An Address ON WHY HYGIENE PAYS.*

BY

ANDREW BALFOUR, C.B., C.M.G., M.D.,

DIRECTOR, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

Not so very long ago the title of this address would probably have read "Does hygiene pay?" but I think it may safely be affirmed that nowadays no educated person has any doubts on that subject. He knows hygiene does pay. If he does not, his ignorance can scarcely be due to lack of being told or to absence of proof. It is the result of indifference, or a wilful blindness, or prejudice like that of the people who say "What was good enough for our fathers and grandfathers is good enough for us," or, worse than all, antagonism to anything savouring of science or scientific endeavour. Believe me, persons with those traits of mentality exist to the detriment of themselves, their neighbours, and the communities which unfortunately have to harbour them. I trust that they are unknown in the British West Indies, but I would not be prepared to lay a wager on their absence. Still, let us hope that, even if they are present, they constitute a minority, for otherwise the outlook for one of the oldest and fairest and most interesting parts of the British Empire would be distinctly unfavourable.

Nothing can be more certain than that, under modern conditions, the race is to the fit, to the people with energy and enterprise, possessing keen, active minds, blessed with sound, wholesome bodies. The motor car which rules the road nowadays is that with the best engine, the most competent machine; and the human body is a machine which, unless it be initially free from defects, and unless it is kept in good trim, will sooner or later break down. In these days of stress and strain and competition there is no place for inefficiency except the almshouse, the hospital, the sanatorium, the poorhouse, the graveyard, or the crematorium. What is true of the individual is true of the colony, and it is specially true of colonies which have to labour under certain initial disadvantages like those we find in the tropics—places where malaria is rife, where the hookworm saps vitality, where typhoid fever, a disease which has almost vanished from England, still lingers and still slays, where dysentery makes wrecks of men and women, and where, in addition to the diseases of hot climates, such maladies as tuberculosis and the venereal complaints are rife, together with many other ills to which flesh is heir, thanks largely to human ignorance, neglect, selfishness, sloth, and folly.

Now, for a race to be fit and to keep fit, certain fundamental rules must be followed, and there must also be an application of the knowledge, the scientific knowledge, which has been wrested from Nature by devoted workers, and of that other knowledge which is the fruit of experience, and which not infrequently is found amongst so-called savage and heathen communities, while conspicuously absent from those who consider themselves civilized.

Granted that hygiene does pay, and pay handsomely, how or why does it pay? It would be very easy to answer that query if I were to confine myself to the revolution which hygiene has effected in this country and the United States. Facts and figures could readily be furnished to show how it has saved life; how it has lengthened life; how it has protected and strengthened those greatest assets of any country, its children; how it has guarded the expectant mother and increased her chance, both of life and health; how in many different ways it has permeated industry and has not only protected the workers but has shown how, by applying physiological knowledge, output can be increased and fatigue lessened; how it has demonstrated that money can be saved by adopting certain lines of sanitation, and that, in some cases, money can even be made thereby, as witness the profits accruing from feeding town refuse to

hogs. These are only a few of the directions whither we may look for proofs, but it is perhaps not quite so easy to obtain the latter from places like the West Indies and British Guiana.

For one thing, these outliers of empire are in the tropics, and hygiene has not had quite such a long run for its money in the tropics as in a country like England. For another, it has not been given the same chance. For yet another, trustworthy statistics are not so readily available. Even so, however, evidence can be obtained that the progress of hygiene in British territories washed by the Caribbean has resulted, not only in putting a stop to heavy losses, but in a material gain. For this purpose it is necessary to invoke the historical perspective. Unless we have some idea of the conditions which used to prevail and the drain of men and money, owing to disease, from which these colonies were wont to suffer, we cannot fully realize the change which increased and more accurate knowledge has brought about, both from the medical and the economic standpoint. Now one of the most instructive, if not one of the most agreeable, things you can do in any of the West Indian colonies is to visit one of the old cemeteries and study the inscriptions on the graves. A similar form of education or recreation can be pursued in connexion with the mural tablets in parish churches, and sometimes is made easy for you in the form of a public monument.

What strikes one at once in the cemeteries is the number of graves of children and also of young adults who died of "fever." In many cases the inscription definitely states that yellow fever was the destroyer. Moreover, most of those who thus perished were white people, educated people, precious lives which were lost to the colony. Human life has a definite monetary value. "In 1800 it was estimated that in England and the United States the economic value of a healthy male infant at birth might be reckoned at £5; at 10 years of age, when he had survived the years of high mortality, this amount had risen to £200, and at the economically reproductive period at the end of the second decade, £500." The lives of Europeans who died in the old yellow fever days might certainly be rated as high, if not higher.

