, 1880.

We now come to the Commission on the Bengal Rent Law, which reported in 1880.

In a memorandum appended to the report, after a statement in figures of the enormous increase of forced sales of immovables most, if not all of the immovables having been taken, showing that forced sales of real property, which always affect the poorer classes, have doubled within the last four years; after a statement in figures of the increase within the last seven years of suits for arrears, with or without ejectment, to the enormous amount of 130 000 in 1878, mortgages and sales of less than 100 rupees having almost trebled within the same period; after a statement in figures that The number of thefts last year has again risen to almost a famine height we are asked: Can we, then, say that the people who, in spite of the most solemn promises of the State to the contrary, have been deprived of a sum nearly equal to the amount of the Franco-German indemnity, whose movable property is almost nothing, whose lands are being sold twice as fast as they were five years ago, who are compelled to encumber their property three times as often as seven years ago, and whose criminal population has reached the figure it was in famine times, are in a fit state to have their rents increased and their customary possession destroyed

We are asked how far it is advisable to give any further facilities for enhancement without protecting the ryots from the ejectment theory, which has more or less developed within the last seven or eight years.

Mark well: the question is not to abolish the Permanent Settlement, but to carry out the Permanent Settlement.

The Government revenue of the Permanent Settlement was about 2 850 000 pounds, and eight-tenths of the gross rental. One-third of the land was waste, it is said. On these conditions, if the whole of Bengal had been under cultivation, the gross rental would be 4 764 000 pounds.

According to the Report of the Board of Revenue, it was, in 1877, equal to 13 037 000 pounds. In other words, the rates of rent, which were intended to be fixed by the Permanent Settlement, have been trebled, and the ryots are now being compelled to pay an excessive exaction of 8 273 000 pounds yearly. If this annuity be valued at twenty years purchase, it appears that we have deprived the cultivators of this enormous sum of 165 000 000 pounds and given it to the zemindars, who still cry for more. What large portions of this enormous income are squandered by mismanagement, extravagance, and want of self-restraint may be gathered by a reference to the Report on Wards Estates for 1877-8, and other years. During the last few years the Government has spent crores (out of the public revenues) on famine. Every Administration Report since 1873 dwells on the bad feeling existing, and the riots and murders which have occurred through disputes between landlords and tenants

Do we still say that our rule has brought peace, and law, and justice to India?

An act to prevent agrarian disturbances had to be passed, and a committee appointed to inquire why the ryots in Behar had abandoned their holdings and fled to Nepal

It is stated that the people in Bengal, at least in some parts, are so near the extreme limit of self-support that very little more will compel Government to hold a cadastral survey of the whole province, and record, once for all, the rights of the people before they are swept away.

In another memorandum to the Bengal Rent Law Commission Report, on which were two native gentlemen representing especially the zemindari interest, it is pointed out that there is much to be said, for their, the zemindars, view of the facts, and it is not at all likely to be left unsaid. The landed and wealthy classes of Bengal have powerful organs in the press, and powerful friends both here and at home. They are, many of them, very amiable persons, of great intelligence and great benevolence. Officials are glad to do them favours, and find it pleasant to be on friendly relations with them. Every prejudice arising out of the Western notions of property, and the relations of landlord and tenant in Great Britain, is entirely on their side. It is only at the cost of much dry study of old records, old laws, and old books, and from a close and critical examination of certain apparently anomalous survivals in the rural economy of the province, that one comes to learn that there is, even in permanently settled Bengal, quite another side of the land question which is not represented in the zemindars statement of the case- which has been affected less than is supposed by modern legislation -which concerns the interests of vast masses of unfriended peasants, and which the occurrences of recent years make it necessary, once for all, to bring prominently under the consideration of Government and Legislature

HERE ARE THE WRONGS: BUT WHERE ARE THE RIGHTS? WHAT ARE THE REMEDIES?

Gentlemen, said the last Emperor of Russia, at once the champion of the principle and the victim of its failure, if reform does not begin from on high, it will begin from below. The dumb ryot is finding speech, the deaf government has long since awakened and heard, and the deaf zemindar will hear.

We say no longer, we do not care for the people of India: but-we would care, if only we could understand.

This is a humble earnest contribution to our understanding of part at least of Indian legislative work, which is now being so actively undertaken by the Viceroy and Government of

India.

This Government is the true friend of the zemindars, because it seeks to give them good, prosperous, paying tenants instead of rack-rented runaways.

Capitalists are wanted as well as cultivators.

Peasant proprietors are often opposed to improvements. They do not care for people twenty miles off. For instance, peasant proprietors care not for roads to distant places. Therefore we want landlords and capitalists.

If there were no landlords we think we should have to create them. But we did create them.

And this is the result. Neither do zemindars care for improvements or for people twenty miles off.

What is the remedy for this state of things?

Certainly not to murder the landlords.

Violence is used to collect the illegal cesses.

What is the remedy for it?

Certainly not to use violence to resist them.

A legal remedy must be sought.

What is the legal remedy?

REMEDIES PROPOSED FOR THE CONDITION OF THE RYOTS IN BENGAL, AS REGARDS LAND TENURE AND PERMANENT SETTLEMENT, OR RATHER VIOLATION OF PERMANENT SETTLEMENT.

What was done under the Permanent Settlement compared with what might have been done:

(a). In protecting the ryot under the old settlements.

(b). In giving new settlements, either making the ryots pay the fixed element, or enabling him to purchase on easy terms.

1. Rights of occupancy, or fixity of tenure.

The laws of 1793 gave fixity of tenure to all resident ryots. This is not disputed.

The zemindar appeals to the Permanent Settlement.

So can the ryot.

It is not now whether anything is to be done, but what is to be done?

One remedy proposed is: that the right of occupancy should be attached, not to the ryot, but to the land; that there should be people's land, ryottee land as in the old Aryan law, as in European laws, where land is kept for the people, whoever might be the holder.

Another remedy is: to give occupancy right to all resident ryots, a privilege on solid ground. Practically this amounts nearly to the same thing.

A counter proposal is: if the ryot or his predecessor has held for twelve years in the same village or estate, though not the same land, this to constitute occupancy right. The ryot's status to depend not on the holding of one and the same plot of land for twelve years, but on holding of any ryottee land (whether the same or not it does not matter) in the same village or estate for a period of twelve years whether before or after the passing of the Act.

The general principle of the Act of 1859 was that any resident ryot, for the future as for

the past, who had settled himself down for a long course of years, cultivated the land, set up houses and fences, and so on, should be deemed to have a right of occupancy, unless it was shown that he held under a special contract.

But the rights of the old-established ryots were seriously injured by the Act of 1859, which threw on them the burden of proving, not merely that they have held in every one of the particular fields or plots in respect of which they claim to have rights of occupancy-a burden which, it need hardly be said, it is impossible for them, in the absence of any trustworthy agricultural records, to discharge. And, as regards the acquisition of rights of occupancy by new comers, matter which is always regarded as absolutely necessary for the prosperity of the agriculturalist class in this country, it becomes almost impossible under a law which enables the landlord to prevent it by the simple device of shifting the tenant from one holding to another before the period of twelve years has run out.

An amendment of the occupancy provisions of Act X of 1859 in the manner proposed, i.e., twelve years occupancy of land in the same village or estate to give the right, although the eland, or some of it may have been changed, as now proposed,-the distinction between resident and nonresident ryots being practically given up-would not materially differ in practice from the proposal to give the occupancy rights to all ryots (The terms “khordkasht” and “paikasht” (purely Persian; Mogul official terms brought from Northern India) were never quite applicable to Bengal; and now, when regular communities are not the rule in Bengal, and hamlets are much scattered, they define scarcely anything. Where, in regular village communities, each aggregation of cultivators of their own lands, i.e., of the lands of their own village, and the temporary cultivators living in another village, is clear enough.

2. Remedy: Fair rents; right of enhancement.

The laws of 1793 clearly gave permanency to the ryots as well as to the zemindars, fixed rents as well as fixity of tenure.

The law of 1793 gave no right of or facilities for enhancement against a ryot paying the ordinary pergunnah rate.

Where the revenue is fixed, it is obviously unfair that fixity all tenure men should be liable to enhanced rents.

Before the Act of 1859 there was no right of enhancement. By that Act twelve years men were given occupancy rights, but liable to enhancement. That Act declared the majority of the long-settled resident ryots of that day to have fixity of tenure, but not fixity of rent. It however, laid down, regulated, and defined the grounds upon which alone the existing rents could be enhanced.

But the law was only enforced by the action of the courts. There was still no attempt to make a public record of the holdings of the ryots.

In Eastern Bengal the commutations of the zemindars right of enhancement into fixed rents by voluntary agreements on payment of a fine have risen from 50 000 a year to 125 000 or 130 000 a year. The recent papers show this number as formally registered.

This may indeed be thought a better course than one now proposed-viz., the right of enhancement to include leave to the zemindar to apply to the collector-the collector to act for the zemindar in order to carry a right of enhancement which he could not carry out for himself. This putting in motion the collector to settle and record the rents is entirely at the option of the zemindar.

The collector is to make, too, a record of the prices of agricultural in the collector to make

a record for their protection.

Instead of this, assistance should be given to the zemindar to obtain a fair enhancement in the rare cases of his increasing by his own expenditure-e.g., by irrigation or drainage-the productive powers of land.

As regards the unearned increment due to increase in value of produce, as well as increase earned by the ryot, no facilities should be given.

But the object should not only to prevent undue enhancement, but to allow existing unfair rents to be reduced. And for this due provision should be made. It, however, hardly appears to have been made.

If the more summary procedure for rent suits is to be given to the zemindars, then sufficient protection against illegal execution must be given to the ryots.

If improved means of enhancing the rent are to be given to the zemindar, at the option of the zemindar, then the ryots should be entitled to come in and demand that a public record should be made for their protection. The zemindars should not have the sole option of this.

This second remedy should properly be limited to sufficient facilities for collection existing rents through summary and effective courts:-

I.e., improved facilities for collecting bona fide existing rents should be given, as a set-off to the twelve years right of occupancy to those who have held in the same village or estate, the zemindar taking the old law of 1859, and making effective the twelve years rule, with the provision that it is to be operative notwithstanding change of land within the same village or estate.

3. Remedy: Free sale.

It is proposed to concede free sale to all occupancy ryots; to put no check on forced sales; all ryots rights to be freely transferable, either by voluntary or by compulsory sale; but the sale to be only to another cultivator; not to be to a non-cultivator, who might keep the old ryot on without any rights at all, as is often done by the money-lenders in the Deccan.

But where, as in India, the cultivator has no inclination to emigrate, the right of free sale is no urgently desired by him. On the other hand, it is liked by the landlords on account of the facility for realizing rents which it gives them.

Forced sales are an almost unmitigated evil, owing to the presence on the soil of an expropriated people, deeming themselves unjustly deprived of their immemorial rights, as in the North-West Provinces in the time of the Mutiny; and as in the Deccan so lately.

Suggested Remedy, a Homestead Law, as in America.

The holding of the Indian villager, having probably had its origin in a distribution of the community lands, might be protected for a time at least by a law that no man can be forced to divest himself of that portion of the community land assigned him for his living. So much land is treated as a trust rather than a property. This protects as much land as is necessary for his individual cultivation, together with the implements of cultivation.

To give the power of free sale to a people unaccustomed to such rights seems to be giving them the power of killing the goose which laid the golden eggs.

We become enamoured of peasant proprietors until we find out that they mean money-lenders. But the money-lender does wish to keep the goose alive. He wants to get as much out of it as he can. We shall not find it to be the same here.

4. There is one remedy as to the necessity of which all are unanimous; and that is, to take from the ryot the power of contracting himself out of these provisions, and so protect him in the

privileges granted him. This refers more particularly to his occupancy rights, but also to other rights.

A right of occupancy is to be acquired under the new Bill by a settled ryot holding ryottee land notwithstanding any contract to the contrary. It appears absolutely necessary to prevent our legislation from being overridden by contract. We seem fully justified in directing our Courts not to enforce contracts, the clear intention of which is to defeat the intentions of the legislature. Here is a sample contract said to be imposed by Bengal zemindars on Bengal ryots: [An ounce of fact is worth a ton of theory]

1. Monthly instalments drive the ryot to the money-lender before the harvest, and they enable zemindars to wrong the ryot by bringing suits every month and saddling the ryot with costs.

due date, I will pay interest at the rate of 2 pice per rupee per meusem

2. Thirty-seven and a half per cent.

3. Bamboo-clumps are necessities for a ryot.

4 By Act X of 1871, the ryot is bound to pay half the road cess.

5 By Act II of 1878, one-half only of the Public Works cess is thrown on the ryot.

6 By Act VIII of 1862, all the dak cess is payable by the zemindar

7 The imposition of such cesses is absolutely illegal. See Reg. VIII of 1793, and Act VIII of 1869.

8 Not the value of even one-fourth the value of the tree.

?

