THE MANCHESTER SHIP CANAL AND THE COLONIAL FRONTIER

The Seventeenth Robert Jones Lecture delivered at the
Royal College of Surgeons of England
on December 8, 1960

H. J. SEDDON, LONDON, ENGLAND

I, alas, met Sir Robert Jones but once. My first attendance at a meeting of the British Orthopaedic Association was his last. I remember it clearly. There he sat in patriarchal splendour, surrounded by his favourite sons, Bristow, Girdlestone, McMurray, Platt and Malkin, to name only a few among them. In those days the Association was a small affair, something of a club; its spontaneity was not blighted by a microphone. We youngsters in the back row noted every word, the astonishing wisdom of Sir Robert's remarks, the geniality that softened the blow of a devastating question.

Later we gathered round him—the attraction was quite irresistible—and he asked us about our work with an interest and understanding too genuine, too friendly to be merely flattering. We felt that we were the grandchildren.

With the passage of time these lectures will be given by men who never even met Robert Jones. This will matter little, for none engaged in the practice of orthopaedics can fail to derive inspiration from the life and work of this great and lovable man. To pay tribute to him, however inadequately, in the precincts of this great College is our most coveted honour.

THE MANCHESTER SHIP CANAL

I would like to recall an event in Sir Robert's early professional life, before he became well known. In 1888, when he was only thirty-one, he was appointed Surgeon-Superintendent to the Manchester Ship Canal. That a Liverpool surgeon should have been chosen to organise a medical service for this vast piece of civil engineering was in itself astonishing, for the hostility of Liverpool to its rival's enterprise only stopped short of open warfare.

With the aid of friends at each end of the Canal, Mr Lloyd Griffiths in Manchester and Mr Goronwy Thomas in Liverpool, I have tried to rewrite this part of the Robert Jones story from contemporary records. In this I have had indifferent success, for two reasons. The medical and other journals had little to say. The British Medical Journal (1889) and the
Provincial Medical Journal (1893) alone gave good accounts. The *Lancet*, faithful to the Wakley tradition, was concerned only with the pollution of the water of the Canal. The one history of the Canal, by Bosdin Leech (1907), although referring here and there to accidents, does not mention the organisation for dealing with them. The *Illustrated London News*, which devoted much space to the Canal (Figs. 2 and 3), is equally silent. The relevant records of the Manchester Ship Canal Company, which might well have been a goldmine, have, alas, been destroyed. Mr Goronyw Thomas has allowed me to examine his collection of some seventy-eight tributes published after Sir Robert’s death. Many are lengthy, but not one mentions the Ship Canal.

Secondly, Robert Jones himself did not seem to have regarded his work on the Canal as out of the ordinary. He mentioned it almost casually in his application (1889) for appointment to the staff of the Royal Southern Hospital.* The article in the *Provincial Medical Journal* (1893) concludes with the tantalising sentence: “We may expect from Mr Jones in the Journal next year a series of articles on the surgery of the Manchester Ship Canal.” They never

*To the Trustees of the Royal Southern Hospital*

My Lords, Ladies and Gentlemen,

I beg to apply for the post of Surgeon to the Royal Southern Hospital, rendered vacant by the resignation of Mr Paul.

For eight years I have been Surgeon to the Stanley Hospital, where I have acquired extensive and varied experience, which has been still further amplified by my appointment as Consulting Surgeon to the Manchester Ship Canal, involving as it does the supervision of three hospitals, each containing twenty beds.

If honoured by your confidence and elected, it will be my constant effort to worthily perform the function required of me.

I have the honour to be, My Lords, Ladies and Gentlemen,

Yours obediently, Robert Jones.

*(Courtesy of Professor O. H. Williams.)*

*H. J. SEDDON*
appeared. Had he not become famous, and had not Watson (1934), in his biography, been at pains to collect information about the Ship Canal affair, the episode might have been completely forgotten.

The salient facts are these. The Manchester Ship Canal, thirty-five miles long, was constructed between November 1887 and November 1893, at a cost of fifteen and a half million pounds. The number of men employed was variously estimated at 14,000 to 20,000. This is what the Manchester folk felt about it when they had paid the bill:

*On the Opening of the Manchester Ship Canal*

> When Orpheus tuned his lyre, he played so well,
> The rocks and trees came down the strain to greet;
> But thou, Mancunium, with a mightier spell,
> Hast drawn great Neptune to thy lordly feet.

