

T H E S I S

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BY

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THE HEALTH CONDITIONS of the NATIVE POPULATION

in OVAMBOLAND, and its BEARING on the

Development of South West Africa.

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THE HEALTH CONDITIONS of the NATIVE POPULATION  
in OVAMBOLAND  
and its Bearing on the Development of  
SOUTH WEST AFRICA.

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## I N T R O D U C T I O N .

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Having had the appointment of District Surgeon and Examiner in the Territory of Ovamboland, of Native recruits, before they were allowed to proceed south to work in the Diamond Fields and Mines, and also farm labourers and men for Railway Construction work, it occurred to me that the following observations were sufficiently interesting, to form the foundation of a thesis for the degree of Doctor of Medicine, Edinburgh University.

At the same time I had the opportunity of observing medical treatment and its results, as applied to natives by the Medical Missionaries in the Territory, as well as the bearing it will have on the development of South West Africa, depending as it does on native labour from Ovamboland.

The distance and isolation of Ovamboland have precluded me from providing data and results of scientific and laboratory investigations, the facts given being merely clinical observations.

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HEALTH CONDITIONS of the NATIVES in OVAMBOLAND  
and its INFLUENCE on the DEVELOPMENT of  
SOUTH WEST-AFRICA.

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I. GENERAL SURVEY OF THE COUNTRY.

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Ovamboland forms the most northern portion of what used to be German South West Africa, but now administered by the Union of South Africa under the mandatory system of the League of Nations. It stretches north from Latitude 20° and is bounded on the north by Angola or Portuguese West-Africa. On the East you have Matabeleland and on the West the Kaokovell which borders on the Atlantic ocean.

In climate it is subtropical; has an average rainfall of 20 inches a year mainly distributed over the Summer months January, February, March and April. The country is peculiar in that over the whole of its thousands of square miles it is absolutely level, with no rivers or hills, so that during the rainy season the water collects in shallow pans or vleis. The soil consists mainly of sand to a depth of over 500 feet as established by boring/

boring operations, with the result that these pans dry up very quickly and, as already mentioned, the rainy season only lasts for about four months, the result is, a great scarcity of water for some months just before the rains start again. The vegetation is chiefly mopani bush with stretches of grass flats. The natives inhabit mostly the open spaces in the bush where shallow pans are formed and where the only palm trees, which are tapped for making a beverage, are encountered. Here they have their millet fields, their kraals or habitations built of the stalks of the millet called 'mohongo' and their small flocks of goats and cattle.

The country has no natural resources which are of any value. There are no mineral deposits as the whole of the territory consists of sand and from an agricultural point of view it is of no use for the same reason, the natives being able to raise a crop of millet, with some pumpkins, beans and watermelons only during the wet, rainy season. In addition there are sparsely distributed wild fruit trees, the fruit of which, however, are mainly used for making intoxicating beverages called 'lambika' and 'morula'.

It will be seen that the natives thus have a precarious existence, a bad rainy season often causing a shortage of food, or even a famine. Such

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a famine occurred in 1917 causing starvation and the death of hundreds, especially amongst young children, the sick and the aged who could not look after themselves and who were thus left to shift for themselves. At the beginning of 1929 a similar famine threatened, but the administration, by timely intervention, sent up motor lorries with mealie meal and maize and prevented a similar catastrophe.

#### THE CHIEF ECONOMIC VALUE OF THE COUNTRY.

There is thus no mineral wealth to be exploited; the country further does not lend itself for agricultural development and hence is of no importance for European settlement. It is, however, of tremendous importance as a source of labour supply for the development of the Southern part of South West Africa, where European settlement is going on apace. Here the copper mines, the diamond fields, the building of railways, cattle farming and agricultural activities all require native labour, the main source of which is Ovamboland in the North. This is, therefore, its economic value. A sick or debilitated native is a potential loss to the State and for that reason I propose to go more/

more in detail into the health conditions in Ovamboland.