9. I.e., If the land is taken up for

(1) Kabuliyat

I, cultivator...take the lease of...bighas of land...I will pay the rent at your kachari...a according to monthky 1 equal instalments. If I fail to pay the rent on

...I will cultivate the land with My own hands...I and my heirs Will never acquire a right of occupancy In the land. I will not sub-let... erect buildings excavate tanks, plant Bamboo-clumps 3 and gardens... or transfer or alienate the lands. I and my heirs will pay, in addition to the rent, road cess 4,

Public Works cess 5,

zemindars dak cess 6
And any other cess which Government May levy in future, together with any Cess 7 which you may levy.

I will not cut any tress whatever.
You are at liberty to cut trees on payment of one-fourth of the price of the Wood 8.

* * *

I and my heirs will not claim any

public purposes, the zemindar is to get the price paid by Government; the ryot nothing.

N.B. The kabuliyat is given by the Ryot and remains with the zemindar. The pata is given by the zemindar And remains with the ryot. This latter

compensation 9 that may be awarded Under Act X of 1870, and under any Other law.

(2) Patta (pottah).

You shall enjoy the land paying kabuliyat.

[This is all].

document gives no details, so that the ignorant tenant never has an opportunity of understanding the nature of his rights and obligations; all these are only entered in the Kabuliyat, which is in the custody of the zemindar.

This is the kind of document-contract we cannot call it-by which our legislation is overridden.

Well may a recent dispatch of the Government of India say. Such is the power of the zemindars, so numerous and effective are the means possessed by most of them for inducing the ryots to accept agreements which, if history, custom, and expediency be regarded, are wrongful and contrary to good policy, that to uphold contracts in to condemn it to defeat and failure. It is absolutely necessary that such contracts should be disallowed, and, in this conclusion, we have the support not only of the Bengal Government, but also of the almost unanimous opinions of the Bengal Officers

What the present Bill provides shall attach to the tenancy notwithstanding any contract to the contrary is briefly as follows:--

(1) The ryot may use the land in any manner which does not render it unfit for the purposes of the tenancy.

(2) He may make improvements on it as provided by the Bill.

(3) He must pay rent at fair and equitable rates as determined by the Bill.

(4) He cannot be ejected, except under a decree passed for breach of certain conditions, or for using the land in such a way as to render it unfit for the purpose of the tenancy.

(5) He may sub-let the land.

(6) His interest is to descend as if it were land.

(7) His interest is to descend as if it were the land.

These rights, it will be seen, include the three FÆs: fixity of tenure, fair rent, and free sale.

5. Remedy: A regular survey.

In reference to 2, fair rents, right of enhancement, it has been proposed to have a system of district rates and produce rates; in other words, fixing tables of rates for particular tracts; fair rates instead of fair rents for particular holdings. Without a regular survey this would be impossible. On every ground, however, a survey is imperative for Bengal; and a survey and record of rights and payments, as at least regards Wards Estates and other special estates and areas in Bengal, should be undertaken at once. We are ashamed that European official administration of Wards Estates has too often administered them oppressively, as if heating up

riches for the Ward were the only thing to be regarded.

The obligation to maintain district and village accountants has come down in the old laws, though it is now quite unheeded.

The obligation to give written pottahs, or leases, to the ryots, much insisted upon in the old laws, is also little observed, or the pottahs contain no details.

Where anything like a public record of cultivators rents has been kept, the cultivators, even in poor and dark Behar, have ceased to be wholly at the mercy of landlords. Landlords in Bengal are, in accordance with the provisions of Sir George Campbells Road Cess Act, required to file in the magistrates Court statements of their lands and of the rents paid to them by their ryots. It was, of course, of importance to the landlords for their own purposes that their receipts from rent should appear at as low a figure as possible.

In Mozufferpore, then, one and another of the ryots of the district came to learn that the record of rent, filed by the landlord, could be used as evidence against himself in a any rent suit between landlord and ryot.

Then for the next three months from every part of the district ryots came trooping into Mozufferpore, paid their inspection fee, got a certified copy of the rent at which they were said to hold their lands, and from that time refused to pay the zemindar one rupee more than that amount which, it need hardly be added, was not in all cases identical with the rent actually paid by the ryot up to that time.

[The rule that one-half of the amount of the orad cess is paid by the ryot, and the other half by the zemindar, is constantly infringed in practice. Sometimes zemindars realize the full amount of the road cess from the ryots].

It is a satisfaction to know that instead of the ryots being always at the mercy of their landlords, it is possible now for unjust landlords to be at the mercy of their ryots.

The remedy therefore proposed is:

A public record for the protection of the rights conferred by law on the ryots.

That the holdings of the ryots should be recorded, as in the province of Benares.

That public accountants should be maintained.

And that some such machinery as that of the North-West Provinces for protecting the people should be adopted.

6. Remedy: Effective penalties for illegal exactions beyond the rent.

The present penalty for illegal exactions is that the ryot may sue for twice the amount in damages; e.g., for an illegal cess of one rupee, the damages, if the suit be successful, will be two rupees. This is a ridiculous remedy (It will be remembered that in 1860, in Bengal, a proposition actually passed into law for six months, enforcing contracts between the European (planter) and the ryot, not, as they are in all civilized countries, by an action for damages in a civil court, but by a criminal suit with the penalty of imprisonment. Sir John Lawrence strenuously opposed these "Specific Performance Clauses." It may be said that the landlord ought not to be subject, though it is not in reality a similar case, to what is condemned for the ryot).

In the Permanent Settlement regulations the remedy is confiscation. This is a tremendous remedy. There is absolute power provided to confiscate the estates of the zemindar, if he fail in carrying out those conditions upon which alone he received them. He has failed, as has been seen; but his estates have not been confiscated. This has been disallowed, even in those worst instances which elsewhere would have been made use of pour encourager Les autres. The agreement for negating it seems to have been: All landlords are to be left to do illegal acts,

because all landlords do do illegal acts.

Remedy: Instead of the tremendous, never used remedy of confiscation, a thorough eradication of illegal cesses so generally imposed in defiance of law, adequate deterrent penalties being exacted.

And as protection against illegal exactions, a public record for future safety.

7. Remedy: Criminal prosecution, not civil action, for breach of law by landlord.

It has been suggested that barefaced systematic violations of the law by the landowners should be met, not by a civil action by a frightened and resourceless peasant who has no money to pay the fees, but by criminal law-e.g., that illegal district (universally prevalent in Behar) should be punishable by fine and imprisonment; that the omission to give written leases or receipts should be punished, not by the possibility of a suit, but by the certainty of a criminal prosecution and a penal sentence

It is answered: But you have the legal power of confiscation of estates, and you never use it. The reply of course is: There is a middle course between a tremendous and a ridiculous remedy.²²

And the ryot whispers, though a dumb animal, We stand upon immemorial rights of occupancy and We look upon a lease rather as a long notice to quit.

8. Behar, the evils of which are so much more carrying than those of Bengal, must occupy a different category. The Behar ryot will submit to be ousted from all his immemorial rights he has no fight in him. The late Commission of indigo planters and zemindars themselves admit that they have been chopping and changing the lands of poor ignorant ryots, so that there is scarcely a right left in Behar. The Behar ryot has lost the right of occupancy by one field being taken for indigo one year, another another. The Behar Commission tells us that while 60 per cent of the ryots have held land in the same village for more than twelve years ago.

Behar has a different race, a different language, and different social institutions from Bengal; and though Bengal without Behar, has forty millions of people, yet Behar has half that number. Twenty millions of people is a kingdom; and of this kingdom the great zemindars have respected very few old rights and have adopted the worst system of all, that of temporary middlemen farmers (ticcadars). Under this system the villages are put up on the highest bidder, and let to a speculator, from whose hands they have fallen into those of European indigo planters, who give very high rents to the zemindar, but take his (arrogated) feudal power and have no voluntary contracts with the ryot.

There are very few Mahomeddan cultivators in Behar-the tough and resolute element of Bengal. The Behar ryots are a mass of poor low castes. They were not strong enough to bring their cases before the Courts, and this is the result. They are crushed by constant and excessive increase of rent. Rents have been doubled, and more, within a few years. Rack-renting is extreme. At least half the gross produce,-but often more-generally paid in kind, goes to the zemindar, who supplies nothing but the land. There is scarcely anything like it in any other part of the world.

BEHAR: HERE ARE THE WRONGS; BUT WHERE ARE THE RIGHTS?

The rights conferred on the ryots in 1793 extended to those of Behar, as also did the settlement of 1859.

But as the mixed Commission of 1878 tells us they have been deprived of all these rights and ground down to the lowest point, The Local Commission, the Bengal Rent Law Commission, the Famine Commission, Sir Stuart Bayley (Commissioner in Sir George

Campbells Lieutenant Governorship), Sir Richard Temple, Sir Ashley Eden, all gave the same account of the deep poverty and misery of the ryots, the grinding traditional oppression the condition of the peasantry lower than that of any other peasantry with equal natural conditions. There can be no doubt whatever that the combined influence of the zemindars and the ticcadars (temporary middlemen farmers) has ground the ryots of Behar down to a state of extreme depression and misery.

The tenants are said to have no rights, to be subject to the exaction of forced labour, to illegal distraint, and to numerous illegal cesses

The tenants are said to have no rights to be subject to the exaction of forced labour, to illegal distraint, and to numerous illegal cesses

It is this great curse of Behar which makes the ryots of the richest provinces of Bengal the poorest and most wretched class we find in the country

BEHAR: WHAT ARE THE REMEDIES?

Proposed Remedy.-Every ryot who has held for three years any portion of what may be called peasants land, as distinguished from lords land, and has held some land of this kind in the same estate for twelve years (though not the same land) shall have right of occupancy, as laid down by Act X of 1859.

Every ryot who has not established a right of occupancy under the law of 1859, but who has held for three years, shall have, if dispossessed, a years rent as compensation for disturbance, and also compensation for improvements.

Another Proposed Remedy.-Also to restore the old system of public accountants and public accounts; for any concession of rights is of little use unless these rights are recorded and protected by an accurate public register and by a much more active administration.

This last is the more necessary, because Behar, as has been said, is an immense province, the one division of Patna containing as many people as the Presidency of Bombay, and several single districts as many as minor European kingdoms, while the sub-divisions are equal to districts in other parts of India.

Additional Proposed Remedy.-To undertake at once the survey and settlement (i.e. record) of the Patna Division, equal in population and probably in number of tenures to the Bombay Presidency, in order to settle far rents, to cut down rents plainly exorbitant, and to bring up those beneath fair and prevailing rates to that standard on the zemindars demand.

An actual existing remedy is, a Voluntary Association of indigo planters; who have just appointed an agent of their own to go about and investigate complaints.

Had the Bengal planters adopted the plan which these planters in Behar have adopted with good effect, viz., of having a paid agent whose special duty it is to inquire into all cases of oppression and of disputes between planters and ryots, the result in Bengal would have been very different. The Bengal indigo planters would not give way. They refused reform, and revolution took place. The trade has, to a great extent, collapsed.

Provision for an effective survey, record, and settlement of rights in the Patna Division, and eventually for the whole province of Behar, -and as regards Bengal for the survey and record of rights and payments in Wards Estates and other special estates and areas in Bengal, must be immediately made if any remedies are to be efficient or any rights secured at all.

I wish we had space to go farther into the exhaustive Report of the Rent Law Commission, the Draft Bill which it prepared, the Draft Bill which it followed, prepared by Mr Reynolds, Secretary to the Bengal Government, and circulated by Government for the opinions of the Judges, the Civil Services and the public; and other Draft Bills, Government opinions and amendments-papers which for intensity of interest are almost terrible-and for research and statesmanlike ability are almost equal to the transcendent importance of the subject.

But, before going into any question of indirect remedies, it might be as well to ask what speech, if any, has come from the hitherto dumb ryots themselves in all this stir and struggle?