New Year's Day 1894

W. Blake Atkinson

As a Manchester man, admittedly rather passé, I applaud these lofty sentiments.

Of the few available accounts of the medical organisation, that written in the *British Medical Journal* (1889) is probably the most accurate: "Our Liverpool correspondent, who, through the kindness of Mr Robert Jones, consulting surgeon to the works of the Manchester Ship Canal, recently had an opportunity of visiting the part of the Canal near Warrington, and of inspecting the hospital at Latchford, writes: . . . The works are divided for medical purposes into eight sections of about four miles each.* A medical man, resident in the neighbourhood, is appointed to each section, his function being to visit at their own homes

* The Liverpool Medical Institution possesses a map showing these sections, but there are nine of them (Fig. 4).
such of the workmen or their families as are sick, and to see them at stated hours at the surgeries which are placed at intervals along the line. There are three hospitals in connection with the Canal, namely, at Ellesmere Port, Latchford, and Barton, intended for the treatment of severe accidents and acute diseases. Each hospital is a substantially built wooden structure. It contains three well-lighted and well-ventilated wards; a general ward, over sixty feet long, a woman and children’s ward, and an emergency ward; an operating room, dispensary and splint room; apartments for the resident staff, laundry, and offices, and can accommodate twenty patients at a push. It is in charge of a resident house-surgeon, a sister, and a trained nurse. A great number of accidents requiring major operations have occurred since the work began, but there has been a remarkable freedom from infectious outbreaks. The whole medical service of the Canal is under the direct supervision of the consulting surgeon, who resides in Liverpool. He performs all major operations, and has the care of the cases in the hospitals. The contractor, Mr Walker, takes a kindly and lively interest in the health and well-being of his men, and the completeness of the arrangements he has made for their relief when the victims of accident or disease testifies to his care and skill in organisation. The works give employment to 14,000 men, all of whom pay a weekly sum which partly defrays the expenses of the medical service."

The location of the hospitals and the place names are a little confusing. The British Medical Journal gives (from west to east) Ellesmere Port, Latchford and Barton; the Provincial Medical Journal names Ellesmere Port, Warrington and Patricroft. This is understandable because Latchford is less than a mile from Warrington, and Patricroft and Barton are contiguous. But at the western end of the Canal Watson places a hospital at Eastham; however, as this village and the locks of the same name are only three and a half miles from Ellesmere Port he may be referring to the first hospital mentioned in the other accounts. He has slipped in giving Latchfield as the location of the hospital near Warrington.

Only one survivor from this great venture is known to us, Dr J. T. Walker of Old Trafford, Manchester. Watson quotes him at length (pp. 67–69) and he has recently (March 1960) written as follows to Mr Lloyd Griffiths: ‘‘I became acquainted with Sir Robert Jones in 1891 when I did a few months’ locum for the houseman at the Southern Hospital, Liverpool, where he was on the staff. He offered me a post of House Surgeon for one of the Ship Canal Hospitals, and I went to Barton for two or three weeks at the end of the year when it closed down as the Canal was finished at the Manchester end. Then at the beginning of 1892 I went to Latchford, a suburb of Warrington, and was at the hospital there till the whole of the Canal was done early in 1894. There were three hospitals, the other one being at Ellesmere Port, but I was never there and don’t know when it closed. We had plenty of work, as accidents

* This was written before the influenza pandemic of 1890–91.
were very frequent. Sir Robert came regularly, and if necessary he came for the more serious cases when summoned by telegraph, there being no telephone then. There were a great many men, and when an accident happened the patient was brought by the canal-side rail. We always knew when a case was coming as the engine had a special whistle so that the way could be cleared. The hospital had about two dozen beds in the large ward and two or three in a small ward. There were two nurses and the matron. The beds were usually full and patients who were not bad enough for admission came for dressings, etc.”

There is no accurate record of the number of accidents that Robert Jones had to deal with. The Provincial Medical Journal (1893) gave the figure as “over 3,000.” The evidence on their severity is conflicting: “A statement having been made by an official of the Navvies’ Union that 1,000 to 1,100 men had been killed during the construction of the Canal, 1,700 permanently injured and 250 partially injured, Mr Bird of the Master Builders Association, in giving evidence before the Labour Commission, gave the correct figures as: 130 killed; 165 permanently injured; 997 slightly injured. For these, ample medical and hospital accommodation had been provided.” (Leech 1907).