It must further be understood that Ovamboland, though forming part of South West Africa is a native reserve territory where no European settlement is allowed even if it were possible. It is separated from the South where European settlement takes place by hundreds of miles of waterless and uninhabited country. The Administration has an officer in charge of native affairs in Ovamboland to represent its authority, for the rest the natives live according to tribal habit and custom. The mining companies have a recruiting officer in the Territory and the Government appoints a Medical Officer to keep it posted with the health conditions, supervise missionary, medical activities and examine the natives recruits for labour, before they are allowed to proceed South, where they usually work under contract for a year and then return home, to proceed South again at a later date.

From the brief survey given above, it is clear that social and political aspects do not obtrude themselves here as they do in other parts of Africa, where the white settler lives in juxtaposition with his black brother, with its attendant half caste population, and direct spread of disease from/

from one section to another, although we will have occasion to refer later to this aspect where the Ovambo comes in direct contact with our Portuguese neighbour in the North.

For this reason, too it is perhaps very interesting to observe disease in an isolated native population, of one racial stock, under natural conditions of environment and mode of living. One can thus survey the conditions under which the endemic diseases obtain and note the spread of disease carried in by natives returning from further afield.

## II. HEALTH SURVEY OF THE NATIVE RACES.

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The Ovambo belongs racially to the great Bantu family of races of which the Basutu and Zulu are perhaps better known. Professor Schwarz of Grahamstown University, Cape Province, proved that there were traces of Arab blood to be detected in certain members of the tribe, possibly through ancient Phoenician traders getting wrecked on the Coast and wandering inland.

Like all the Bantu tribes they are a grain-eating people, keeping cattle and goats for milk supply/

supply and as a visible token of their individual wealth; cattle also forming the main currency in trading transactions.

The healthy Ovambo has a magnificent physique, and as most of them still go about with only a loincloth, any constitutional changes are very easily detected by the fact that the normal, evenly soft, pliable, glistening black skin of the native changes into a dull, wrinkled and mottled pale one. His natural environment is the open air on the hunting field or the millet field with plenty of fresh air, sunlight and activity. Their huts are constructed of poles and milletstalk thatching, a group of huts usually being built closely together with a maze of passages between and a fence of poles round about the whole group. Such a group constitutes a 'kraal', where one native lives with his several wives and their relatives, his number of wives depending on his wealth in cattle, goats and grain. Such a mode of living, from the natives' point of view, would be ideal were it not for several disadvantages attendant on this mode of life.

Firstly, the native has no idea of sanitation. He urinates and defaecates literally on his doorstep. Flies abound in millions all the year round. Large mud holes serve as water supply, which during the dry season is little more than a thick/

thick, black or greenish slimy ooze. During the rainy season human and animal excreta, dead animal refuse and what not, are carried into these water holes. Furthermore, during the rainy season when the pans are filled with water, mosquitoes are a veritable pest, against which the native has no protection.

Like all native races, the Ovambo is inordinately fond of intoxicating beverages. This he procures by fermenting milletseed, wild fruit or palm tree juice. Specially intoxicating is distilled morula fruit juice, which contains such a high spirit percentage that it can be set alight. Special seasonal festivities are held where all and sundry become highly intoxicated<sup>7</sup> with the inevitable result of drunken fights and promiscuous sexual intercourse.

In reviewing these factors and their bearings on the home life and health conditions of the native we find:-

- (i) An abnormally high percentage of natives suffering from eye diseases. These range from the ordinary conjunctivitis as seen in infections with the Koch-weeks bacillus, to such severe conditions as/

as gonorrhoeal infections of the eye with total destruction. This is in accordance with what one would expect where flies abound, excreta lying all over, and sand and a glaring sun augmenting matters.

(ii) Hookworm infection in certain localities is more severe than in others. This (is) in accordance with what we know forms the most potent factor in infection, namely excreta.

(iii) Malaria is exceedingly prevalent. In young native children fully 50% present the 'Ague Cake' or malarial spleen.