RYOTS MEETINGS, 1881

During 1881 ryots meetings were held in Calcutta, Hugely, Burdwan, in the twenty-four pergunnah, Birbhum, in Nuddea and other places, showing how a public opinion is at last being created among them, at these, resolutions were regularly passed. And petitions also were prepared and signed. I propose to notice the resolutions only of one meeting-that at Calcutta-and two petitions.

These resolutions concern Mr Reynolds Bill. This Bill gives all resident ryots right of occupancy, but requires ryots claiming fixed rents to go back to 1839, twenty years before the Act of 1859, instead of twenty years from the date of action.

Resolution 2 protests against Mr Reynolds Draft Bill as being calculated to deprive the ryots and under-tenure holders of an important right which they have enjoyed since 1859. That inasmuch as these sections require ryots and tenure holders in permanently settled estates claiming a fixed rent, to produce evidence to show that they have been in possession of their holdings at such a fixed rent ever since 1839, and not for twenty years before the institution of the suit, as required by Act X, of 1859, and the Draft Bill of the Rent Commissioners, and that, inasmuch as in the vast majority of cases it will not be possible for the ryots to produce such evidence extending over such a length of time, this meeting is of opinion that the existing law on the subject should not be altered

[How, indeed, could farmers in England bring such proof?]

Resolution 3: That this meeting, while it feels grateful to his Honor the Lieutenant-Governor for the intention he has expressed, to confer upon all settled cultivators the boon of occupancy right, is of opinion that the same right should be conferred upon paikast (non-resident) ryots who have been or shall be in continued possession of their land for twelve years or more; and this meeting views with regret that under the Bill, as drafted by Mr Reynolds, paikast ryots are not allowed to retain their land against the will of the zemindar, though under the provisions of the Bill as drafted by the Rent Commissioners, ryots who have held land for three years could not be evicted so long as they paid rent regularly [Paikast ryots are, however, few in number, and generally not poor.]

Resolution 6. That this meeting strongly protests against the alteration proposed by Mr Reynolds, in sections 36 and 77 of the old Bill, by which the right to build pukka-houses and to cut trees without the consent of the zemindar had been granted to the ryots, but which have been withdrawn under the provisions of the new Bill. This meeting thinks it most undesirable that these rights should be withheld from the ryots; as in the first case they should be encouraged to build pukka-houses, and as in the second to allow the cutting of trees, etc., to be regulated by local customs would place the ryots entirely at the mercy of the zemindars, and lead to constant litigations

RYOTS PETITION, 1881.

The ryots petition to Sir Ashley Eden, Lieutenant-Governor of Bengal, from which I propose to quote, also states It is hopeless to expect that men in the position of your petitioners, without any education, and who cannot take care of their own interests, would be found able, as a rule, to produce receipts extending over a period of nearly forty years, even admitting that these receipts might be preserved, if proper care were taken of them But rent receipts are for the most part given in loose sheets of paper of the worst kind, which are stored away by the ryots if this were to be incorporated in the proposed Rent Law (The state of ignorance of the ryots was thus described by a native gentleman; The country is yet in *primaeval* darkness: the millions are dumb; they do not know who governs them; what is finance; who makes laws. All that they know is that they live in Maharanee's Mooluk (i.e., in Queen's dominions), and that the Deputy-Magistrate, or the Magistrate who governs them, is their Hakim or Judge. they therefore require a protector, a guardian, to save them from oppression of the strong and the rich, and from the fraks of the Mofusil Hakim”).

3. ryots who had been in continued possession of their holdings for a period of twelve years and more were declared occupancy ryots under the old Bill. This right is taken away from paikasht ryots under the old Bill. This right is taken away from paikast ryots under the provisions of the new Bill. Your Petitioners would respectfully pray that paikast ryots, who have been, or shall be, in continued possession of their land for a period of twelve years and more, may be placed on the same footing with khood-kast (resident of occupancy tenant) ryots, and may be declared to be ryots enjoying the occupancy right. It cannot be to the good of the State or conducive to the welfare of the agricultural community that any portion of the community should be reduced to the position of mere tenants at will, who may be evicted from their lands at the will of the zemindar, and who, in this respect, is at liberty to exercise an unbounded discretion, unaltered by any salutary provision of the law. But under the Bill, as drafted by Mr Reynolds, paikast ryots have virtually been reduced to this position; for under its provisions ryots are not allowed to retain their land against the will of the zemindar, though under the Bill, as drafted by the Rent Commissioners, ryots who had paid rent for three years could not be evicted, as long as they paid their rent regularly (The distinction between resident and nonresident ryots is practically abandoned. It is said that it never was quite applicable to Bengal, and it is shown that now, at any rate, when regular communities are not the rule in Bengal, and hamlets are much scattered, those terms are not definite or sufficient).

The Permanent Settlement may be claimed by the ryots to maintain their rights, just as much as by the zemindars to maintain theirs.

And the leading ryots seem now happily to have got hold of this. The Petition says: 4. The zemindars have been all-powerful; and though the rent payable to the zemindar was fixed in the same way as the revenue payable by him to Government, the zemindar has gone on enhancing his rent; and what, indeed, is truly remarkable, the Legislature has ratified with its authority the power of the zemindar to claim enhancement of rent-a power expressly taken away from him by the provisions of the Permanent Settlement

. . . Your Petitioners cannot but complain that the time during which rents shall be liable to enhancement has been limited to only ten years, which actually places the Bengal ryot in a worse position than that of the ryot in Upper India and Bombay, with whom the Government fixes the rent for thirty years, during which it is not liable to enhancement. Further, your Petitioners cannot but regret that it is proposed to allow the Zemindar to raise the rent to double

its former rate.

5. Your Petitioner are of opinion that the cumbrous machinery provided for the disposal of rent suits in the Rent Bill is unnecessary, and that the rapid disposal of such cases would be greatly facilitated by the appointment, if necessary, of additional Moonsifs who shall take cognizance exclusively of rent suits.

So far the Petition.

As regards the zemindars, no speedy mode of realizing undisputed rents from the ryots has been devised. There will still be room (I again quote from native authorities) for the ryot to file false receipts, to prove false payments, and to produce false evidence in rent suits in our Courts of Justice. You know the sad history of this unfortunate country, say these native authorities, who are in favour of the ryots. There is no check, no restraint of public opinion here. Corruption is systematically practised in our Courts of Justice. The ministerial officers-the Amlahs of our Courts of Law-are proverbially corrupt. They extort large sums of money from the litigants. One can get plenty of witnesses in this country ready to swear by anything and to give false evidence for money. In not a few cases, forged documents are produced; sometimes it is done in such an ingenious manner that it escapes scrutiny. Imagine the state of such a weak and unprotected class as the ryots in a court of justice. They generally depend for legal advice on the law agents-the Mooktars-who do not fail to rob them of the little they have. The field for work in this country is very extensive but alas! The workers are so few.

INDIAN ASSOCIATION PETITION, 1881.

The other petition I propose to quote from on the subject is one from the Indian Association, also in 1881.

It is the only Association in Bengal which may justly be called the peoples Association.

It begins by noticing the ryots public meetings, which enable us to form a tolerably correct idea of the views of the ryots themselves and by showing the importance That Government should know what the views of the ryots are. It shows That the relations between landlords and tenants are in a most unsatisfactory state

It quotes from the famous Regulation I, of 1793, expressly reserving the power of interfering for the benefit of the ryot (First, it being the duty of the ruling power to protect all classes of people, and more particularly those who from their situation are most helpless, the Governor-General in council will, whenever he may deem it proper, enact such regulations as he may think necessary for the protection and welfare of the dependent talookdars, ryots, and other cultivators of the soil; and NO zemindar, independent talookdar, or other actual proprietor of land shall be entitled on this account to make any objection to the discharge of the fixed assessment which they have respectively agreed to pay).

The zemindars quote from the Permanent Settlement. But it is the ryots advocates, and not the zemindars, who are the true followers of the Permanent Settlement.

There is a further quotation from a dispatch of the Court of Directors, previous to the conclusion of the Permanent Settlement, about interposing our authority in making from time to time all such regulations as may be necessary to prevent the ryots being improperly disturbed in their possession, or loaded with unwarrantable exactions. . . Our interposition being clearly consistent with the practice of Mogul Government: . . . that the cultivator of the soil duly paying his rent should not be dispossessed of the land he occupied

6. . . .Under the Regulations of the Permanent Settlement, the zemindars have no power to enhance rents beyond the pergunnah rate-the rate prevailed in the pergunnah at the time of the Permanent Settlement . . . But surely it is both opposed to reason, and to all sense of fairness, that zemindars should repudiate that portion of the Regulations which would be to the benefit of the ryot, but that they should be allowed to seek shelter behind, etc., etc.

7. . . .The prosperity of the peasantry means the prosperity of the zemindar. A teeming population of impoverished ryots is what no prudent zemindar would like to have on his state. If the ryots find it hard to maintain themselves, they will find it much harder to pay their rents. If, on the contrary, they are prosperous and well to do, they will pay the rents punctually, the zemindars will get their dues; there will be less of litigation, less of those bitter and angry feelings which now unhappily characterize the relations between landlords and tenants

We now return to the remedies, but have only space for two proposed remedies, but indirect ones, among many others to be hereafter touched upon; and on these two probably all will be agreed.

9. Remedy-Revival of Village Communities.-There is an increasing feeling in favour of reviving as far as possible the ancient village communities, of paying greater attention to the village system, indigenous to the soil of India, but much destroyed in Bengal, of making the immemorial headmen of the village act more as organs of the cultivators,-in favour, too, of the custom of summoning village headmen by Government officials as these make their rounds.

It would appear as if Lord Ripon Local Representation scheme were to begin, as it ought, by Village Representation, which is almost identical with India.

10. Remedy-Encouragement of trades and industries-The consequence of the want of other employments is excessive competition for land, upon which follows rack-renting. There is little competition in India, except for land.

This immense subject, which is now receiving the attention of the Government of India, can only be glanced at here.

If the condition of the peasantry had not been set to rights in the Punjab by John Lawrence, when the Mutiny broke out, where should we have been?

At the outbreak of the Mutiny, in the west of Bombay Presidency, the chiefs tried to make the ryots join the revolt. And they refused. They said: When we were under you, what did you do for us? Therefore, we will not rise against the English who have improved our condition

Our own safety is a reason for solving this tremendous problem.

To sum up in a few words:--

What is wanted is:-(1) Fixity of Tenure, or Occupancy Rights: (2) Fair rents, in a country where from time immemorial the ryots right to have his payments fixed by the authority of Government has been recognized: (3) A complete public record of the holdings of the ryots: (4) Free sale is doubtful; but, if free sale, then the sale to be only to another cultivator. What is wanted is: (5) To take from the ryot power of contracting himself out of his rights: (6) Effective penalties for illegal exactions beyond the rent: (7) Above all, a regular survey in Bengal; the re-establishment of public accountants: (8) In Behar all evils are intensified and the above wants and others more keenly felt. Compensation for disturbance is wanted ; an accurate public register, and a much more active administration. As indirect remedies: (9) Revival of village communities; and (10) Encouragement of trades and industries are wanted.

"The Bengal Tenancy Bill." *The Contemporary Review*. 44 (October 1883):587-602 [10:602-19]

The Bengal land questions concern interests too large for us to be interested in. India is almost wholly an agricultural country, or rather a country of tillage. The new Bengal Tenancy Bill will decide the fate of about sixty millions, almost as much as did the Permanent Settlement of ninety years ago. Each year adds alike to the difficulty and the necessity of solving these questions, but the difficulty becomes impossibility by delay.

The spirit of the day is all for improving the condition of the peasantry. The new bill does not violate the Permanent Settlement. It really carries out the Permanent Settlement. The advantages it gives to the Bengal landlord are as great as those it gives to the cultivator. To read the Permanent Settlement is to have revealed to us peasants' rights we wot not of. "We are yours, but the land is ours." No time is to be lost! The ryot is learning his rights and his wrongs--his rights in that the law has fixed a limit to his rent, his wrongs in that this limit has been constantly and illegally transgressed. But a mere increase of rent has not satisfied the zemindar. Illegal exactions have been levied far more oppressive and arbitrary than anything that could be called by the name of rent. And what is to come of this?

What are the regulations of the Permanent Settlement? and, first, as to the position of the zemindars.