There can be no doubt that Robert Jones was kept very busy. We must remember that he undertook this work in a part-time capacity, that it called not only for great versatility and courage but for ability to organise and to command the loyal service of a fair number of people. And he was only in his thirties.

I believe that Watson is right in his view that: “For Robert Jones it was like a rehearsal in miniature for what was then not even a cloud the size of a man’s hand,” the first world war. For this reason alone the medical service of the Manchester Ship Canal deserves to be remembered.

THE COLONIAL FRONTIER

I come now to my second theme. I wonder if you will agree with me that it has some connection with the first. If Robert Jones were alive to-day I think he would be interested in what may be called the frontiers of orthopaedics and the surgeons holding them, many of them men after his own heart. Most of them are young and not well known, though some have already achieved distinction. Many work under conditions that recall the medical service of the Ship Canal. And so that it may not be said that “some there be which have no memorial, who are perished as though they had not been” (Ecclesiasticus, 44, 9) I am going to devote the rest of this lecture to describing these pioneers.

They are all overseas. In this country a young surgeon may start a department from scratch. He may feel isolated, but he can always find a colleague within seventy miles and there are meetings that he can attend from time to time. Furthermore, the social and economic background is fairly uniform; the pattern of development of his work is well established.
It is otherwise in many British territories overseas. One could say much about pioneer work in the older of the great independent countries of the Commonwealth, in India and Pakistan, but time does not permit. They deserve a lecture to themselves. I must limit myself to colonial or recently colonial territories, most of which lie in what our forefathers described as the torrid zone.

TABLE 1

<table>
<thead>
<tr>
<th>Area</th>
<th>Population</th>
<th>Number of physicians</th>
<th>Population per physician</th>
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<tbody>
<tr>
<td>Africa</td>
<td>210,832,000</td>
<td>23,284</td>
<td>9,055</td>
</tr>
<tr>
<td>North and Central America</td>
<td>234,276,000</td>
<td>259,664</td>
<td>902</td>
</tr>
<tr>
<td>South America</td>
<td>121,000,000</td>
<td>48,263</td>
<td>2,507</td>
</tr>
<tr>
<td>Asia, eastern</td>
<td>1,370,821,000</td>
<td>209,688</td>
<td>6,537</td>
</tr>
<tr>
<td>Asia, western</td>
<td>82,529,000</td>
<td>16,951</td>
<td>4,869</td>
</tr>
<tr>
<td>Europe</td>
<td>619,707,000</td>
<td>665,522</td>
<td>931</td>
</tr>
<tr>
<td>Oceania</td>
<td>14,234,000</td>
<td>12,427</td>
<td>1,145</td>
</tr>
<tr>
<td>World total</td>
<td>2,653,399,000</td>
<td>1,235,799</td>
<td>2,147</td>
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The way we describe a country of this sort depends on our outlook. The superior white man, still not extinct, calls it backward. The business man or economist, thinking of plantations, mines, factories, roads and railways, calls it under-developed. The man with no egotism or technical expertise, looking at things dispassionately, realises that the outstanding feature is poverty. Not that the people are starving: that is rare nowadays, but the standard of life is low and—this is important for medicine—the revenue of the country is very small by our standards.

Uganda, with some justification, is often regarded as a model country. It is well off in comparison with many other territories. Here are some figures. In 1959 the revenue was 25 million pounds, of which one million pounds was contributed (Colonial Development and Welfare) by the United Kingdom for capital projects. It has been found that, if other equally important services—education, agriculture, animal husbandry, forestry and communications—are not to suffer, the proper allocation for medical services is about 10 per cent; in this country it is about 4 per cent of the total revenue. In Uganda the medical budget for 1959 was £1 million pounds; the population is six and a half million and this works out at about eight shillings a head compared with £11, 14s. 0d. a head in the United Kingdom—nearly thirty times as much. Let us consider it another way. There are now 400 practising clinicians in Uganda. This number needs to be increased to 900 in order to achieve one-tenth of the ratio in the
United Kingdom. By 1965 Makerere College, which serves the whole of East Africa, may be turning out twenty-five Uganda medical graduates a year. At this rate, if not one of the present clinicians in the country retired or died, it would be 1980 at the earliest before even the modest one-tenth of our ratio was reached. And their salaries must be found too. The fearful lesson provided by certain Latin countries cannot be ignored; if the economic status of the profession is lowered, its standards fall and the public suffers.