(iv) Typhoid Fever, contrary to what one would expect, is not so often seen although by no means non-existent. One could only explain this on the supposition that since childhood and for generations they have been receiving small immunising doses of the infecting virus *B. typhosus* or the para-typhoid strains, and have consequently developed a high degree of immunity, or that it causes very trivial symptoms.

(v)/

(v) Undulant fever is very prevalent and severe. The milk of goats and cows forming part of the staple diet makes fairly conclusive evidence that the goats must be infected with the micrococcus militensis. In Rhodesia evidence has been brought forward that the bacabortus in cattle, an allied organism to the micrococcus militensis may give rise to symptoms in man resembling undulant fever. The high abortion rate among pregnant native women may partly be accounted for in this manner, although the chief factor is undoubtedly syphilis as will be pointed out later on. Hence cows' milk in this instance may also be a source of infection. Here again, considering the unhygienic conditions under which milking operations take place, one would have expected a higher incidence of Typhoid Fever.

(vi) Venereal disease, however, introduced into the population, has spread like wild-fire fully 60% of the population suffering from/

from Syphilis, Gonorrhoea being hardly less prevalent. The lax moral code, drinking orgies, polygamy and ignorance easily account for this deplorable state of affairs. Gonorrhoeal ophthalmitis and interstitial keratitis adding their quota to the already high incidence of eye affections due to flies and filth. An appalling high rate of abortion and infantile mortality and complete sterility in others, coupled with the disabling effects of the disease in adults, makes this the biggest scourge in the territory.

#### ANTHRAX.

The cattle right through the territory are widely infected with anthrax. Animals dying of this disease are considered a heaven sent opportunity of having a thoroughly good gorge on meat, with the inevitable result that many cases succumb to this disease.

It is, however, by no means as virulent in the native as when Europeans contract the disease, as/

as seen in workers in wool and hides in this country, so that relatively few die of anthrax.

#### HYDROPHOBIA.

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Dogs and possibly wild animals, as has been proved in South Africa in the case of the Meercat and wild cat, are widely infected. The native, however, knows that to be bitten by a mad dog means probable death, hence only rarely do cases of hydrophobia occur.

We have thus seen that the native through his ignorance and mode of life, is beset with pitfalls which seriously threaten to disrupt his tribal health structure. That they are not accepting these calamities lying down, is evidenced by the fact that they have their own so-called native medicine men. These provide remedies in the form of herbal extracts taken internally against gonorrhoea and syphilis which actually cause the gonorrhoeal discharge to disappear within a short time, and the primary and secondary lesions of syphilis to heal up. They prepare a paste out of roots of plants and other ingredients only known to themselves, which has a marked beneficial effect on malignant pustules of anthrax. Similarly in malaria and dysentery they know how to reduce the fever and stop excessive bowel action/

action. As however, they get suspicious the moment you start enquiring into things, it is exceedingly difficult to get to know what they actually use.

That they do possess a knowledge of the pharmaceutical action of certain plants and roots, there is no doubt; and a scientific investigation of these ingredients, may be, not without benefit in a wider sphere, if we remember that cinchona and many other drugs were made use of by natives, long before the European got to know their benefit and isolated the active alkaloid.

The diseases as mentioned above are mainly the result of the native's habit of life or his environment, if we except venereal disease, which has definitely been introduced by the European and in this instance the Portuguese must bear the onus. The disastrous effect on the native population and his future welfare we have already mentioned. Another disease may become equally so, if timely measures are not taken to prevent its spread, namely Tuberculosis. Bearing in mind the conditions enumerated under which the native lives, we may be inclined to think this would never be a serious menace. He lives in the open air, goes naked or practically so, exposed to direct sunlight, and is on the whole well fed. This condition/

condition, therefore, requires closer scrutiny.