But yellow fever caused loss of money not only by killing its human victims but by dislocating trade and leading to the imposition of all kinds of restrictions. Read the old records, and you will find accounts of ships hung up in port because their crews had perished from yellow Jack. In some cases their cargoes, of a perishable nature, were ruined. Again, ships frequently could not be loaded or unloaded because no one was left to supervise. The stevedores were like sheep without a shepherd, the shepherd being either jaundiced or dead.

Now yellow fever has vanished. It is true that, in some places—as, for example, St. Thomas and San Domingo—it disappeared without any action being taken, a curious state of things to which we do not yet possess the clue; but, in the main, it has come to an end because hygienic measures have trodden hard upon the heels of scientific knowledge. Once Reed and his colleagues, working gallantly in Cuba, had incriminated the "tiger mosquito" and shown that there was no other means of spread, the way was clear. For the most part the British colonies have benefited more or less indirectly, as, unfortunately, it cannot be said that, as a whole, they have bestirred themselves unduly in the fight against the mosquito concerned. I know to my cost that in 1914 it swarmed in St. George's, Grenada, and flourished in Barbados, while it still persists in both islands. Trinidad, nearer old endemic centres in South America, has done better; indeed, Port of Spain is a notable example to be followed in this as in other respects. The energy of the Americans and the stimulating influence they have exerted on Brazilians and other South and Central American nationalities possessing sea-boards has, however, cut off the supply of infection. At Rio, at Santos, and elsewhere, the yellow fever mosquito has been so reduced in numbers that it is no longer a source of danger, and now South American ports on the Atlantic, Caribbean, and Pacific coasts are free from yellow fever.

The white community is not, and has practically never been, in a majority in the West Indies and British Guiana,

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and it is true that the whites suffer to a greater extent and more severely from yellow fever than do the coloured population. But the latter have their own trials and tribulations as the result of preventable disease, and they also have a monetary value. In the old slave days this was easily obtainable.

We know that in the eighteenth century the price of negro slaves ranged from £18 to £50, and that when slavery was abolished the compensation grant to planters was at the rate of a little over £20 per slave. White slaves—political and other offenders—were known as forty-pounders, each being considered worth a sum of two score pounds. Now in these old days dysentery was terribly rife amongst the slaves. It killed them and it crippled them. A slave with acute dysentery could do no work at all, while a slave with chronic dysentery was little better than useless. Again, owing to unhygienic conditions upon the slavers, ophthalmia sometimes ran riot amongst the cargoes of black ivory and blinded the unhappy Africans. A blind slave passed from slavery to pauperdom and dragged out a miserable existence financed by the colony. Happily, there are now no slaves, but there is still labour. In some of the West Indies and in Bermuda a considerable percentage of the potential labour is put away underground in the form of dead babies. Fortunately, in some of the colonies it has been recognized that this kind of thing is wasteful as well as wicked, and now in British Guiana and Trinidad and St. Kitts, to take three outstanding examples, there are baby-saving leagues, and a serious and successful effort is being made in the direction of infant welfare work. What, however, is the good of saving infants if, as soon as they become toddlers, they acquire hookworm infection from running about with bare feet on a soil polluted with human excrement and which contains the larvae of that intestinal helminth? What is the sense of spending money to rear them if, just about the time they are due to become wage-earners, they develop the cough and blood-stained sputum which tell the sad tale of pulmonary tuberculosis, due, in all probability, to defective and insanitary housing conditions? Hygiene pays only when its principles are carried into effect thoroughly and sensibly.

There is a tendency towards complacency, towards saying, "Well, anyhow, we've done very well in this or that particular"; but, believe me, it is essential, if the best results are to be secured, if the greatest saving is to be effected, to take a wide view and endeavour to bring about a general improvement in all important directions. Of course, money may not be available for any such universal development. Then the investment should be made in hygienic stock which is sound, unlikely to depreciate in value, unlikely to be affected by movements of the disease market—in short, in gilt-edged securities like the "Prevention of Soil Pollution," unlimited, and the "Provision of Pure Water," limited only by the needs of the people and the state of the colony's finances.