One more comparison (Fig. 5). The hospital beds in this country average 6·5 per thousand excluding beds in mental hospitals. In Uganda the figure is 1·32; and it is only 0·83 per thousand if dispensary beds (no nursing, and the patient's relations must bring his food) are excluded. And the burden of sickness is far heavier than here. This is in “prosperous” Uganda.

Conditions on the Ship Canal were similar: sixty beds for what, with the navvies' families, must have been a population of not less than fifty thousand men, women and children. The medical service was for every kind of ill—as much for pneumonia, rheumatic fever and “Russian” influenza as for injuries.

**PREVENTIVE SERVICES**

Now we come to some of the diseases that the doctor in a tropical country must tackle. The worst scourges are indicated by capitals:

<table>
<thead>
<tr>
<th>Parasitic disease:</th>
<th>MALARIA</th>
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<tr>
<td></td>
<td>HELMINTHIAISIS</td>
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<td></td>
<td>Trypanosomiasis</td>
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<td>AMOEBIASIS</td>
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<td>Bilharzia</td>
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<td>Filariasis</td>
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<th>Spirochaetal, bacterial and virus diseases:</th>
<th>SYPHILIS</th>
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<td></td>
<td>GONORRHOEA</td>
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<td></td>
<td>Yaws</td>
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<td></td>
<td>TUBERCULOSIS</td>
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<td>LEPROSY</td>
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<td>Tetanus</td>
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<td>Smallpox</td>
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<td></td>
<td>TYPHOID FEVER</td>
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<td></td>
<td>Bacillary dysentery</td>
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<th>Diseases causing blindness:</th>
<th>Trachoma</th>
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<tr>
<td></td>
<td>Ophthalmia neonatorum</td>
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<td></td>
<td>Onchocerciasis</td>
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| Nutritional disease: | Kwashiorkor |

It requires no prolonged contemplation of this abbreviated list—it does not include yellow fever or plague—to appreciate that preventive medicine is of the utmost importance in the tropics. Indeed, the greatest triumphs have been in this field: the European now visiting a tropical country, if he observes a few simple precautions, can remain in good health. Some of you, like myself, have visited the cemetery in Calabar to pay homage to Mary Slessor who is buried there. She lived to a good age, but it is sobering to read the inscriptions on many other tombstones. Most of those who lie there died young. It is not very long since tropical Africa and other equatorial regions treated native, settler and visitor with impartial severity.

But this great work of prevention, which demands constant vigilance, has to be paid for out of the modest budget that must cover every kind of medical activity. You may well ask how anything can be spared for curative services.
MEDICAL ORGANISATION

A striking feature of colonial medicine is the part played by local medical auxiliaries under the supervision of a few qualified medical officers. Much of the health work is done by native health inspectors and the less highly trained hygiene orderlies. On the curative side most of the primary medical care is provided at dispensaries or at the more comprehensive health centres. The latter are now replacing dispensaries and they have the following functions: 1) health work and education—for example, housing improvement, water supplies, sanitation, and the control of malaria, tuberculosis and other communicable diseases; 2) domiciliary midwifery; and 3) minor medical treatment. The staff of a health centre may number up to seven people and is entirely indigenous.

CURATIVE SERVICES

The man responsible for the minor medical work, the general practitioner in fact, is usually called a medical assistant, and his training is thorough. He treats minor ailments, and refers more serious cases to a medical officer. In Zanzibar there is a remarkable little book, one half of it about what the medical assistant should deal with, the other on the recognition of conditions that should be dealt with at a hospital. In Dar-es-Salaam, the congestion of the out-patient department at the central hospital has been abolished by the institution of well run out-patients clinics in various parts of the town, each staffed by medical assistants and visited daily by a medical officer who sees patients requiring his attention.