1. In what sense are the zemindars to be understood as proprietors, landlords, landowners? The answer to this question is simple. The zemindars were not originally proprietors or landlords, and it may be shown beyond contradiction that they were not made so by the Permanent Settlement in the sense of absolute owners of the soil. What were they made? In the words of a lieutenant-governor of Bengal on the "Code of 1793," they were:

Persons empowered under certain very rigid restrictions, to receive from the occupants of the soil a fixed rental settled by the government, on ascertained principles.... Neither by ancient usage nor by the terms of the original settlement and original laws of these provinces, nor by modern laws, are zemindars unlimited proprietors, nor are the ryots without rights or claims to protection.

By the Permanent Settlement a contract was made with the zemindars, of which the following were the principal terms: (a) no arbitrary cesses are to be levied by the zemindar; (b) taxes or revenue are to be paid by the zemindar; (c) only on condition that the zemindars do not raise their rents is the revenue they are to pay not to be raised; (d) the zemindar is to undertake roads, lesser public works, etc.; (e) the zemindar is to give leases.

Such was the contract made by the government with the zemindar as a condition of his tenure of the land. How has it been kept? There is scarcely a single term in the contract that has not been violated by the zemindar.

Take the facts for the last three quarters of a century. The revenues imposed on the zemindar by law have remained nearly stationary. The rents raised by the zemindar from the ryots have been trebled in amount. In addition to this sum, as much again has been levied from the ryots by illegal exactions--a grand total of six times the return on any zemindar's capital which the law contemplated his being allowed to receive at the time of the Permanent Settlement.

2. The rights of the zemindars as between themselves and the *government* were settled. But, as between themselves and *the ryot*, what are the rights of the ryot? The ryot was promised protection from illegal exactions, and redress if they were levied on him. He has seldom got either the one or the other. Having been recognized as a ryot, he had a right to sit there at a definite prescribed rental described as the "*pergunna*," that is, the customary rate, without further demand, either by way of enhancement or cesses.

As to the waste lands, the Permanent Settlement only transferred the rights of government to the zemindars. The rights of the ryots remained the same. How have they been observed?

3. We have touched on the position of the zemindar and the ryot. What is the position of the government? The government shall itself define it:

Not only is it the duty of the government to protect all classes of the people, and especially those who, from their situation, are most helpless--a duty the performance of which they have specially reserved to themselves as a condition of the Permanent Settlement--but it is also their interest to carry out that duty, because the extent to which the burden, not only of the taxation, which should properly fall in certain specified proportions on different classes of the community, *but even of the actual personal expenses of the proprietors*, is thrown indiscriminately upon the lowest class, and that the least able to support it, must of course interfere greatly with the legitimate power of government to impose fresh taxes, and such undue and illegal pressure, on the part of the zemindars, on the great and indigent mass of the people, must be attended with great and imminent perils of a political character. (No. 46 of "Records of Government of Bengal.")

In one of Sir George Campbell's reports (1873), too little known in England, we find that even in Orissa, where the zemindars are still mere rent collectors,

They exacted *eleven* different kinds of annual cess, beside *seventeen* descriptions of occasional tax. Among the former were cesses to recoup themselves for the postal payment, cesses on account of the telegraph wire running through their estates (a pure imposition, as

this cost them nothing), cesses to reimburse them for income tax, and so on. There were presents exacted for the zemindari underlings, presents very compulsory in their nature, on every occasion of a zemindar moving from home, or of a magistrate travelling through the estate, *on account of fictitious expenses* that were never incurred.

The illegal exactions levied on the ryots appear to be suited to the fancies of the zemindars. We hear of cesses extorted for bracelets for the ladies of their families, cesses for a zemindar's tooth powder, cesses to pay a zemindar's debts, and when he visits his estates, cesses to pay for his religious devotions.

In fact, in the case of the zemindar, the ordinary rule that you must pay for what you want is reversed. The zemindar seems to be paid whenever he satisfies his own pleasure and whenever his wants are supplied. Not he who eats, but he who is eaten, pays. The ryot seems to receive nothing, but his opportunities of giving are indefinitely multiplied.

He pays on his own marriage, he pays on his son's marriage, he pays on his daughter's marriage, he pays on his second marriage (if he is of low caste and marries a second time), he pays on the zemindar's marriage, he pays on the zemindar's son's marriage, he pays on the "gomastah's (agent's) son's" or "gomastah's daughter's" marriage, he pays on the zemindar's son's birth, he pays on the "zemindar's son's first taking rice," he pays on the zemindar's funeral, he pays on his own "ploughing of land," he pays to the zemindar on his "making a tour through his estates," he pays for being "permitted to perform puja or any festival" himself, he pays equally for the zemindar performing puja, he pays a tax for "presents to fakirs," the very drum pays for being beat "at processions, marriages and feasts." (See "Records of Government of Bengal.") The ryot pays a fee for everything he does himself, and for everything the zemindar does not do for himself or the ryot, and makes the ryot do for him.

There is a Bengali proverb, "The same love that the Muhammadan has to his fowl (he fattens it in order to kill it), the same the zemindar has to the ryot." But the proverb lies, for the zemindar does not even fatten his ryot. "Who stole the goose from the common? The common man. But who stole the common from the goose? The lord."

4. To turn from official records, on which the whole of our story is based, to the opinions of lawyers, judicially given on what is to so large an extent a question of law, the following was the unanimous declaration issued by the Judicial Bench of Calcutta in March 1879. And considering how largely we have had the advantage of judicial opinion or proposed legal changes lately, it would be a grave omission not to quote their authority. We quote from the *Official Gazette*:

The judges desire to reiterate once more what they have

repeatedly asserted before, that organized resistance to the payments of rents by ryots is invariably due to systematic efforts to enhance them with or without cause; that bad relations between zemindar and ryot are almost universally due, either to the property changing hands and to the speculator's attempt to augment the yield of his purchase, or to the zemindar allowing some one, a middleman, to come between him and the ryots, the middleman talukdar, or whatever he be called, being left very commonly to raise the profit which he pays by putting pressure on the ryots.

14. The judges desire to express the astonishment that they feel at the observations frequently made on the subject of riots arising out of rent disputes. Zemindars, and perhaps officials, are apt to think that the ryots are to blame. Now it seems to the court that, from the nature of the case, the blame must generally rest with the zemindar. Of course the judges do not mean to say that he is not more or less frequently subjected to great annoyance and perhaps to loss, but so long as he confines himself to legal measures for enforcing his right, there cannot ordinarily be a riot. If rent is refused, he can sue; if he is resisted in distraining, he can apply to a court for assistance; if he is entitled to measure lands and is opposed, he can do the same. There is a legal remedy in each case, and if there is a riot it can hardly be that it does not result from his impatience, pride and preference for illegal courses. An obstinate ryot can be coerced, but he can legally only be coerced by the aid of the court; if no other coercion is attempted there is no occasion for a riot.

The ryots' riots, it is thus said, are the result of the zemindar--of his preference for illegal courses. "The blame," in riots, "must generally rest with the zemindars," the High Court says. The documents following after this, upon which the minute of the High Court is based, are painfully interesting. On the question of the increase of rents, the judges say: "The fact is, the zemindars seeking enhancement get the best of it, either by open decree, favourable compromise, or other settlement agreeable to the zemindar. The ryots cannot afford to carry on appeals. The zemindar can and does." This has been forcibly stated elsewhere. But the remarkable thing is all this appearing in the *Gazette* and nothing being done. And further on (this is still from the *Gazette*): it is "district judges" who speak:

Zemindars sell out by auction the right of determining, of collecting and, above all, of screwing up the rents. When the disagreeable task has been effected, the zemindar re-enters on the estate and claims to work on the enhanced rent roll. "As a rule, enhancement suits are almost avowedly mere engines for harassing by expensive processes." The usual device is to allege all the possible grounds, increase in area, increase in fertility, increase in crop value,

increase in rates payable by neighbour ryots of the same class, to hop from the one ground to the other, to fence over all of them, and to *prove none*.

It is a judge who speaks.

The High Court also describes the intriguing and maneuvering--not to call it worse--for enhancement of rents; also, how the so-called "unearned increment"--*i.e.*, made by ryots introducing new and valuable staples only furnishes the means to raise the rents on themselves. This is the state of things in a country nominally governed by law. The zemindar raises his rents for public works undertaken by the government, and for other things which cost him absolutely nothing, in one case even for a "recent providential fall of rain," and in another for "education among his tenants." The zemindar can impose any rent or cesses he pleases. The ryot can only obtain redress by going to law, but he is ruined if he goes to law. The ryot is always underfed, yet always works hard. He is expected to protect himself, and some have done so of late years by combinations. But this protection does not give him what he wants most, and what he can by law demand, tenant right, which prevents his rent being arbitrarily raised and defends him against eviction.

Let us now look at a few revenue figures: the revenue in 1793 (at the time of the Permanent Settlement) was about three millions; the zemindars' share was one tenth or one eleventh of the revenue. In three quarters of a century the government revenue has increased to three and a half millions, while the zemindars' rental has grown from about a third of a million gross to more than thirteen millions net. But this rental of thirteen millions is only an official return for road cess purposes, and the entire amount paid annually by the occupants of the soil is said to be between twenty-five and thirty millions. We have given away a land revenue as large as the whole land revenue of all India, for we have allowed between twenty-five and thirty millions, reckoning illegal exactions, etc., to be extorted from the cultivators of the soil, out of which government receives instead of nine tenths or ten elevenths--the rule at the Permanent Settlement--about one eighth. The government revenue of the Permanent Settlement was about £2,850,000 or eight tenths of the gross rental. One third of the land was waste.

If all Bengal had been under cultivation, the gross rental would be £4,764,000. It was, in 1877, £13,037,000. The rent rates intended to be fixed by the Permanent Settlement have been trebled and the ryots now pay an excessive exaction of £8,273,000 yearly. If this be valued at twenty years' purchase, "we have deprived the cultivators of the enormous sum of £165,000,000, and given it to the zemindars, who still cry for more." And this "in spite of the most solemn promises of the state to the contrary." The "movable property" of the people "is almost nothing"; their "lands are being sold twice as fast as five years ago"; they are "compelled to encumber their property three times as often as

seven years ago"; their "criminal population has reached the figure it was in famine times"; the "ejectment theory has more or less developed within the last seven or eight years." (These are the statements of the Bengal Rent Law Commission reporting in 1880.)

Among the twenty millions of Bihar the state of things is worse: universal illegal distraint, chopping and changing the poor ignorant ryots from one field to another, loss of all occupancy rights. And still the landlords cry for further facilities for enhancement. Loss to the ryots, loss to the state--who gains? "Heads I win, tails you lose," says the zemindar. All zemindars must not be painted black, nor yet all ryots white. There are many amiable zemindars, full of intelligence and benevolence, very many who have not pushed their power of exaction to the extreme limit. But there are vast masses of unfriended peasants, rightly discontented or too wretched to resist, and some who have righted themselves.

We call zemindars landlords or landowners; there is, perhaps, scarcely one resemblance between the English landlord and the Bengal zemindar. There are three great differences besides those named. (a) Interest on capital spent by the English landlord on farm buildings, drainage and the like forms a large portion of the rent paid by an English tenant to an English landlord. What is the case in Bengal? (b) The English landlord (or his agent) knows what rent his tenants pay and where their lands lie; the zemindar is always asking government to try and help him to find out just these facts--to help him in making up a proper rent roll. (c) Indian governments have fixed the rent from time immemorial. There is no such thing as an economic rent. By applying the political economy of English conditions to conditions in India, to which it is not applicable, we have committed the greatest mistakes. The Bengal ryot has been left at the zemindar's mercy as to rent, a state of things unexampled in India's experience.

The zemindars number about 130,000. Among these are brilliant exceptions of admirable zemindars. The tenure holders (middlemen) number about 750,000, their annual income in 620,000 cases being below £10.

The cultivators--who occupy about ten million holdings, nine millions of them so small as to pay less than £2 a year, and of these, six millions so small as to pay less than 10s a year, which represents holdings of only two or three acres--are in a state calling, we see, more loudly for redress year by year, except in Eastern Bengal. These are not figures, but human beings.

Can you create a class with duties as well as rights arbitrarily by "proclamation?" All history answers, "No." But we have "confiscated" the zemindar's duties, after having conferred the land *on the sole condition* of performance of those duties, and have let new rights grow up without corresponding duties.

From the ryots have been taken away all those rights that they undoubtedly had. This new bill is not a "confiscation" of the zemindar's property, as it had been called, but a restoration of rights to the ryots.