As in the case of venereal disease, the native goes out of his territory where he contracts the disease, comes back and disseminates it wholesale. After having been recruited the natives are employed underground in the mines, ill ventilated, dusty or damp. On the diamond fields on the coast region, dust, cold winds and fog are prevalent. The result is, that they are prone to chest troubles such as pneumonia, bronchitis, or catarrhal colds. Here, also, are natives from other areas already infected with tubercle. Hence the Ovambo easily falls a victim. On convalescence he is sent back to his Kraal. Here he sleeps in the same hut with perhaps a dozen of his family, spits promiscuously on the sandy floor, drinks and eats out of the same dish simultaneously with the rest of the family, with the inevitable result that other members of the family get infected. It is well known in South Africa that the native is notoriously non-resistant to the tubercle bacillus, not having been immunised, as in the case of typhoid, or the European to tuberculosis, and the Ovambo is no exception. Once they contract the disease, very few succeed in getting rid of it again, and in tracing the interaction of one/

one disease on another as we intend doing now, we may get an additional factor in his susceptibility apart from non-immunisation.

#### INTERACTION OF VARIOUS DISEASES.

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Reviewing the diseases enumerated to which the Ovambo native is unduly prone - such as malaria, hookworm, undulant fever, syphilis, one would naturally expect to find a condition of chronic debility in these subjects. Considering that some of them suffer, or have suffered, from several or all of these diseases at the same time, the degree of debility and anaemia produced is sometimes very pronounced. A secondary anaemia of  $1\frac{1}{2}$  million red corpuscles in the blood and a haemoglobin percentage of 25% being a not uncommon finding.

Such natives then, when exposed to tubercular infection readily contract the disease and succumb with equal facility, and this in spite of what may seem strange at first sight, if we remember that they go about practically naked, with abundant fresh air and sunlight and are generally well nourished. How this comes about becomes clear, however, when we follow the course of events which is as follows:-

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The debilitated native, having contracted tuberculosis is next sent back to his Kraal. This in itself involves an arduous journey on foot, and he now probably wears European garments of sorts. In addition he carries a load of water, food and articles of civilised manufacture that would do credit to a good pack-ox, and reaches home in an exhausted condition. As we have seen from their mode of living, namely several sleeping and occupying the same hut, eating and drinking out of the same utensils, promiscuous spitting on a sand floor, ultimately leads to the infection of other members of the family or the tribe. In this way then, the thin edge of the wedge is introduced and healthy natives, who, considering their out-of-door mode of life, one would not expect to be easily liable to the disease, fall victims. Thus tuberculosis is gradually but surely invading all sections of the population.

? anacina  
? debilitated }

The occurrence of malaria, syphilis or hookworm in the same subject, as happens to be the case with many of them, coupled with alcoholic abuse, leads to rapid progress of the disease and death. The combination of syphilis and malaria in the same subject, as must be the case in practically all Ovamboes contracting syphilis, is of further interest in view of JAUREGG-WAGNER'S work on general paralysis in/

in which the parasite of benign tertian malaria is inoculated therapeutically into the patient. I can definitely state, that in spite of the general prevalence of syphilis of long standing, I have never seen a case of nerve syphilis in Ovamboland, with the possible exception of a few cases of epilepsy. Without definitely wanting to ascribe the infrequency of nerve syphilis in malarial patients to the presence of malarial parasites in the blood, it yet remains worthy of note.

Another well known clinical observation, seen in most, if not all native races in South Africa, and not merely confined to the Ovambo, is their low resistance to any pyogenic or toxæmic infection, pneumonia in particular being deadly in the native. His resistance to shock or trauma from whatever cause, on the other hand being decidedly again abnormally high as compared with the European. Instances of natives having been mauled by lions, and having their abdominal muscles ripped open with protusion of viscera and great loss of blood, recovering after the most crude surgical help from hunters, are of frequent occurrence.

In the case of tuberculosis I have tried to make it clear how the disease contracted far afield is/  
is/

is being disseminated to other members of the tribe at home, with the certainty of an ultimate wide distribution. In the case of syphilis this stage of widespread infection has already been reached.