Prevention of soil pollution is the best of the hygienic investments. It need not cost a great deal, and the results are widespread, for, properly carried out, it safeguards water supplies and checks fly-breeding, thus controlling typhoid fever, dysentery, diarrhoea, and, where it occurs, schistosomiasis, the fluke disease associated with the presence of blood in the urine. It also abolishes another and much more important worm disease, that ankylostomiasis or hookworm malady which the Americans have been helping us to fight in so many of our West Indian possessions; and which, when severe, does so much harm to agricultural labour. It also lessens the incidence of worm infestations generally, and this is a most important matter, for the ordinary round worm is by no means a harmless parasite, tapeworms are often a source of illness, and there can be little doubt that whip-worms and thread-worms and all the rest of that unpleasant crew, if they do not actually cause sickness, keep people below par and militate against the ideal state of health and fitness. It is interesting to note that in the Philippines the question has recently been raised if ascariasis, or round-worm infection, may not be an exciting cause of nephritis, a condition very prevalent and causing considerable mortality in British Guiana, Trinidad, and Barbados. In addition, the preven-

tion of soil pollution by the provision of latrines and the education of the people in their use and value is to some extent an elevating force. It makes a population more cleanly and self-respecting. I admit it may take a long time to accomplish such a regeneration, for, though hygiene pays, it does not always yield quick returns. Sometimes, however, it does, and your "Provision of Pure Water" stock is likely, nay certain, to be satisfactory in this respect.

There are other stocks worthy of consideration. I can strongly recommend "Anti-Mosquito," unlimited—that is, not limited to the anophelines which carry malaria, but extended to *Culex fatigans*, the carrier of filariasis with its sequel elephantiasis, and the other domestic gnat, *Aedes aegypti*, which, as we have seen, carries yellow fever, and which is also responsible for dengue or dandy fever, a distressing complaint which still breaks out now and again in the New World.

Malaria is the curse of places like Trinidad, British Guiana, and Jamaica, while it also causes much invaliding in some of the smaller islands. It is true that in certain localities antimosquito measures are impracticable—the game is not worth the candle; in other words, the results would not be commensurate with the money which would have to be spent. This applies to places where engineering works—draining, filling, and so forth—are required. But there are many spots where a reasonable expenditure pays hand over fist. Who can estimate the saving in hard cash which the antimalarial measures in Port of Spain have effected? Remember that malaria is not only a crippling disease, it is a killing disease.

Dr. Maynard, in a very interesting paper on "The economic aspect of preventable deaths," which embodied the results of an inquiry into the financial loss due to unnecessary mortality in the Transvaal, a paper published in 1908 in the *Transvaal Medical Journal*, enters mathematically into the loss sustained at that time by the Transvaal every year from deaths due to four preventable diseases—namely, typhoid, dysentery, pneumonia, and tuberculosis. It amounted to no less than £2,640,000. Dr. Maynard, however, does not forget to quote Lord Playfair's words:

"The record of deaths only registers as it were the wrecks that strew the shore, but it gives no account of the vessels which were tossed on billows of sickness, strained and maimed as they often are by the effects of recurrent storms."

The crippling effect of disease is perhaps exemplified better by tuberculosis than by any other malady, because, except in the acute pulmonary cases, the victim usually struggles along for some considerable time, waging a fight with Koch's bacillus, which, alas! too often terminates in defeat. One of the saddest and most depressing sights I ever witnessed was a collection of ex-service men who had become infected during the war or who had relapsed as a result of strain and exposure. Damaged lives, that was what they were, some slowly struggling back to health and possibly to efficiency, some stationary, not a few doomed.

Tuberculosis is a most important disease in the West Indies because, as you know, the negro part of the population, or rather a large section of it, lives in terror of "duppies" or "jumbies" and close up all doors and windows at night. They take every precaution against imaginary dangers and are ignorant of the risks they run from that great white plague, which in very truth is "a pestilence that walketh in darkness." If you travel by tube in this city and so avoid the dangers of its thoroughfares, which, from the life-saving standpoint, are unhappily proving the truth of the refrain to the showman's ditty, what is gained upon the roundabouts is lost upon the swings, you will note that you are strongly advised to invest your money in building societies. Well, a very sound hygienic stock in the West Indies is building stock, provided that when, or rather before, you put money into good houses for the people you make sure they will not abuse them—in other words, educate them so that they will appreciate the principles of healthy living and the dangers of unhealthy dying. I say "unhealthy" advisedly, for there is a way of dying which is not unhealthy but natural, the way we should all die but do not.