Above this widespread system for primary medical care is a three-decker hospital organisation. 1) In the capital city there is a large well equipped hospital, with senior clinicians, called specialists in the colonial medical hierarchy. This is the territorial medical court of
appeal. 2) The country is usually divided into provinces for administrative purposes, and in each there is a provincial hospital where one usually finds a physician, surgeon and obstetrician with appropriate higher qualifications, but not enjoying the status of specialist. 3) In each province there are districts and each has a hospital in direct touch with dispensaries or health centres. The work done in every grade of hospital is of a kind that would tax the versatility and energy of an experienced clinician in this country. Injuries are formidable, malignant disease is often far advanced, tuberculosis is like a great avalanche, the complications of pregnancy are of the greatest gravity. In this welter of appalling morbidity there is little room for therapeutic refinements. Yet it is in this grim environment that these pioneers are doing their work.

The roles of the three types of hospital—central, provincial and district—are illustrated, very simply, in Figure 6 (Seddon 1959). The district medical officer must be expert in dealing with the commoner conditions, even though their treatment may be difficult. Injuries are frequent: fractures, many open and grossly infected; burns, often extensive; and bites, of lions, leopards and snakes, and sometimes human, usually causing severe infection. The man who deals with these things will also have to repair a ruptured uterus or unwind a volvulus. Yet this is only a part of his work. He is responsible for preventive medicine and for public health, but above all he must be a friend of the people and welcome in their homes.

It is the business of the provincial clinician—at the provincial hospital, medicine, surgery and obstetrics are differentiated—to help his district colleagues with the more serious emergencies. One provincial surgeon I know, Keating in Mombasa, runs an efficient flying squad. In addition, the more complex cases are sent to the provincial hospital and here one sees specialisation beginning to take shape. Gillespie in Nakuru, Kenya, deals skilfully with skeletal tuberculosis. Incidentally, there is a ward in his hospital dedicated to Robert Jones. This same surgeon, like Hugh Owen Thomas, has his own workshop and makes apparatus for his patients.

At the central hospital, in the capital city, specialisation is more apparent. Nevertheless, the man with a leaning towards, say, thoracic surgery, important because of the prevalence of tuberculosis, or orthopaedics, important because of the volume of work, often remains a general surgeon. It is better to have two men specialising part time than, say, one orthopaedic surgeon and one general surgeon. It is then possible for the work to be covered if one man is away on tour or on leave; and with two men any tendency to megalomania—not uncommon in specialists—is counteracted. Thus in Nairobi we find a progressive orthopaedic service in the King George the Sixth Hospital, but as a part of general surgery.

Those who work in the central hospital have a responsibility towards the curative services as a whole. They must provide facilities not available elsewhere in the country—in orthopaedics, for example, a workshop for the manufacture of braces and artificial limbs—and they must shape clinical policy. What, in the particular circumstances, is the best way of dealing with tuberculosis? What is the simplest and safest way of treating a fracture of the shaft of the femur? What is the best method for dealing with chronic osteomyelitis? In neural leprosy what type of reconstructive surgery is worth while? There may be special problems, such as fractures, particularly of the spine (Fig. 7), in those who climb oil palms, coconut palms and clove trees. A harness (Fig. 8) (Newman and Wilson 1960) can reduce the hazards of climbing a palm. But no such apparatus is of the slightest use on the fragile branching clove tree; all I could think of for this was a carpet of well stuffed sacks round the tree to break the fall of the unwary.

Here, at the centre, clinicians somehow find time for research, though at the periphery too, where the pressure of work is even greater, I have come across men carrying out clinical trials with commendable precision or engaged in field epidemiology, like Pickles of Aysgarth.

This, roughly, is the pattern in Africa with its great shortage of doctors. In this respect, as in many others, it is the poorest of the continents, as the following table (Teamwork for Mankind's Well-being, 1959) shows (Figs. 9 and 10).
A few of the patients in the little island of Pemba who broke their spines while picking cloves. These were the fortunate ones; all those who suffered damage to the spinal cord died.