According to the evidence obtained from Missionaries who have been in the country for 40 or 50 years, syphilis in the Ovambo native was a rare disease 50 years ago. At that time, due to tribal hostilities no free communication or trade existed between the Ovambo and the Portuguese natives in Angola. Following on European protection and the establishment of peaceful relations between various native races, the Ovambos trading with Angola natives further north, contracted syphilis, infected their wives and probably the wives of several others on their return, and today, as previously stated, fully 60% of the Ovambo race is syphilitic. Gonorrhoea is probably even more prevalent, though more difficult to gauge. Syphilis and gonorrhoea, it may be observed, is a legacy which the Angolan native inherited from his master the Portuguese.

LEPROSY. The same process, in its initial stages may be observed in Leprosy. Elderly natives assert that they never knew of this disease before. Angola on the other hand has many lepers, and to my knowledge there are already twenty known lepers in Ovamboland and probably many more.

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The present state of affairs then, may be more readily gauged by contrasting the mode of life of the Ovambo, before and after European interest in the welfare of the native races, as a whole, in Africa.

Before the advent of the European, he lived strictly under tribal law, constantly in a state of warfare with his neighbours and seldom venturing far from the boundaries of his territory. The sickly and weak, not fit for warriors, were either destroyed or left to the mercy of beasts of prey. Immorality was severely punished and the law of 'survival of the fittest', found full expression here.

Under conditions of peace and European domination, tribal law fell in abeyance or became very slack. Members of the tribe wandered far over the boundaries either trading or looking for work. New diseases were carried back or introduced as instanced in the case of tuberculosis, leprosy, and syphilis. Diseased members of the tribe lived a comparatively protected life and became depots and carriers of disease to others.

The outlook, therefore, under the present state of affairs, considered from an economic point of view should cause uneasiness in the minds of those engaged/

engaged in the opening up of South West Africa for European settlement. An unlimited supply of manual labour is essential. The waste, which must inevitably result under present conditions, must be enormous, not only in numbers succumbing from disease, but also in quality of work performed by invalided natives. As pointed out previously, the native, on account of cheap labour, his ability if healthy, to work under tropical conditions out of doors, impossible to the European, and further his relative immunity to some diseases endemic in the country such as malaria, blackwater fever, typhoid and yellow fever, to mention a few, is of incalculable economic value. But the native must be healthy and able to do a good day's work.

The outlook, medically, is frankly bad. With the passing of time, matters are bound to progress from bad to worse unless wholehearted efforts are made immediately to remedy the state of affairs.

Politically it may be of greater moment than is generally realised. Apart from the responsibilities of administration, under the mandate, for the welfare of the native, there is the universal unrest amongst native races at present to free themselves from European Government. Paid agitators with/

with Bolshevik tendencies, will find it useful for their purpose, to point out the obvious deterioration and disintegration of the native race, under European protection and legislation.

FACTORS/

FACTORS MOST SERIOUSLY THREATENING  
PUBLIC HEALTH AT PRESENT.

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Surveying all the factors treated above which threaten public health in Ovamboland, we find the following the most serious:-

- (i) Natural climatic conditions. Large stretches of open water affording ample breeding ground for anopheles, mosquitoes with universal prevalence of malaria. Bad system of conservation of water in the dry season with the incidence of amoebic and bacillary dysentery.
- (ii) Natural infections in domestic and wild animals. Incidence of anthrax, hydrophobia, malta fever and tapeworm.
- (iii) Ignorance of sanitation and hygiene, prevalence of hookworm, eye diseases and typhoid.
- (iv)/

- (iv) Disruption of tribal life leading to rapid spread of disease when once introduced as in syphilis, tuberculosis, leprosy. Unrestricted consumption of alcohol.

