

## INTRODUCTION

In universal terms, medicine is rooted in the anthropological, cultural, socio-economic and ecological environment specific to each population. Consequently it reflects many facets of public health that necessitate a diversity deserving attention and respect.

### *The introduction of western medicine into Central Africa*

The small number of medical pioneers practising in Central Africa at the end of the 19th century had to face countless challenges in this unknown territory. The sum total of their ignorance could not be better illustrated than by the blank areas on maps of the period.

Faithful observers of the Hippocratic oath, they set great store by the duties of their profession. This enabled them to acquire, through action rather than research, the know-how essential for solving unusual problems. They combined great daring and prudence, as they encountered the life-styles of black African communities and their unfamiliar customs.

Their field of action covered a polarized world. At one extreme were populations who stayed outside the mainstream of the modern world's development and continued to lead lives governed by apparently strange traditions. At the other extreme was Europe which, having mastered the seas and technology, had granted itself the right to increase its holding of world territory. The great powers of the time — Britain and France — were preparing to carve up the African continent still further, but without unduly disrupting their existing connections. Britain's dream of extending her imperial hold from the Cape to Cairo was thwarted by France's attempts to acquire an east-west link from Libreville to Obok. The former great powers, Portugal, Spain and the Netherlands with their experienced colonizers, were (at best) tolerated as equals, as were also the newcomers: the Germans, Italians and Belgians.

The native populations, decimated by disease, tribal rivalries and slave-trading, were naturally fatalistic, and were considered unable to escape unaided from the vicious circle of poverty, hunger and ill-health. Helping them to do so was thus a duty. No one yet suspected that this apparently primitive life-style devoid of modern technology might hide a cultural heritage worthy of respect and of which use could advantageously be made.

The Europeans, convinced of the universal value of their culture, believed their form of civilization offered the means of bringing progress to Central Africa — if the people could be westernized, assimilated,

culturized and, in essence, de-Africanized. This left all initiative to the colonizers and implied a passive acceptance on the part of the colonized who, at least to all appearances, generally offered little resistance to the newly introduced concepts.

The first colonial doctors were courageous but lonely men, strongly opposed to conventional methods or slackness. They were responsible for the health of the other pioneers and their entourage. Stimulated by the life breathed into medicine by the recent birth and rapid growth of microbiology, immunology and chemotherapy, which gave hope that the *therapia sterilisans magna*, absolute weapon against all infectious diseases, would soon be discovered, they attempted manfully — and not unsuccessfully — to deal with the most pressing needs.

### *The colonial medical officer*

The colonial doctor, motivated by these encouraging prospects, learned the natural history of communicable diseases. No relevant factor was overlooked. As the numbers of professional health personnel increased, field surveys began to discover the problems experienced by the local inhabitants. This led to an increased concern for villagers and to the launching of research programmes.

The medical officers, graduates from western colleges, were convinced that their role in the Central African health system was a crucial one, but the subordination of their function to the administrative personnel contradicted — or even negated — their technical responsibility. Their superiors saw them only as dispensers of medicines and of repatriation certificates, or as deputies to help and replace them in their administrative tasks. Aware of the importance of their medical and scientific duty, these doctors investigated local diseases with the objective of improving substantially the development of the colony.

Because of the lack of infrastructure and of qualified auxiliaries the first generation of doctors had to become builders and instructors. They were above all *field-workers*, anxious to put their professional knowledge to best use within the existing paternalistic context. This allowed them to provide health care to the local inhabitants in an orderly way.

These bush practitioners faced risks of disease as well as physical disadvantages; but also compensation in the form of true professional satisfaction that only trail-blazers can fully understand. They made valuable observations in the field of health and human sciences.

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Daily contact with the reality of African life greatly tempered their belief in the general theory that all attempts to adapt to the sociocultural conditions of African society were useless, if not erroneous. Local traditions might be hard to understand, but it was clear that this made them no less valid. They showed their vitality at the critical moments of life such as birth, development, disease and death — in all of which medicine is called upon to play a part.