The harness for the protection of men climbing palm trees devised by Newman and Wilson. (By permission of the authors and of the Editor of the British Medical Journal.)
Nevertheless, medicine has become more differentiated elsewhere. Let us consider orthopaedics. In Singapore there is a Chair of Orthopaedics in the University of Malaya; there is a Readership in the University College of the West Indies; there is a Senior Lectureship in the University of Hong Kong; and there are Lectureships in the University of Malta and in the University Colleges of East Africa and of Nigeria. The young surgeon on the Ship Canal would have been glad to know that a number of the men I am describing were Liverpool trained. In addition there are surgeons unconnected with teaching centres devoting themselves wholly to orthopaedics in Malta, Ceylon, Malaya, Singapore, Hong Kong, Mauritius, Nigeria, Southern Rhodesia and the West Indies. There are a few orthopaedic hospitals, similar to those we know so well here. Like ours they have arisen in response to a special need.

May I now take you round the world with glimpses of some of the more notable places? Malta comes first and for me this will always be so for it was there, in 1943 (Seddon, Agius, Bernstein and Tunbridge 1945; Agius, Bartolo, Coleiro and Seddon 1945), that my enthusiasm for this work overseas was aroused. A. J. Craig was its first orthopaedic surgeon and is now Professor of Surgery in Malta’s venerable medical school. His able lecturer in orthopaedics is V. P. Amato. Aden has a small medical service, but important in relation to the two Protectorates and to the Yemen. The standard of surgery—including orthopaedics—is high, thanks to the efforts, in recent years, of Arthur Tucker; and the Royal Air Force maintains a medical station of exceptional quality.

In Mauritius the great poliomyelitis epidemic of 1945 (McFarlan, Dick and Seddon 1946; Seddon, Hawes and Raffray 1946) made it imperative to organise an orthopaedic service. The man who took over from me and built it up, during a three-year secondment, was J. M. Fitton of Leeds. André Bathfield, a Mauritian, was the first man to be given an established appointment as orthopaedic surgeon, and he presided over the birth of the splendid Princess Margaret Orthopaedic Centre. He has recently been joined by a fellow-countryman, N. L. Teck Kem (Figs. 11 and 12).
Two excellent men are in Colombo, Ceylon: G. M. Muller and J. F. Silva.

J. A. P. Cameron was Malaya’s first orthopaedic surgeon, stationed in Kuala Lumpur. A. M. Ismail is now working there. In Figure 13 Cameron is in the company of Sir Henry Gurney, that gallant Governor who was murdered by bandits in 1950. The standard of medical care revealed in Figure 14 was achieved within two years of the defeat of the Japanese. Cameron was also the first professor of orthopaedic surgery in the University of Malaya. He was soon joined by a Swedish surgeon, A. G. Karlen (Fig. 15), who had distinguished himself with the Red Cross in Korea. He succeeded Cameron as professor in 1956, and is ably assisted by his lecturer, D. R. Gunn.

In Hong Kong A. R. Hodgson (Fig. 16), Senior Lecturer in Orthopaedics, in collaboration with F. E. Stock, the Professor of Surgery, has made his mark in the radical treatment of tuberculosis of the spine (Hodgson and Stock 1956).

John Golding, Reader in Orthopaedics in the Medical School in the West Indies, deservedly enjoys a reputation extending far beyond the Caribbean. There is no aspect of orthopaedics in the tropics that has escaped him. Farther south, E. L. R. Robertson (Fig. 17) in Trinidad has given that island a very good orthopaedic service.
Now across to Africa. The first orthopaedic hospital in the British colonial territories, at Igbobi, just outside Lagos, the Nigerian capital, was established by T. L. Lawson whose early death we still mourn. Then A. F. Bryson (Fig. 18) in Kano provided the first orthopaedic service for the twenty million people in the north, and early this year his orthopaedic hospital was opened (Fig. 19). At Ibadan, in the Department of Surgery, P. G. Konstam (Konstam and Konstam 1958) startled us a little by showing that when hospital beds are too few it is possible to treat spinal tuberculosis effectively by ambulant means.

In Tanganyika a start has been made, and under the direction of Walter Kerr in Dar-es-Salaam an orthopaedic department is taking shape.

In Kenya orthopaedics has prospered. In Nairobi Kirkaldy-Willis (Fig. 20), a distinguished pupil of C. V. Brainbridge (Fig. 21), the father of surgery in Kenya, is the head of a flourishing department and, in addition, adviser in surgery for the whole of the country. I have already referred to Frank Gillespie and his workshop in Nakuru and to the versatile Stephen Keating in Mombasa.