Meanwhile, from exceeding centralization, "ryots have been toiling in Madras and starving in the Deccan, in order that gentlemen in Bengal may enjoy incomes of hundreds of thousands a year, free from taxes." Madras and Bombay, with an area together only equal to that of Bengal proper, and a population one third less, pay nearly twice as much land revenue as Bengal into the imperial exchequer. Of the total payments, including rent, made by the people of each province of India, much less finds its way into the government treasury in Bengal than elsewhere.

Thus, in Bombay, where the land tenure is nearly all ryotwari, 88 percent of the payments made are devoted to purposes of government, being either paid as revenue or for the support of public establishments. In Madras, where about four fifths of the country is ryotwari, the proportion is 69 percent. In Bengal, under the Permanent Settlement, the proportion is believed not to exceed 33 percent.

Something must be done. So far from matters adjusting themselves, efforts to destroy occupancy rights are becoming yet more determined and successful. Mark well! The question is not to abolish the Permanent Settlement, but to carry out the Permanent Settlement.

2. Before passing on to remedies, we are led to touch on two or three questions which have arisen.

(a) One, a rather undefined controversy, has been raised as to whether the ryots in Bengal are not, owing to the Permanent Settlement, better off than those of Bombay or Madras, where the state is the landlord. But, first, Bengal is a big place and a wide word [world], and Bombay and Madras, taken together, are also wide. And next, it is just in proportion as the ryots have gained occupancy rights or something more, as in Eastern Bengal, that they have become prosperous.

There is little doubt that if the Permanent Settlement *had* been efficiently carried out, the Bengal ryots would have been for generations better off than almost any others, not complete proprietors. For the soil is fertile: the law gave them fixity of tenure and rent so far fixed that it could only be raised (if at all) under strict and equitable rules. But the present evil is that for the most part the laws of the Permanent Settlement have been set at naught. In Bihar the position of the ryots is probably the worst in India; in Western Bengal most of them are very poor and oppressed. But still there are some who have acquired permanent rights. In Eastern Bengal circumstances (among which a democratic Muhammadan religion is an important factor), have enabled them very much to hold their own--and they are decidedly well off. ("Land is dear, it is a second wife. And many

Hindus have become Muhammadans for it." From a native speech in the viceroy's Council.) When we compare them with Bombay and Madras ryots, certainly those in the south who are absolute owners of the land are so far better placed. But then, under our rigid application of anachronous laws of political economy, we have enabled them to get into debt, and in some parts there is sub-letting.

To decide as to the relative prosperity of the peasantry in Bengal and in Bombay or Madras, one must know the condition of the peasantry all over those three vast provinces, which varies extremely in different places. The Deccan peasant is generally ill off. So, notoriously, is the peasant of Bihar. The Gujarat peasant is generally very well off. So is the peasant of Backergunge, in Eastern Bengal. But why? Because Backergunge is essentially a district of peasant proprietors. "Almost all the actual cultivators have to a certain extent a proprietary right in the land they cultivate." It will be said that the rise of the jute industry is the cause of their prosperity. But what was the first use to which their prosperity was turned? To acquiring such proprietary right. In three years, 1877-80, 342,596 perpetual leases were executed, and mainly in five districts of Eastern Bengal, including Backergunge and Chitagaon.

It is scarcely possible to imagine a greater contrast than between Eastern Bengal and Bihar--Bihar, perhaps the most fertile province of India. The difference can hardly be traced to anything but the different tenures, won or lost by different races: in Eastern Bengal, sturdy Muhammadans; in Bihar, poor, weak, low castes. A Bihar zemindar himself says that the "raiya," "though they labour hard, are in a state of almost utter destitution." The Bihar committee says that "the zemindars of south Bihar practically take by way of rent as much of the crop as they choose to claim." Permanent tenure is, too, exactly what the Bihar tenant has not got.

If, again, we look in the *Gazette* for the average monthly wage of an able-bodied agricultural labourer, we find:

Patna district . . .	3 to 4 rupees	(6s to 8s)	a month	
Darbhunga	2 to 3	"	(4s to 6s)	"
Gya	2.8 to 3	"	"	"
Shahabad	4	"	"	"

Elsewhere in rural districts of Bengal, from a minimum in Murshidabad of 5 rupees a month.

The usual rate being 7 to 7.8 rupees
It rises in Backergunge, etc., to over 9 rupees (18s).

Thus Bihar gives less than half the wages of Eastern Bengal. In the former the *métayer* [rent paid in kind] system prevails, with the absence of all rights, in the latter, peasant proprietors or tenants with occupancy rights. So far for different parts of Bengal.

But we can determine generally in figures the comparative

averages of agricultural wealth in Bengal, Bombay and Madras. In Bombay the yearly value of the crop per head of population is rupees 22.4, the payments for purposes of government and irrigation per head, rupees 2.2, the balance rupees 20.2.

(Produce of the cultivated area is not the only source of income to the cultivators. Milk, ghee, curds, hides, wool, livestock and fuel have also to be taken into account.)

In Madras, the yearly value of the crop is rupees 19.0, the payments rupees 1.7; the balance rupees 17.3. In Bengal, the yearly value of the crop is only rupees 15.9, the payments rupees .8; the balance only rupees 15.1.

Under certain conditions the ryotwari and zemindari tenures may show an equal degree of agricultural wealth. But where the zemindari system exists, with the greatest pressure of population and no sufficient protection to cultivators against landlords, there agricultural wealth, as we should expect to find, is the smallest. This we find in Bengal. Agricultural wealth in Bengal, and in the North Western Provinces and Oudh, is much less than that of the other provinces of India, Oudh, so notorious for its poverty, being in only a slightly worse position than Bengal. But one might almost as well lay down generally that: all tenants are prosperous,

all peasant proprietors are ruined or the reverse, as that all Bengal is prosperous, all Bombay or Madras is poor or the reverse. (It can never be overlooked that the condition of the cultivators depends on many factors, including that of their tenure, doubtless the most important of all--e.g., the character of the race, the pressure of population, the nature of the climate, the fertility of the soil, the means of communication, etc. But if there is any truth at all in land tenure facts, the Bombay peasant must, *ceteris paribus* [all things being equal], be better off than the Bengal peasant.)

But however interesting it may be to discuss the relative conditions of various sections of ryots in different parts of the country, such controversy is entirely outside of the scope of this paper, which is intended, not as an attack on individuals, nor as an indictment drawn against one class, nor even as a mere appeal for sympathy on behalf of another; but which has for its object to call the attention of those who care for India to the injustice of a system in which custom can trample on law, so that oppression is made easy, and redress almost impossible.

(b) Another question stated against the new bill, viz., that it may, by making the tenure valuable, create middlemen, whether money lenders or larger ryots, who will grind down the ryots more than is done already by the zemindars--is a very serious consideration.

This hits, in fact, what is perhaps the weakest part of the Bengal Rent Bill as drafted. It seems to have been found difficult to define a ryot, and apparently the privileges are to be conferred on those who are borne on the books as ryots without

prohibition of sub-letting to unprotected cultivator. In Ireland the "*fixities*" are given to the *actual cultivator*. In the Bengal bill this does not seem to be so. The ryot is already not unfrequently a sort of small landlord, with tenantry under him, and it is possible that when his rights are well defined, we might more and more have small landlords under the name of ryots, as is the case in some parts of India. Temporary sub-lettings, in cases of minority and the like, must, perhaps, be specially permitted. But if we aim at peasant proprietors, rather than small landlords, great care must be taken in settling the details of the bill in committee.

The provisions of the new bill certainly give the occupancy tenant the right to sell or sub-let. But these can have no new or startling effect in the direction indicated, because the justification for them is that, wherever there is a margin of rent, the universal custom in Bengal is to sub-let already. Besides, it must be remembered that, by the practice of sub-infeudation, the Bengal zemindars have already created middlemen to a vast extent.

(c) A third point is, it has been said, and unhappily perhaps, too justly, that the government itself is sometimes the worst zemindar, that the ryots on crown lands and wards' estates were treated like ryots on zemindars' lands, without higher rights and with the wrongs of enhancement of rents and evictions. But that the government has done a worse thing is no argument for the zemindars continuing to do a bad thing. Rather is it an argument for the government watching that none of its departments do the same.

The commissioners of woods and forests in England, the officials in government and court of wards' estates in India, are said sometimes to think it their duty to exact as much as they can, and more than any private proprietor. Let the supreme government see to this, if it be true.

But we have sometimes heard a truly strange argument, something like that of the Irishwoman to whom a jug was lent and who gave it back broken: "I never had the jug; the jug was broken when it was lent to me; the jug was not broken when I sent it back." So it has been argued: "Zemindars have not oppressed their tenants; oppression of tenants by government has been as bad as or worse than that by zemindars; therefore oppression by zemindars is right." Also: "There have been no evictions; government has evicted more than zemindars; as government has evicted, zemindars did right to evict." Let, on the contrary, government property and government wards' property be a model of good administration and an example of prosperous tenantry.

3. Let us now pass on to the remedies. Here are the wrongs, but where are the rights? What are the remedies? "If reform does not begin from on high, it will begin from below." That government is the true friend of the zemindars, which gives them

prosperous paying tenants instead of rack-rented runaways. Capitalists are wanted as well as cultivators. Peasant proprietors are often opposed to improvements, but neither do zemindars care for improvements. What is the remedy? to murder the landlords? Certainly not. To use violence to resist violence used in collecting the illegal cesses? Certainly not. A legal remedy must be sought. What is the legal remedy?

(a) Occupancy rights, or fixity of tenure. The laws of 1793 left fixity of tenure to all resident ryots. It has been proposed to attach right of occupancy not to the ryot, but to the land-- strenuous efforts having been made by landlords, especially in Bihar, to get into their own hands as much as possible of ryottee land, or land over which occupancy rights exist, and convert it into *khamar* land or the private land of the proprietor. It is now proposed to be enacted that "the existing stock of *khamar* land cannot hereafter be increased, that all land which is not *khamar* land shall be deemed to be ryottee land, and that all land shall be presumed to be the ryottee land until the contrary is proved." A complete survey and record of the existing *khamar* land is also to be made.

It has been proposed to give occupancy right to *all* resident ryots--three years' residence to constitute a resident ryot.

It is proposed, if the land has been held for twelve years in the same village or estate, though not the same land, that this shall constitute occupancy right. The grave objections to this are the landlords' zeal to prevent the occupancy right from growing, or to destroy evidence of it; the hostility between two parties, one of whom will at a certain known period become entitled to privileges at the expense of the other. Landlords have been known to welcome famine as an opportunity of dealing with inconvenient rights, and not to welcome relief in the shape of concessions of revenue, because it would rob them of a useful weapon in dealing with tenants.

It was stated by the zemindary interest with regard to the great bone of contention, the position of occupancy ryots, that ninety percent of the tenants in Bengal have got the occupancy right. "If ninety percent of the tenants in Bengal have got the occupancy right, the fact remains that they cannot prove it, and it would be ruin to most of them to try to prove it." It was stated by one zemindar that most of the ryots on his estates had "MORALLY a right of occupancy." Does that mean that they had got it, but had not got it? To pass a law "by which the difficulties of proof should be minimized, by which the onus of proof should lie less heavily on these tenants, and by which they may be able to get a more effectual enjoyment of this already existing moral right," is what every honourable zemindar would wish.

(b) Fair rents: right of enhancement. The laws of 1793 left fixed rents as well as fixity of tenure. The ryot's right, from ancient times to our own, through a succession of governments, native and foreign, to have his payments fixed by the authority

of government, should be recognized. It was not an economic rent--not determined by competition, "the real competition being that arising from the necessity of large numbers who must live off the land and have no alternative but starvation." It was a "customary" rate, and it was the duty of the state to regulate this customary rate. Cultivation in India is not for profit but for subsistence. Before the Act of 1859 there was no right of enhancement. When the revenue is fixed, it is unfair that fixity-of-tenure-men should be liable to enhanced rents. In Eastern Bengal commutations of the zemindar's right of enhancement into fixed rents by voluntary agreements have risen to 150,000 a year. This is excellent, but it is undesirable to give the zemindar leave, as now appears to be proposed, to put the collector in motion to settle and record his rents. There is no similar provision for the ryots to call in the collector to make a record for their protection. A complete public record of the holdings of the ryots has still to be made.

It is proposed to prepare a table of rent-rates--to be in force not less than ten or more than thirty years (which will be in fact the "pergunuah rate" of the Permanent Settlement)--and an authorized table of prices. If it is feasible to ascertain this "pergunuah rate," it will be a boon. But on this "if" success depends. Also "the landlord can use the table of rates for levelling up; the tenant cannot use it for levelling down." There is no proposal for a reduction of rents. A maximum is to be fixed, beyond which rent cannot be enhanced, for starvation rents ought not to be recoverable.