So far as I am aware, no one has ever done for the West Indies what Maynard accomplished for the Transvaal, but Colonel Christophers of the Indian Medical Service some little time ago discussed the question of what disease costs India. It is true he did not get the length of actual monetary calculations, owing to the difficulties of accurate estimation in a country so large and populous, with such a diversity of governments and nationalities, creeds and castes. At the same time, he adduced some highly suggestive, not to say startling, figures, pointing out that of the 360 millions of people in the Indian Empire 7,000,000 die annually; the average inhabitant does not get a fair run of life for his money. While in England, out of every 1,000 persons born 530 attain the age of 50, in India only 186 reach what has been far from euphemistically termed the "dirty half-hundred." There is nothing to show that the natural span of life in India is a shorter one than in England. The real cause of the difference is the malign influence of disease acting in the earlier and consequently very often in the wage-earning periods of life.

Some of the conditions and diseases in India are not preventable because our knowledge regarding them is defective. The same is true of the West Indies—hence the absolute necessity for research. Here is what Christophers says on that subject:

"All I can say is that the tribute paid to disease in a country like India is one of importance economically, even politically, and one that has many financial and commercial aspects. It, however, transcends this in being of importance to the welfare of 360 million human beings, who, by their tacit acceptance of such calls as may be made upon them, signify their belief that they are being governed to the best ability of those responsible for such government. The important matter, therefore, seems to be that proper and enlightened views should be held by Government as to the steps to be taken to justify that trust, in so far as the prevention and amelioration of disease is concerned.

"But no Government, however enlightened, can combat disease without knowledge, and were they prepared to lay out vast sums on the public health, their efforts would be nugatory without the contributions of medical research. Both sanitation and medical relief are based on the findings of medical research, and are powerless to advance except as a result of advances in the branches of science dealing with disease. The vastness of the problems at issue should not be ignored."

This leads me to the value of laboratory investments in the West Indies. They are very badly off in this direction: even clinical laboratories do not exist in the hospitals of some of the smaller islands. How, then, can disease be properly diagnosed? A disease not properly diagnosed leads to a waste of time, of medicine, of food—in short, of money. Everywhere the laboratories want strengthening and expanding. Nowhere in the British possessions bordering on the Caribbean are they really up to date and efficient. Research is very largely neglected. Yet we see the strange anomaly of a fine College of Agriculture, with research departments, arising in Trinidad. There parasites and diseases of plants will be studied and remedies devised, while nothing comparable exists for dealing with human pathology. At the same time, the College of Agriculture itself deserves every credit for the step it has taken, along with the International Health Board of the Rockefeller Foundation, to give its students instruction in hygiene.

"Comparisons are odorous," says the buffoon in *Much Ado about Nothing*, but I cannot refrain from directing your attention to the public health activities of the Americans in Porto Rico. I confess, when a patriotic Briton considers the record there and compares it with the conditions obtaining in Jamaica, the Bahamas, Dominica, and half a dozen other colonies, he must feel humbled and ashamed. It will be said at once that Americans are full of money, they can easily afford to spend thousands on such work. Very true, but the American is a keen and astute business man. He is, I admit, in many cases more of an idealist than the Britisher, but I have never heard that he disdained the dollar or cared nothing about a return for his outlay. The American, knowing that hygiene pays, and knowing in part why it pays, has set out in Porto Rico to find out how it can be made to pay more, although, at the same time, he is influenced by humanitarian considerations and an anxiety, very proper, very patriotic, to show what the

United States can do in the field, the great and honourable field, of hygienic endeavour.

Now it is no use our sitting still and saying we are poor, we can't do anything like this, we must jog along as best we can. Such an attitude spells decadence, and, as I have said, there is no room in the world nowadays for decadent people. Some of the islands have no excuse for a policy of masterly inactivity. Barbados and the Bahamas in the West Indies, and Bermuda in dignified isolation are, if not as rich as Croesus, very comfortably off. To do Barbados and Bermuda justice, they are waking up to a sense of their responsibilities, and will doubtless reap their reward. The Bahamas seem to be past praying for, and are at present reaping a fitting reward in the shape of malaria, enteric fever, mosquitos, and the ubiquitous fly. Other colonies suffer grievously from financial depression, but in such cases the situation should be reviewed, possibly with the help of experts, to see if anything can be done in the way of a re-allocation of funds. We may well ask, Is the money available being spent to the best advantage? We know that, even in the wealthy Bahamas, it is not, for the principal medical officer in one of his reports complains about the establishment of a library which scarcely anyone uses, while he cannot obtain the wherewithal to prevent and combat the prevailing typhoid fever.