The most serious loss, inconvenience and disruption result in the following diseases:-

- (1) Syphilis. High infantile mortality and abortion rate. Mental and physical deterioration.
- (2) Gonorrhoea. High percentage of disability due to partial or complete blindness.
- (3) Malaria, hookworm and malta fever, produce an enfeebled anaemic and debilitated native, disinclined and disabled for work, leaving his millet fields fallow, and unfit to be employed on European labour.
- (4) Alcohol. The intoxicated native, even more than the intoxicated European, disregards all laws of self preservation; faction fights, promiscuous sexual intercourse, disregard of tribal and administrative laws; moral and physical disintegration, and criminality follow in its wake.

MEDICAL SERVICE AS IT IS TODAY.

These factors are today combated to some extent through the agency of Missionary Societies, subsidised for that purpose by the South West African Administration. Of the three Missionary Societies operating in the territory, namely the English, Finnish and Roman Catholic, two have a Medical Missionary on their staff, viz. the English and Finnish. A small native hospital has been built on the station of each of these, with an out-patient clinique. Treatment is confined mainly to members of the congregation in question although all are welcome. That only a fraction of the native population in need of treatment is reached in this way, will be evident when barely eight thousand natives out of 150,000 belong to either of the Churches. Furthermore, the natives are settled in small localities over an area of over a hundred thousand square miles. The Government subsidy consists of 9<sup>d</sup> per head per day, for every tuberculous patient treated in hospital, plus an allowance of £100 per year to those Missionary Societies with an established treatment centre. For the rest, the expense of treatment is covered by whatever funds these Societies have at their disposal.

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The Government further supply lymph for smallpox inoculation sufficient for 100 doses each month, distributed between the two missionary treatment centres. The district surgeon to the territory, appointed by the Government, examines all natives recruited for labour outside the territory. He has a small dispensary at his disposal on the Government Station, where out-patients can be treated and where drugs are supplied free by the Government. In this way quinine is distributed to natives suffering from malaria when they come under observation. Anti-syphilitic treatment is given to a small proportion of syphilitic patients who are treated when they apply for treatment. This is, admittedly an attempt to remedy matters but, hopelessly inadequate when the magnitude of the problem is studied.

Firstly there is the ignorance of the native and his superstition. Native witch doctors still have a tremendous influence. Generally, until the native medicine man has failed to cure him, the native will not seek medical advice from the European. In the case of malaria and syphilis, especially in syphilitic, pregnant women, the benefit they derive from scientific treatment has been so striking, that they readily come for treatment and appreciate the benefits derived therefrom. Unfortunately it is never possible to/

to go through a proper course of treatment in syphilis, since they fail to come for further treatment as soon as visible signs of the disease have disappeared.

Secondly, there are the enormous distances sick natives have to travel on foot or ox-back to put themselves under proper medical treatment. Further they do not like going out of their particular tribal area into another for any length of time, unless the whole family and household goods can be taken along as well.

Thirdly his disregard of disease in its early stages makes efficient treatment extremely difficult. The native will wait until he is literally falling to pieces before seeking medical advice.

The present system, therefore, is futile and merely a waste of money and time. If the problem is to be solved at all, it should be tackled radically and comprehensively.

Firstly, medical service should be of such a nature, that it is available to all who are in need of it.

Secondly, it should combine the teaching of prophylaxis with the demonstration of the benefits derived from thorough and scientifically/

scientifically carried out treatment of active disease.

To attain this object the mentality of the native should be kept in mind, and his inherent distrust of anything new or which he does not understand. One is struck by the inability of the native to understand why anyone should be interested in his welfare, unless there is some ulterior motive behind it. By tradition he has been brought up to realise that the weaker must go to the wall, unless he is able to fend for himself, and after coming into contact with the white man, he has unfortunately only too often found out that, whatever benefit he may receive in the immediate present, it leads to his exploitation later on.

MEASURES/

MEASURES WHICH SHOULD BE ADOPTED.