Assistance might be given to the zemindar to obtain fair enhancement whenever he can prove that he has increased by his own expenditure the productive power of land, not as regards the (so-called) unearned increment. But due provision should be made for existing unfair rents to be reduced. Sufficient facilities for collecting existing rents through summary and effective courts should be given. If these are given, then sufficient protection against illegal execution ought to be given to ryots.

(c) Free sale. It is proposed to concede free sale to all occupancy ryots, to put no check on forced sales, but to allow the sale only to another cultivator--not to a non-cultivator, who might keep the old ryot on without any rights at all.

Free sale and improvement of our civil courts, which unwittingly played into the money lenders' hands, have been a root of evil in Bombay, in enabling the money lenders to dispossess the ryots. We become enamoured of peasant proprietors until we find out that they mean money lenders. The cultivator's power of free sale is liked better by the landlords, on account of the facility for realizing rents, than by the ryots. Forced sales are an unmitigated evil, owing to the presence on the soil of an expropriated people, who deem themselves wrongly expropriated out of immemorial rights.

A homestead law, as in America, that no man can be forced to

divest himself of that portion of the community land assigned him for his living, has been suggested. Avoid giving the power of killing the goose which lays golden eggs.

(d) To take from the ryot the power of contracting himself out of his rights is absolutely essential. The following is the form of contract in use on an Indian estate, and gives a sample of the covenants that may be imposed upon a ryot when he takes a lease:

I, cultivator, will never require a right of occupancy in the land. I will pay, in addition to the rent, road cess, public works cess, zemindari dak cess (legally half the two first, and the whole of the last cess are to be paid by the zemindars) and any cess which you may levy (the imposition of such cesses is absolutely illegal). I will pay the rent by equal monthly installments (these drive the ryot to the money lender before the harvest). If I fail, I will pay interest at the rate of 37½ percent, etc.

(It has been said that the government has an equally objectionable kabuliyat or contract with its cultivators, but if anything can be different from the form given in the text, it is this document.) To enforce such contracts is to condemn the present government bill to defeat and failure.

(e) A regular survey is imperative in Bengal, a public record for the protection of rights conferred by law on the ryots, the maintenance of public accountants. Where, by the Road Cess Act, zemindars are required to file a record of their rents, and the ryots hear of it, they come trooping in, pay their inspection fee, get a certified copy and pay no rupee more than that amount.

It must not be forgotten that records are untrustworthy and oral evidence is worthless. There is no record of rights and the "managers," not the zemindars, think nothing, it is stated, of "fabricating a set of papers." Nearly one half of the litigation in Bengal arises, it is said, from the impossibility of ascertaining facts. And most of it would be rendered unnecessary if a real record of rights, and if trustworthy rent receipts, could be had. Surely this would be as great a boon to the righteous zemindar as to the ryot. There are two things wanted, viz., that the zemindar should have his rents paid, and the ryot his rights respected. But the zemindar, when the ryot is strong, does not get his just rents paid. And the zemindar, when the ryot is weak, ousts him out of all his rights. The zemindar wants the government to aid him to collect what *he* considers his rent. The ryot justly thinks that the government should settle what *they* consider his rent. A record of rights and rent receipts is essential for *both* sides.

Had the government from the first insisted that an authentic government record of rights and rates should be kept up, and that a reliable system of recording payments should be enforced, there would be no difficulty in complying with the

demand of the zemindar, and it would be the clear duty of government to do so. But unless the government will resolutely determine to face this matter, it will never be able to do equal justice to the zemindar and the ryot: to give the ryot proper protection is one duty; to give the zemindar power to realize punctually from the ryot that rent or revenue which the government exacts so punctually from the zemindar, is another duty. Neither of these duties can ever be effectually performed *without an authentic record of rates and payments*, and if this bill be not supplemented by vigorous executive action in this direction, it will join the long list of acts and regulations of high-sounding promise and little performance of which ryot and zemindar have been the subject.

(f) Effective penalties for illegal exactions beyond the rent. Now there is nothing between the tremendous remedy, confiscation, and the ridiculous remedy, two rupees damages for an illegal cess of one rupee. All landlords are to be left to do illegal acts, because all landlords *do* illegal acts.

(g) Criminal prosecution, not civil action, for breach of law by zemindars, has been suggested. But there are no obvious objections. The ryot who *could not* pay has been treated as a criminal. Lord Lawrence strenuously opposed this.

(h) Bihar. All evils are intensified among these twenty millions of poor low castes. They are ground down to the lowest point by forced labour, illegal distraint and illegal cesses; in certain areas the average of rent have [has] been enhanced all round by 500 percent in the last forty-three years. They have lost all their rights, as admitted by the commission of zemindars and indigo planters themselves, who tell us that, while sixty percent of the ryots have held land in the same village for more than twelve years, less than one percent hold exactly the same land as twelve years ago, one field having been taken one year for indigo, and another another. The ryots of the richest provinces of Bengal are thus the poorest and most wretched class in the country.

Remedies. Every ryot who has held for three years any portion of peasants' land and has held in the same estate (though not the same land) for twelve years, to have the right of occupancy. Compensation for disturbance, and also for improvements, to be given. An accurate public register. A much more active administration, the more necessary because the one division of Patna equals in population, and probably in number of tenures, the Bombay presidency.

An effective survey, record and settlement of rights in Patna division, to be undertaken at once, and eventually for all Bihar. A voluntary association of indigo planters exists already, with a paid agent to investigate complaints and disputes. For want of this, Bengal indigo planters collapsed. The survey and record of rights and payments in wards' and other special estates

in Bengal should be provided for at once.

The new Bengal Tenancy Bill does not embrace all these provisions and remedies. It deals principally with the three Fs. Money, not law, is required for the survey, but the bill confers power to secure it. The bill leaves the zemindar all advantages gained during the last ninety years. It leaves him the rent he now receives. All it says to him is: "Your power of enhancement and eviction shall be, to a limited degree, brought back in the future to the position of ninety years ago." It falls very far short of giving back to the cultivator his original rights. But it "endeavours to make a settlement which will restore to the ryots something of the position which they occupied at the time of the Permanent Settlement." It "is not, and does not profess to be, a complete code of law of landlord and tenant." "It is merely a bill to amend and consolidate certain enactments relating to that subject. And it expressly saves custom." Its chief provisions are those stated as (1) relating to khamar land and occupancy rights--occupancy right to be obtained by holding, *though not the same land*, for twelve years; (2) fair rents, table of rates, zemindar to have the power of invoking the aid of the revenue officer; settlement of rents by revenue officer; recovery of rents by zemindar and power of distraint for arrears of rent of not more than a year; (3) free sale, but only to another cultivator; power of sub-letting; (4) taking from the ryot the power of contracting himself out of his rights.

All the details will have to be discussed in committee when the bill comes on again for discussion in the viceroy's Council in November.

One word on behalf of the zemindar, a word which will not cancel one single syllable written on behalf of the ryot. The present race of zemindars have--every one of them--taken their places in a system which can exist only in continuous breach of a contract to which they individually were none of them parties, a breach which must have been known to the government, who were a party and who are ultimately, if not solely, responsible for allowing it to continue. In these circumstances, if any zemindar loyally accepts the Bengal Tenancy Bill, which is based upon the justice of the original contract, he must be one of those rare men whose love of justice is stronger than his fear of loss.

And let us not think that the "dumb ryots" have been silent. The dumb will speak and the dumb have spoken for such a crisis as this. Ryots' meetings have been held and resolutions drawn up and ryots' petitions have been sent in to government, from which, had we space, we could cull the most telling extracts. The very government papers on this matter comprise upwards of sixty reports, besides draft bills and minutes, papers which for intensity of interest are almost terrible, and for research and statesmanlike ability almost equal to the transcendent importance of the subject. Had a prophet like Nathan addressed the Englishman as he did David, and described the state of things as

we know it to exist in the most fertile provinces of this ancient country of India, whose welfare we have undertaken--as it has been established or, at least, allowed to grow up by us who govern India--would not the Englishman rise in his righteous wrath to redress the wrong, to punish the wrongdoer? And would not the prophet say: Thou art the man? But this reproach it is now proposed to take away from us. Government has bestowed an amount of labour, inquiry and thought upon these momentous land questions, which perhaps have never been equalled. The English statesman seeks to conceive and carry out a work of evenhanded justice to both parties concerned. Let us see that the work be not left half done. Let the Government of India, the ryots and the zemindars of Bengal see that we care about it, and care thoughtfully and with knowledge. Let us see that all this great reproach *is* taken from us. It has been hanging over us for ninety years. As a matter of policy, and for policy's sake, this must be done and done quickly; for the sake of morality, of humanity, for the sake of *right*, it must be done and done well.

1888

Letter from Miss Nightingale to W.J. Simmons, Esq., Honorary Secretary, Public Health Society, 6 Hastings Street, Calcutta. *Journal of the Public Health Society* IV,2 (October 1888): 63-65[9:935-37]

27 July 1888

Sir

Allow me to thank you most gratefully for your kindness in sending me from time to time the various papers and documents which interest me so deeply, and especially for your society's journal, and the suggestions of your committee on the then pending municipal bill, now carried.

It is remarkable how the memorandum of the Army Sanitary Commission in this country on the municipal reports for 1884 and 1885 confirms the conclusions which it is the object of your society to establish and make popular. It must be a matter of great satisfaction and encouragement to you and your good fellow workers in the cause of Indian sanitation to find that your views are so completely in accordance with those of a body so experienced and authoritative in the things of Indian sanitation as the Army Sanitary Committee.

Having thus received the highest official sanction in this country, they cannot fail, we trust, to influence the future policy of the government in respect of this most important subject. And you may, with reasonable confidence, we may hope, expect that neither indifference, prejudice, nor short-sighted economy, nor any other of the well-known obstacles to improvement, will be allowed in the future to stand in the way of reforms which you have shown to be so necessary, and which are advocated by the Army Sanitary Commission with no less urgency than by yourselves.

Of the vast additions to human happiness which these reforms are calculated to produce, of the deplorable amount of human suffering and sorrow which they would obviate, of the enormous money loss which such a mass of preventible disease and death entails on the community in which it is permitted, it is unnecessary now to speak.

Your reports have made these truths emphatic with results which are startling only to those who are too careless to study the subject. It appears to be demonstrated that sanitary improvements are fully as effective in diminishing disease in India as they are in England. The success which has attended the introduction of proper drainage and water supply into parts of Calcutta is itself a striking example. Where the sanitation has been complete, your mortality is as low as in the healthiest of English cities. Where it has been incomplete, where the water supply is inadequate or impure, where the drains have been allowed to be encumbered with deposit, or to remain untrapped, where dwellings are huddled together without reference to the requirements of the inhabitants in the way of air, water, purity of soil or prompt and effectual removal of filth, there I find that the mortality of Calcutta rises to a level which is happily now unknown in England, and that epidemics, against which we trust the English population is now effectually safeguarded, rage with as much violence as ever. We were much struck by the fact that, in the severe outburst which occurred in the last quarter of 1886, and which cost Calcutta more than 900 lives, the Park Street ward (with the exception of four deaths in October) enjoyed absolute immunity—a circumstance which seems to illustrate very forcibly the fact that, even when cholera is epidemic, systematic sanitation will prove, in India, as it does [in] England, an effectual safeguard.

It now remains for those who like yourself appreciate at their true worth the blessings of health to the community, to see that the invaluable advantages which have been secured for the richer portions of Calcutta shall be enjoyed equally by the poorer and by the inhabitants of the suburbs whose mortality is now so greatly in excess of that of the city. Your health officer has clearly indicated the causes of the evil and the means by which it can be obviated.

Calcutta and its suburbs must not go on losing, as they did in 1886, 3500 lives annually (Calcutta: 1741; suburbs: 1845 = 3586) from an epidemic which your statistics show to be to so large an extent amenable to human control, and which in England, we have good reason to hope, has been effectually kept at bay by efficient sanitation. The same result it is doubtless within human competence in other parts of the world to attain by the means which science indicates. I feel the deepest sympathy with the inestimable labours of the Health Society to promote this result in India.

The Army Sanitary Commission reckon, I observe, that 38

millions of deaths have occurred in India within the last decade from epidemics which in other parts of the world have been either wholly obviated or curtailed within narrow limits.