Again, are we certain that full value is being obtained for what is spent on education? It is true that the curricula embrace lessons in hygiene, but, as taught, they are almost useless. Would it not be possible to make a big change here and to devote some of the money spent on education to sanitary work designed to improve the attendance of scholars in the school, to quicken their intellects, and to make them cleaner and better citizens? I have little doubt there are other directions where the robbing of Peter to pay Paul would not only be feasible but justifiable—not only justifiable but wise.

The mention of education should remind us that Education Stock contains the best of the hygienic shares. To get the best results you must carry your people with you, and you can only do so when you have developed in them a sanitary conscience, made them realize that hygiene pays, and understand how it pays and why it pays. The return on these shares is never immediate, but the investment is sound, and, while some of the money goes to Education Stock, the rest can profitably be expended on hygienic measures which are not quite so dependent on the co-operation and goodwill of the inhabitants. For example, it is rarely that you have to force people to drink a pure water brought to their doors, and you can do much in stamping out malaria without the help of the proletariat. Still, the more you get of this help, provided it be intelligent, the better. It is more likely to be forthcoming if you can convince the people that hygiene will benefit their pockets as well as their minds and bodies. Hence, in conclusion, let me cite some examples which you can employ when, as apostles of Hygeia, you return to the West.

In the case of malaria I propose to take my illustration from Malaya, where Sir Malcolm Watson and others have worked wonders which can, thanks to their researches and enthusiasm, be expressed in terms of hard cash. A Commission not long ago contrasted the value of expenditure on hygiene (a) when the measures employed were crude and the main effort was directed to curing infected coolies, and (b) when the steps taken were guided by a knowledge of prophylactic principles and the main effort was the prevention of disease. The estate chosen was, and is, potentially as unhealthy as any estate in the Federated Malay States.

In 1911 the staff consisted of seven unhealthy Europeans, constantly sick, given to liquor, and taking no interest in bungalows or gardens. In 1923 there were four healthy Europeans (three married and one engaged), three healthy children, pretty gardens, comfortable bungalows, no drinking, and no absences on account of sick leave.

In 1911 there were 870 coolies with practically no dependants. They were miserable, crawling wrecks with narrow shoulders and prominent bellies. They lived in squalid, dirty lines, void of gardens. They possessed no livestock and, saddest thing of all perhaps, no children born alive—a miserable and degraded folk without hope, without

	1911.	1923.
Average cultivated*	1,632 acres	2,650 acres
Average labour force	870 Indians only*	450 (all labour)
Dependants	Practically nil, due to deaths	220
F.O.B. cost	\$1.09	18.64 cents
Yield	83,000 lb.	778,000 lb.
Total expenditure	\$240,215.38	\$145 018.44
Medical (cure)	\$12,444	\$6,208.67
Medical (prevention)	Nil	\$9,531.20
Death rate	232 per mille	3 per mille
Number of deaths	202	2
Staff (Europeans)	7	4
Hospital	Overflowing	Empty
Total loss of labour	862	186
Percentage loss of labour	100	30
Check-roll average	30 (15 % below standard)	35.5 (standard)
Hospital admissions for year	1,084	275

* There was also a large but unknown number of Chinese.

ambition. In 1923 there were only 450 coolies, but these were doing thrice the work accomplished in 1911. Their dependants were represented by 220 healthy old people and young children. Births, as the report puts it, have become a chronic habit. The coolies were fat, well liking, and clean. They had fine gardens, over sixty head of cattle, hundreds of goats, and thousands of chickens.

In 1911 the tappers (it was a rubber estate) were sent out to new tasks every day, and one-third to one-half of the tasks had to be completed in the evening, as the coolies returned sick or too weak to finish the work. In 1923 a coolie was not taken off his task for months, and never had to finish his work off in the evening. In 1911 a gang was sent out to dig graves every day, yet never dug sufficient for requirements, as coolies were constantly dying in the field. In conclusion, the estate in 1923 had become one of the cheapest producers in the Federated Malay States and the cost of production compared favourably with Ceylon and Java.

[In addition to malaria, the lecturer dealt with ankylostomiasis in India, enteric fever in North Carolina, tuberculosis, and dengue in Texas.]