In Uganda the policy until recently has been against any differentiation of orthopaedics. At the Medical School in Kampala the surgery of the locomotor system is rightly presented to the African student as a part—it accounts for one-half—of general surgery. Yet the surgeons in Kampala, Ian McAdam, now Professor of Surgery, and his colleagues (Fig. 22) have all made valuable contributions in orthopaedics. Even so Makerere has now appointed its first lecturer in orthopaedics, R. L. Huckstep.

Lastly, the Central African Federation. E. J. Nangle in Salisbury is in demand from Beira to the Copper Belt, and orthopaedics is growing up in Bulawayo too.

It is my good fortune to know all but two of these men, as well as others whom I cannot mention by name because time does not permit.
An orthopaedic ward in Kuala Lumpur, about eighteen months after the end of the war against Japan.

But it would be unjust to ignore men from countries outside the Commonwealth who, in one capacity or another, are doing good solid work. I found a charming Austrian working alone in a little town on the Kenya coast. He was responsible for everything, and having worked at one time with Böhler he treated fractures—without the aid of x-rays—in strict accordance with the inspired word; and he did it very well too.
Fig. 16
A. R. Hodgson, Hong Kong. Walk or ride?

Fig. 17
E. L. R. Robertson, Trinidad.

Fig. 18
A. F. Bryson (centre).
FIG. 20
The staff of the orthopaedic centre in Nairobi in 1952; Kirkaldy-Willis is in the back row at the right.
C. V. Braimbridge.

The surgeons at Mulago Hospital, Kampala. Left to right: standing, J. Cook, R. L. Huckstep, H. F. Lunn; sitting, D. P. Burkitt, I. W. J. McAdam, Professor of Surgery, J. S. Darling.

H. N. Davies, pioneer in the treatment of pulmonary tuberculosis in East Africa. In 1950, when this photograph was taken, the wards of his hospital at Kibongoto, on the slopes of Kilimanjaro, were no more than thatched shacks erected by patients.
I have seen many of these surgeons at work. I have had the privilege of being responsible for the training of some of them. They are splendid people. They wrestle with a Sisyphean load of work, often with indifferent help and the simplest equipment. In these countries the little hospitals of the Ship Canal exist to-day. Many patients come to them with advanced and hideous disease. Some scourges that we have almost mastered, such as tuberculosis, are still rampant. Yet long before the days of chemotherapy, one of the heroes of medicine in East Africa, Norman Davies (Fig. 23), challenged the prevalent view that pulmonary disease in the African could not be treated. Then surgeons there and elsewhere set to work on skeletal tuberculosis, and in this field we must now learn from them. In some places there is even a turn in the tide, as in Hong Kong. The successful treatment of leprosy has opened the door to the reconstructive surgery of the neural form of the disease, of which Paul Brand in India is the greatest exponent.

These surgeons have a shrewd understanding of what is worth while. Their aim is and must be the greatest good for the greatest number. They have an uncommon amount of commonsense.

Fig. 24
THE MANCHESTER SHIP CANAL AND THE COLONIAL FRONTIER

THE FUTURE

On August 3, 1914, Viscount Grey said: "The lamps are going out all over Europe." To-day the lamps of colonial rule are being extinguished, though in circumstances not of dire tragedy but brightened by faith and hope. An era which with all its faults has brought great benefits to millions of poor people is drawing to a close. Yet it was unnatural, it could not last. The voice of its prophet, Kipling, is no more than a fast-fading echo.

We believe we have found a better way which, we trust, may endure—the association of nations called the Commonwealth. As in a family the ties are mutual respect, understanding, self-sacrifice and common interests. We cannot see far ahead, and our power to influence the future is very limited. But one thing is certain. If we do not lose the love of adventure, the devotion and other-worldliness that animated many of our forebears who helped to build our once great Empire, this country will still gather to itself the loyalty and affection of countless men and women of every race and colour. In this great work we as surgeons have our part to play.

It may seem a far cry from the grime and clangour of canal construction to the silent rivers, the vast lakes, the deserts, the sombre forests, the hamlets and the busy towns of the tropics. But in all the work of the medical pioneer is the same.

And the young man who laboured in obscurity on the banks of the Mersey seventy years ago, and whom we remember today, is the exemplar of other young surgeons who are now his followers in distant lands.

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REFERENCES