But this is not the worst. If we reckon, as I believe is the correct estimate, twenty cases of severe disease for each death, the mind really sinks oppressed under the idea of the pecuniary loss, the laying aside of cultivators from their daily labour for weeks, if not months, every year, the deterioration in the physical powers of the races, the bodily sufferings, mental sorrow, family bereavement which such a death rate indicates. And all this, or the greater part, might be spared.

I can only wish you and your fellow workers Godspeed in what we must all regard as a most important and benevolent project. It must cost you I know much labour. Such things are not achieved without effort, patience, long delays and frequent disappointment. But you will succeed. And your success will brighten the lives and lessen the sufferings of millions who, but for sanitary reforms, would fall victims to preventible disease. I have written at length, but you will forgive me. The subject is near my heart.

Pray believe me ever the faithful servant of the cause and yourselves.

FLORENCE NIGHTINGALE

1889

Letter to the Joint Secretaries of the Bombay Presidency Association and to the Joint Secretaries of the Poona Sarvajanic Sabha. London: Printed privately as a pamphlet for circulation to members of the above associations, by Spottiswoode & Co., 20 February 1889. Also in *The Quarterly Journal of the Poona Sarvajanic Sabha*. 15,1 (July 1892): 5-9 [10:353-57]

London

20 February 1889

Gentlemen, Since I had the honour of addressing you just two years ago on the subject of village sanitation, there has been published in the *Bombay Government Gazette* of 24 January 1889 a new draft bill entitled the Bombay Village Sanitation Bill 1889, which, in many respects, makes an important advance upon previous projects of legislation. Especially is it a cause for satisfaction that the new bill proposes to extend the benefits of sanitary legislation to *all* Bombay's 24,600 villages, without excluding any, as was contemplated by the previous limitation, which, by excluding villages under 500 inhabitants, excluded nearly two thirds of the total number. You are aware of the great interest I have taken for many years in questions of Indian sanitation and I am again advised by Sir William Wedderburn to submit for your consideration some points with regard to this amended measure, and to ask the favour of your opinion and advice.

2. The general method which, according to my view, should

govern this class of legislation was indicated in my previous letter, namely, that the act should enable and encourage the people to organize themselves in the villages for sanitary purposes--the villagers themselves doing the work, with the necessary advice and (in the case of unsatisfactory results) stimulus from outside. What is to be avoided is filling the villages with low-paid subordinates of a centralized department. The villagers should be encouraged to get the necessary work done in their own way, the results being judged by a qualified inspecting officer of the Sanitary Department, upon whose report the collector would, when necessary, bring pressure to bear to get the work done by the village organization, and only in the last resort cause it to be done through outside agency. The advantage of this method seems to be that the ancient village organization is thus strengthened and utilized, the hereditary village authorities and servants being gradually trained to the improved methods of performing their customary duties towards the local public, so that eventually the health machinery may come to work almost automatically.

But, again, would you suffer me to repeat that there must be, as it were, missionaries and preachers of health and cleansing, if any real progress is to be made? In persuading the villagers and in directing them, the officers of the Sanitary Department ought, of course, to act as such. And would you kindly give me your further advice as to how best this important mission can be performed?

3. To those who, like myself, earnestly desire both that the village sanitation should be really effectual and also that it should be carried out by the people themselves with the least possible friction and interference, it will be a cause of rejoicing to find in the new bill various provisions which will operate in these directions. Prominent among such provisions are the sections (41 and 42) which place the services of the hereditary village servants at the disposal of the village sanitary committee, and which ensure to such servants the recovery of their customary dues, provided that their duties have been duly performed. It is believed that indirectly also this provision will be beneficial as tending to remove friction and to produce harmony among the various castes within the village. Again, those sections (28, 30, 38) seem excellent which provide that all money collected in the village, by subscriptions, rates or fines, shall be spent within the village itself. And I am glad to see that section 39 contemplates donations and loans being made by district and taluka local boards to villages for expenditure on sanitary purposes contemplated by this act. Might not also a portion of such donations be made available to provide rewards, such as a turban or dress of honour, to be presented on some public occasion to those patels and other village authorities who most distinguish themselves by their successful efforts to benefit the health of their fellow villagers?

4. As regards the general scheme of the bill, it appears that at first every village is to have a chance of showing what it can do by itself. In the beginning each village is to employ its own resources and keep itself clean, the patel being its natural head. If the village does not keep itself clean, if it is found to be in a bad sanitary state, it is to have a notice, by means of a proclamation, of not less than two months; after that, if it is still unrepentant, arrangements will be made under Part 2 for the appointment of a village sanitary committee, with powers to punish infractions of the sanitary rules, to carry out the work of sanitation and to recover the amount expended by a rate charged on the inhabitants of the village. It is my inference that the extension of Part 2 to any village is consequent upon the failure of the village to keep itself clean, but it is not expressly so stated in the bill. Section 6 does not require that the collector should, in his proclamation extending Part 2, make any statement as to the objects and reasons for the extension, nor does this section explain what is the nature of the objections which will be held valid if brought by the villagers. Would it not be desirable that the proclamation should be based on the report of a sanitary inspector to the effect that the village is in an insanitary condition? and should not the proclamation specify the nature and particulars of the default? In that case the villagers would understand exactly what were their faults of omission and commission, and would have an opportunity of amending their ways before more stringent measures were adopted. No doubt the efficacy of the bill depends primarily upon the executive efficiency of the village sanitary committee.

And a very vital question upon which I should wish to be favoured with your opinion is, whether the mode of selection proposed by the bill is the best one for the objects in view? Section 8 provides that the committee shall be chosen by the collector, and that the chairman of the committee shall also be nominated by him. Are there not grave objections to such a mode of selection? I am assured by those well acquainted with district life in the Bombay presidency that, owing to the large size of the collectorates (are there not in Khandesh 2600 villages?), it is impossible that the collector or any other high official, European or native, can be personally acquainted with the villagers from among whom the choice has to be made. To place on the collector the duty of nomination would, therefore, be in practice (would it not?) to give the selection of the committees to the subordinates of the taluka office and the village accountants, who are not likely to choose the independent men who possess the confidence of the villagers. Would it not be better to allow the villagers to choose their own committee, to have the old village panchayat [council] established by the inhabitants themselves? This was what was proposed by a draft bill in 1885, which provided that "the inhabitants of any non-municipal village may at any time establish a panchayat to look after the cleansing

of the village." Such a course would be consistent with the ancient village organization and at the same time be in accordance with the spirit of all recent legislation relating to local self-government. If this principle be approved, I would ask you kindly to advise regarding the best practical method of carrying out the selection.

5. Part 3 is apparently to be put in force when Part 2 has proved ineffectual to produce proper sanitation. But, as in the case of Part 2, objection may here be taken to the want of definiteness as regards the reasons for the extension, and also to the nomination by the collector of the members of the sanitary board. Would it not be possible to link such sanitary board in some way with the taluka local board, making it, perhaps, a sub-committee of that board? The multiplication of local committees having concurrent or conflicting authority, and elected in different ways, appears likely to produce confusion.

As regards the nature of the tax or rate (to carry out the work of sanitation), it is so very important a consideration, that might I ask the association what they would recommend, so that it should be acceptable to the people without transgressing accepted principles of taxation?

6. There are a variety of minor points on which I should be glad of your opinion, such as the following questions:

(a) Would it not be well that the village rules to be made by the committee under section 11, should be approved by the sanitary commissioner as well as by the collector?

(b) Should there not be some provision, by grant of lands or pay, to induce Mhars and other hereditary village servants to settle in villages where their services are required? And if more is demanded of them to properly cleanse the villages than was demanded of their forefathers, must not more be paid them? (c) What should be the status of the sanitary inspector (sections 21 and 22)? Should he not be an educated man whose sanitary qualifications have been duly tested? Should he not belong to the Sanitary Department, his services being placed at the disposal of the taluka local board?

(d) Is the contract system (section 26) such as you would approve, instead of having appointed village servants?

I should esteem it a great favour if, with the permission of the council, you would kindly inform me how far you would consider the provisions of the bill as it now stands effective for the end proposed, and how far you would suggest that they should be modified. I should also again venture a request to be informed what other practical steps are, in the opinion of the association, to be best taken in this most important matter of village sanitation.

Pray believe me, gentlemen, to be
your faithful and hopeful servant
[Florence Nightingale]

P.S. For the favour of distribution to members of the association

and others, should the council so permit it, I forward a few printed copies of this letter. I may mention that I have addressed the Poona Sarvajanik Sabha on this subject in similar terms.

1891

Letter to Rao Bahadur Vishnu Moreshwar Bhide, Chairman, Poona Sarvajanik Sabha. London: Printed privately as a pamphlet for circulation to members of the Poona Sarvajanik Sabha by Spottiswoode & Co. December 1891. 3 pp. Also in *Quarterly Journal of the Poona Sarvajanik Sabha* 15,1 (July 1892):13-17 [10:362-65]
London

December 1891

Sir, I have to thank you for your letter of 9 June last, and shall feel obliged if you will express to the members of the Poona Sarvajanik Sabha my best thanks for their ready response to my request that they would bring the subject of Indian village sanitation before the Congress of Hygiene and Demography, and also for the valuable papers which, at their instance, were contributed by Messrs Kirtikar, Ghole and Dhurandar.

2. I have noted their desire that the Indian authorities should be moved to appropriate a certain portion of the local fund proceeds to the expenses of village sanitation under the Act, and I am now in communication with friends interested in the subject with a view to a representation being made to the India Office.

3. In the meantime, may I perhaps be allowed to suggest that the Poona Sarvajanik Sabha should themselves institute a system of lectures on village sanitation to be given in all the villages and small towns? If villagers are not taught the simple things that they can do for themselves to promote health at home, law cannot force them, nor can funds help them. Is it not generally not so much the want of money as the want of knowledge that produces bad sanitary conditions? Do not rich people in the towns die from overcrowding and from bad drains? Indeed, are not the typhoid fevers of Bombay city more rapidly fatal than the malarial and typhoidal fevers of Bombay villages? Alas! we have also to remember the life long deterioration in strength and the annual interruption of labour from these rural fevers.

Must not the poor people be taught that, by merely taking trouble, without spending money, they can do much to make their homes healthy? But they will never take trouble, unless they can be convinced that much of the suffering and sickness from which they and their wives and children suffer so grievously is preventible suffering.

4. Are not the great needs of the very poor:

- (a) diminution of overcrowding,
- (b) carrying away of sewage,
- (c) better water supply?

(a) The question of overcrowding and want of ventilation is

the most difficult one for poor people themselves to touch; but is it not a question for the Poona Sarvajanik Sabha seriously to consider how fresh dwellings can be most efficiently and cheaply erected?

(b) and (c) But upon the two other points--(b) the carrying away of sewage and (c) a better water supply--the people can most effectually help themselves, if they are made to understand the terrible results of neglect and the most simple remedies.

Might not the Poona Sarvajanik Sabha, which has always shown itself so active in promoting the social and physical welfare of the people, organize a system of lectures and practical demonstrations on such subjects, to be given from village to village by men (1) well versed themselves in the principles of sanitation and (2) knowing the habits of the people, and able to sympathize with and help them, instead of stirring up their prejudices?

Much work might be done at little money cost by men working in the untiring missionary spirit of the late Mr Garesh Wasedeo Joshi, who gave a bright example in his devotion to the welfare of the people.

Probably the village school rooms might be utilized for the lectures, which might be made attractive by object--lessons, with the magic lantern showing the noxious living organisms in foul air and water. Such preparations shown at the hygiene congress produced a strong impression. But the lecture would only be the first beginning of the teaching; a lecturer who had made himself acceptable to the people would go round the village and show the people how to dispose of their refuse; he would explain to them the danger of depositing it in their little close courtyards, and how the solid should be separated from the liquid excreta, and the former utilized in their cultivation. Then he would go with them to examine their water supply and show them certain simple precautions to be observed: not washing near the supply of drinking water, not allowing human beings or cattle to foul the river, tank or well.

The Hindu religion enjoins so much purity and cleanliness that the influence of the religious teachers and of the caste panchayats might be usefully appealed to. The people have a high respect for the panchayat--the panchayat for the Poona Sarvajanik Sabha. The Sabha can approach the people through the panchayat, if the panchayat can be brought to interest themselves, not only in domestic and social moral condition, but in domestic health.