Surely enough has been said to indicate what a fine field exists in the West Indies for economic and humanitarian endeavour! As has been indicated, it is not altogether a virgin field. Here and there we see notable signs of activity, solid evidence of sound work, and indications of a quickening and regeneration—as, for example, the work in Port of Spain, already cited, the extensive water supply and drainage schemes in British Guiana, certain new developments in Jamaica, the stirrings of a sanitary conscience in Bermuda and Barbados, the provision of good drinking water in Dominica, the recognition of the importance of infant and child welfare work in several places. On the whole, however, one must admit that these colonies are sadly behind the times, and that some of them scarcely realize that of recent years the whole outlook in tropical hygiene has changed. I admit the solution of health problems is not so simple as it sounds. There are various difficulties. Above all things it is essential to have good men to initiate and control the reforms. Yet, for the most part, medical officers in these possessions are paid a mere pittance. Nowadays it takes six years to make a doctor, and when he is made he has yet to learn a great deal of his life's work. Not until two years have elapsed after his registration as a medical practitioner can he proceed to a degree or diploma in public health, even though the actual study for such a diploma only occupies one year. If he wishes to qualify in tropical medicine and hygiene he has to undergo a special and intensive five months' course of instruction. All this means a great deal of expenditure. It is a very costly education, and why should a man thus trained, thus equipped, accept a beggarly salary? He may, even if he is first class, provided there are possibilities and opportunities for getting something done; he may, if there is a chance of carrying out research and he is a born research worker; but, in the great majority of cases,

he will not, for he can do better elsewhere, and will go elsewhere, even though, as compared with other parts of the tropics, the West Indies possess some advantages. For example, you can make a permanent home in them in a way impossible in many parts of tropical Africa, India, Ceylon, or Malaya.

Remember, however, that satisfactory and sufficient salaries are not everything. A really good man will not be tempted to stay merely by considerations of filthy lucre if he finds his hands tied for lack of funds, and what should be his life's work crippled and hampered at every step. If he does remain he will cease to be a good man, and joins the ranks of those who say, "I've done my best; it's not my fault, let things rip." How often has that happened! I have seen it myself again and again, and it is a state of mind fatal to the individual and to the advancement of health. Hence well paid medical officers and an active and progressive, but non-extravagant, policy are alike essential. If these be forthcoming there should soon be a change for the better. Yet we must remember that the medical officer is not the only cog in the health machine. Well trained and qualified sanitary inspectors are absolutely necessary if it is to work smoothly and efficiently. In some places these men are available locally—for example, in British Guiana and Trinidad, where there are some first-class inspectors—but very often it will be found better to introduce a man of the right stamp from this country, or, better still perhaps, from one of our other tropical colonies, promoting a junior official to a senior post.

The inspector should be the health officer's eyes and ears; he is the essential intermediary, he is the non-commissioned officer of the sanitary force, and therefore its backbone. Without him it is apt to lack cohesion, and in his absence can never get properly to grips with the populace. Adequate clerical help must also be accorded the Health Office. Too often the wasteful and disheartening process of employing razors to cut wood is adopted. In other words, the medical officer of health spends his time making out returns, and the sanitary inspector is turned on to keeping books when he should be out in the field. This kind of thing is supposed to spell economy. As a matter of fact, it leads to loss of money and possibly also to loss of lives.

So much for personnel, on which practically everything depends. Let us not forget that the more mobile the Sanitary Force the more satisfactory will be its work. There should be no niggling over transport allowances. Epidemics can very often be nipped in the bud, but to accomplish such a desirable abortion the nipper must be on the spot at the earliest possible moment. This has long been recognized in Egypt, where the Epidemiological Section of the Public Health Department is fully equipped as a mobile unit. There are many other points to which I might refer, but I must not weary you, and have probably already provided more than sufficient mental pabulum for the lay digestion.

Let me only say that these matters we have considered—and I esteem it a privilege to have had this opportunity of addressing you—are not vain imaginings or flights of fancy or the ideas of an idealist. They are facts which merit most careful consideration; they are the principles on which action must be based; they are, in a very special sense, matters of life and death. Hence I would express the earnest hope that they will not be lightly regarded or looked upon as impracticable, but that this discussion may prove the means of giving modern hygienic methods a fair and fighting chance in the West Indies. Other British possessions have done so, and have reaped and are reaping the reward, a monetary reward as well as a reward in other directions. The West Indies, fair and fruitful, are amongst the oldest of our colonies. They have had a great past, their very names spell romance and recall glorious and stirring times. Such days may not come again, but there seems no reason why most of them should not have a rosy future, if only they will remember that rosiness is, under certain conditions, a sign of health, and that health, though nowadays readily attainable, can only be obtained by concerted effort and by following those guiding principles which have been enunciated and which have proved, and are proving, beacon lights to many tropical communities.