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It is nevertheless possible, by establishing an efficient medical service and with tact and knowledge of the special prejudices of the native, to save him from the fate in store for him, should the factors bringing about disease and misery, be tackled at once.

Starting with natives recruited for labour, these should be treated for whatever specific disease they may have. Working under contract as they do gives one a good opportunity of carrying through the treatment until they are cured. At the same time the nature of the disease and the means of contracting and propagating it, should be explained to them. All these natives should be vaccinated against smallpox, examined for hookworm, and treated if necessary. If they contract tuberculosis, they should be treated in hospital until the disease is arrested and then sent to colonies established for that purpose, where they can be under constant medical supervision, and where the well known methods of/

of rest and graduated exercise out-of-doors could be carried out. They could also be taught the dangers of overcrowding and promiscuous spitting.

All natives, working under contract are housed in compound areas, - that is areas set aside and fenced in. Here a number of separate two or three-roomed houses are built for them, several natives occupying such a unit. At night dozens congregate in the same room with doors and windows shut in winter time. Prophylactically, therefore, not only should a rigorous examination be made, before accepting a labour recruit, but periodical examinations should be carried out while under contract. The same applies to hookworm and venereal diseases.

In the territory itself a well organised medical service could be established, in such a way that better use could be made of the Medical Missionaries already in the field. Government Treatment Centres should be established in different parts of the territory, where native medical orderlies could be trained to do the routine work under supervision of medical officers visiting these centres periodically.

Better/

Better domestic sanitation could be obtained by instructing the head men of the tribes what the aim and object of sanitation is, and how to carry it out on lines best suited to the circumstances. In this way it could be pretty strictly enforced. As drainage of standing water is impossible, the only way to minimise the mosquito pest would be the method employed in destroying the larvae in the water with paraffin.

*Drinking ?*

With better sanitation and the active treatment of cases of hookworm, this disease would not be too difficult to eradicate.

Vaccination against the ever-present danger of smallpox could be carried out systematically. The provision at present of segregation and isolation hospitals would not come under the scope of practical politics.

A definite leper colony, where leprous patients could bring their families and farming stock, together with sufficient ground for cultivation must be established. Attached to such a leper colony should be one of the medical officers, so that instruction and treatment with supervision could be carried out on scientific lines.

Furthermore/

Furthermore, the tendency for natives to clothe themselves in European garb should be most strongly discouraged. Owing to their dirty habits they are bound to become infested with lice. Typhus, which is at present unknown in the territory would soon be introduced.

The problem of disease amongst natives, the control and prevention of which is intimately bound up with the success or otherwise of establishing European settlements, to absorb the overflow from overcrowded European countries, affect many European nations. It is, therefore, a problem of international importance. To work in absolute watertight compartments in each territory, without knowing what your neighbour is doing, may lead to waste of time and money and probably failure, through lack of control of the movements of diseased natives, and inability to size up the situation as a whole.

With this end in view, a central medical bureau, representing all European nations having an interest, territorially, in Africa, should be established. Here a wide, comprehensive and correlating scheme envisaging the situation as a whole over Africa, and aiming at co-operation; the exchange of experience/

experience and knowledge, and a definite control of the situation over its wider range, should be drawn up.

SUMMARY/

SUMMARY OF THE SITUATION.

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- I. The progressive deterioration, mental and physical of the native, due to disease which he is unable to combat.
  
- II. The obligation which the European has towards the native as a dependent, and frequently as a victim of European invasion.
  
- III. The economic value of the native in opening up Africa for European settlement, where the European is dependent on the native for labour.
  
- IV. The inadvisability and, probably, the impossibility of European settlement, owing to unhealthy environment created by a diseased native population.

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- V. The urgency of establishing an efficient native medical service on lines indicated.
- VI. The advisability of pooling experience between the various Governments concerned so that a more co-operative and comprehensive campaign may be carried through.

History shows that few if any European civilisations have been able to withstand and survive dark and uncivilised Africa. It may be that medical science will prove to be the talisman.