5. Sanitary *primers* are much needed if sanitation is to be taught in elementary schools; not mere adaptations from the English, but productions from the best native experience. But much more wanted are sanitary *masters*--schoolmasters who BELIEVE in sanitation or prevention of disease, and know something about it. *What is read in the book stays in the book.* In lectures, in schools, representations to the EYE are alike wanted. The officer

of health is too often only a book and a pen. So is the schoolmaster. He must be a voice—a voice as it were among the villages. Books often do no good, and so few can read.

6. The business of municipal and sanitary reformers, should it not be to see that the public money spent on roads, water supply, etc., does really benefit the poor who cannot help themselves, and not only the rich who can? Some roads are sure to be kept clean, but what is the condition of the bye-lanes and back streets of towns and villages? Is it not these ordinary sanitary requirements of the common people that need to be promoted rather than large and expensive schemes for the comfort of those who can take care of themselves?

7. One more suggestion. Might not the municipalities and rural local boards appoint sanitation sub-committees from among their members, whose duty it would be to help the health officers in their work, and to be the medium of communication between them and the general body of these corporations as regards sanitary matters? This plan is now being followed in England, where teaching committees are being appointed for technical education and sanitation, under the county councils. It is found that the members of such committees are led to make a special study of their subject, and much fresh energy is thus brought into the practical work of the general body.

8. The Sabha will have observed with satisfaction that, on account of the active interest shown by India in the work of the congress, it is proposed at future congresses to form a tropical section, with a view to secure adequate discussion of the sanitation and diseases peculiar to tropical climates. And it is hoped that Indian sanitary reformers will thus be encouraged to keep in touch with the most recent scientific developments.

Pray believe me, Sir,

faithfully yours and the Sabha's

P.S. Will you kindly allow me the liberty of sending you printed copies of my letter, to follow by next mail, and asking from you the great favour of distributing them to local associations and influential Indian gentlemen, as you think fit?

1892

"Introduction," Dayaram Gidumal, *Behramji M. Malabari: A Biographical Sketch*. London: Fisher & Unwin 1892:v-vii [10:778-79]

The most interesting portions of this book are those which give us a peep into an Indian home--that of Mr Malabari and his family, revealing the life of the young reformer: his aspirations, the weakness and the strength of his character, the influence of women on his youthful training, his devotion to their cause in after life. We see how much he owed to his mother, a remarkable woman of strong will, masterful mind and irresistible energy, yet a simple, homely housewife, with the tenderest heart. She said: "All the boys in the street are my own

sons," when, for her own son, thought to be dying, a specific was pressed upon her which would have injured another boy.

The mother's influence in India is so great that in truth it moulds the character of the nation. Of this influence Mr Malabari is an instance in point. His mother transmitted to him, by inheritance and example, many of his key characteristic qualities--amongst them a keen susceptibility and the power of patient endurance. The sympathy existing between mother and son determined the choice of his work in life and devoted him to the service of his countrywomen.

The mission which he led against infant marriage has, no doubt, stirred up a strong feeling of hostility in some quarters. But on reading this book it will be seen that much of that hostility has arisen from a misunderstanding of his objects and methods, and that it is only a temporary feeling, which will subside when the excitement has calmed down. The evils he has attacked will be acknowledged to be those which most endanger the physical and moral well-being of the Indian race. It will be seen that if he has offended by the vehemence of his advocacy, that vehemence has been caused by a just indignation and an intense sympathy with the Indian people, especially with the weakest and most suffering classes.

His work as a reformer of Indian social life cannot fail to set Englishmen, and especially Englishwomen, thinking of their duty towards their Indian brethren and sisters. Englishwomen understand as little the lives and circumstances, the ideas and feelings, of these hundred millions of women in India as if they lived on another planet. They are not reached by us, not even by those of us who have lived in powerful positions in India. Yet the women of India possess influence the most unbounded. In their own households, be it in hut or palace, even though never seen they hold the most important moral strongholds of any women on earth. Did not a well-known Indian gentleman declare that it was easier to defy the Secretary of State than to defy one's own mother-in-law? Supported by ancient custom, Indian women are absolute within their sphere.

How may we hope to reach this great influence, and utilize it for the cause of social progress? The answer seems to be that the women of India *can only* be reached by educated ladies of their own country: ladies of pure life and enlightened enthusiasm in doing good. They have ready access to their poorer sisters--they understand their circumstances and feelings. It is to *them*, therefore, that we must appeal to convince their countrywomen, by example and precept, of the evils of the present marriage system, and to suggest the remedy. They can prevail, we cannot. What we *can* do is earnestly to support and strengthen the educated Indian ladies who have already entered on the paths of social progress. To them we Englishwomen must look in the first instance for instruction, and with them lies the power effectually to carry out this perhaps the greatest reform the world has yet seen.

1896

"Health Missioners for Rural India." *India: A Record and Review of Indian Affairs* 7,12 (New Series) (December 1896): 359-60

[10:389-92]

In a former paper contributed to *India* ["Health Lectures for Indian Villages"1893] I made some suggestions for improving the health of Indian rural villages. My proposal was that a system of simple and popular health lectures should be organized to show the villagers the need of (a) a pure water supply, (b) the removal of refuse and (c) the diminution of overcrowding; these lectures being given from village to village by men well versed themselves in the principles of sanitation, and knowing the habits of the people and able to sympathize with them and help them, without offending their prejudices. It was suggested that the village schoolrooms might be utilized for the lectures, which might be made attractive by object-lessons with the magic lantern, showing by the help of microscopic slides the noxious living organisms in foul air and water.

But it was pointed out that the lecture would be only the first beginning of the teaching; a lecturer who had made himself acceptable to the people would go round the village and show the people how to dispose of their refuse; he would explain to them the danger of depositing it in their little close courtyards and how the solid should be separated from liquid excreta. Then he would go with them to examine the water supply and show them certain simple precautions to be observed: not washing near the supply of drinking water and not allowing human beings or cattle to foul the river, tank or well. The Hindu religion enjoins so much purity and cleanliness that I thought the influence of the religious teachers and of the caste panchayats might be usefully appealed to.

To show how much may be done for the Indian peasant--who is thought so unpersuadable--by the vigour of sympathy, may I mention an instance of a sanitary officer in India [T.G. Hewlett], now alas! dead, who, when he came into office, found the rural people sacrificing with flowers and fruits at the shrines of the Goddess of Smallpox and the Goddess of (whatever they call it) Cholera; and how, long before he left, they came to him, if there had been four or five deaths from cholera: "Sahib, bestir yourself, don't you see we're all dead?" Another instance of the work of the same man is, how he moved a village in one night which had been decimated by cholera and fever for one hundred years, and which successive governments, native and British, had in vain attempted to move: in vain, because it was clustered round a temple of great sanctity; and he, by persuading the panchayat, moved them to a site of his own choosing; and he came in the morning and they were all, goods and all, settled in upon the new and safe site. He knew what he wanted to do and how to do it! Is it not the case that we sometimes call people unpersuadable when we do not sufficiently try to look at the

matter from their point of view? Do we not sometimes come into fatal collision with prejudices which have in them a grain of truth, because we do not have patience to seek out that truth?

I am painfully aware how difficult, how almost impossible, it is for anyone at a great distance to do anything to help forward a movement requiring unremitting labour and supervision on the spot. But it is my privilege to meet in England from time to time Indian friends who are heartily desirous of obtaining for their poorer fellow countrymen the benefits which, through sanitary science, are gradually being extended to the masses here, both in town and country, and which are doing so much to promote their health and happiness; so I never lose an opportunity of urging a practical beginning, however small, for it is wonderful how often in such matters the mustard seed germinates and roots itself, and at last produces an overshadowing tree. I should like to see such experiments tried in different provinces and under various conditions.

As regards the Bombay presidency I have been so fortunate as to obtain the powerful aid of Mr B.M. Malabari, who has recently paid his periodical visit to England and with whom I have had the opportunity of full consultation. And I do not think I shall be betraying confidence if I say that he is turning his special attention to Gujarat and Sind, and will probably make his first attempt by establishing small committees at Rajkot, Ahmedabad, Surat and Hyderabad in Sind. The watchword is, Small beginnings under favourable circumstances. "Let us begin somehow," he says, "in the name of God, the beginner of good life and good work. Let us cast the seed in the most congenial soil we can find. What pleasure it will be to watch this seed germinate, shoot up the tiny flower and in time bear the much needed fruit! This is a beautiful process and the only one that is natural. It will repay us abundantly; the growth we seek will be real and lasting." The program he suggest is modest and practical. He proposes to raise a small fund, say 1200 or 2000 rupees for the expenses of the first year. When that has been collected and a local committee is formed, the next step would be to prepare a simple sanitary primer suitable to the local requirements and to have it translated into the vernacular languages of the district, with a view to its distribution among the rural villages. Then arises the most important part of the work, that of securing health missionaries for select localities. Mr Malabari would have them married men, whose wives would accompany them and preach health and cleanliness amongst the village women. In this proposal I would most heartily concur. Indeed from my point of view, to enlist the sympathy and gain the approval of the good mother who rules the home, is the keystone of the whole position. If her authority is on our side I feel little fear for the result. Then it is proposed that the health missionaries should send in monthly reports to the committee, who would publish and circulate the most interesting portions, especially to local boards and to

sanitary and medical officers. If the movement commended itself to the villagers and to the public generally, the government might, at the end of the year, be asked to consider the best means of further promoting it.

Such is an outline of the proposals sketched out by Mr Malabari. It is essentially a scheme of self-help, but it also contemplates recognition by government. And this seems the right means to attain success: local effort, strengthened and stimulated by the great central authority. Happily there is no doubt of the good will of government in this matter of village sanitation; successive viceroys have shown an anxious desire to deal effectively with this most difficult problem; and a solid foundation for future proceedings is being laid by the excellent "Village Sanitary Inspection Books," which are being introduced for the purpose of collecting and storing precise information regarding the condition of each village. Every sanitarian who reads the Government of India letter of 8 March 1895 (which is printed at p 367 for ready reference) will be struck by the thoroughly practical and suggestive character of the various "points" to which attention is drawn. It will be observed that the government propose to introduce the system of inspection books tentatively in selected villages, which will be conveniently grouped and marked off in the official maps. Such selected villages would be specially suitable for the operation of our voluntary committees, which would be in a position to assist the villagers in accurately compiling the information required by the government; and doubtless the local officers would gladly include in a group of selected villages any locality which the committee may choose for the scene of their labours. The health missionary in such places would occupy a most useful position-in touch with the villagers on the one hand and with the sanitary and district officers on the other. And by gaining the confidence of the people he could act as an interpreter as regards their habits, wishes and prejudices in such a way as to remove friction and promote useful work.

Many of the "points" are of an intricate kind, needing much careful local observation. Take for example Point 4, which deals with the character of the soil and its tendency to retain moisture or otherwise; and the question is asked whether there is any obstruction to drainage by roads, railways, embankments or other works. Here many interesting considerations arise. In fever-stricken villages the soil about the houses may be saturated with noxious matter, or the whole neighbourhood may be so waterlogged, owing to embankments or large tanks in the vicinity, as to produce malarial fever. In this connection it would be interesting to ascertain from the villagers what, according to their idea, are the causes of local unhealthiness, and what are the medicines and modes of treatment adopted by them in case of illness.

Point 8, again, refers to the all-important question of the

water supply and its proper use by the inhabitants, and here also there is need for constant watchfulness, in order to ascertain whether the people really take trouble to get their drinking water pure, or whether they are content to go on in the old way, taking into their bodies, by means of impure water, the germs of fever and other destructive maladies. It is only by the constant care of the people themselves that a tank or stream, nominally set apart for drinking purposes, can be effectually protected from pollution by liquid refuse, clothes washing and the intrusion of cattle. And the people will not take this care unless convinced of its vital necessity for themselves and their children. Here therefore instruction and persuasion by friendly and familiar advisers are urgently needed.

The vital question of conservancy, including the disposal of house and kitchen refuse, is dealt with in Point 9. This is a matter which depends so much on local conditions and the habits of the people, that too great pains cannot be taken in order to discover in each locality what is the most suitable method of obtaining satisfactory results. In this, as in most of the other matters, it is the peasant woman who, in the rural villages, holds the key either to health or disease.

I have put together these few rough notes in the hope that the leaders of Indian public opinion about to meet in congress [the 12th Indian National Congress] at Calcutta will take up this question, and with their special knowledge and experience will guide our steps in a matter so deeply affecting the welfare of the Indian masses.