Sociocultural factors have acquired new importance since the World Health Organization (WHO) began recommending that western and traditional medicine be associated, in order to make *health for all* a reality as soon as possible. The impact of alternative medicine has been a source of concern for doctors of all generations. Some saw it as entirely harmful and a form of competition that threatened the patients. For example, the healer, considered to be a danger and an enemy, was never considered a desirable auxiliary. On the other hand, the legislators recognized the existence of healers, and limited their action only in so far as it conflicted with the maintenance of public order and with international law. Some practitioners appreciated their usefulness, realizing that social anthropology provided a vital basis for the correct application of psychosomatic medicine, whose impact on African medical practice it would be folly to ignore. The psychiatrists were the first to understand all the benefits they could gain from a good collaboration with the healers. Moreover, no-one disputes that health education can be fully effective only if sociocultural adaptation, pushed forward to the point of cultural assimilation, allows it to be accepted by the parties concerned.

Experience acquired in the bush, the importance of which cannot be overemphasized, contributed to the advance of medical science, and particularly to the discovery of river blindness (onchocerciasis) in Africa and the description of its typical lesions.

Careful observation and the scientific study of the peculiarities of diseases in Central Africa were much encouraged by an administrative ruling that doctors and health officers in the Belgian Congo should — after six years of service and if they wished to be promoted up the State career ladder — take a refresher examination in tropical diseases accompanied by the submission of a thesis. This so-called *Examen B\**, which took place before the jury of the Prince Leopold Institute of Tropical Medicine in Antwerp, gave the doctors the incentive to break with routine and to undertake observations and research in their own areas of interest. It also contributed greatly to the

(\*) The *Examen B*: a degree with dissertation at the Prince Leopold Institute of Tropical Medicine, Antwerp; unpublished, available at the library of this Institute.

production of original theses. The quality of the data collected often under rudimentary conditions, was sometimes astonishing.

An aspect of tropical medicine deserving special attention is the fact that tropical diseases offer a particularly encouraging terrain for doctors and other health workers. The aetiology can usually be diagnosed accurately and by means of simple techniques. The specific treatments are surprisingly effective; and the wealth of biological, chemical and physical means of prevention is remarkable. Even before the age of sulfonamides and antibiotics, the physician working in tropical regions had considerable assets; which channelled him almost automatically towards the field of epidemiology in preference to other medical disciplines. This tradition of identifying and monitoring common endemic diseases continues, since a climate of constant research is stimulating and productive.

Patient-care is the traditional and familiar duty of all doctors. Curative medicine needs only consulting rooms and beds for the patients. Their quantity depends on demand, and on the equipment, finances and staff available. This individualized medicine has developed steadily, and has gradually assimilated all technical innovations, which is by no means surprising, since it is an area of medical and health activities that is personally of interest to the administrators.

The general practitioners had gradually to rely more on specialists in various fields or clinical sub-branches of medicine. They did not confine themselves to staffing hospitals, clinics and polyclinics, but were active in a great deal of scientific research and produced many high-quality publications and theses. Such achievements should be neither overlooked nor lost.

While it is true that health is priceless, the cost of medicine (especially specialized medicine) is high, and its application is necessarily limited by budgetary resources. Consequently the benefits offered by increasingly sophisticated services are only enjoyed by certain social strata. The colonial medical service showed great realism in allocating its attributes.

### *Mobile medicine and auxiliary personnel*

The health of the rural and suburban populations raised a new problem for doctors: the sheer numbers of people to protect. The magnitude of the needs meant abandoning the one-to-one consultations current in individualized medicine, and required the development of an active screening system while ensuring an extension of the health care network. This in turn called for a strict division of labour and the delegation of much of the practical work to auxiliaries, qualified or not. This innovative approach was a complete

revolution in medical thinking. With their backs to the wall, the doctors had the courage and imagination to take on this very difficult course of action.

The African staff, when properly trained, proved very efficient, and carried out precise, repetitive tasks successfully, as long as they had clear instructions supplemented by regular supervision and continuous training. Their numbers were swelled by a spontaneous generation of volunteer medical aids from missionary circles. This phenomenon gave rise to the *agent sanitaire*, a genuine health officer, who would play a decisive role in extending the public health network to the entire population (see p. 113).

This shift in the approach to medical practice meant leaving the hospital's hallowed halls and developing innovative methods or health care. However, innovation did not mean inconsistency. The development of strategies, screening schemes and standardized treatments was essential to success, as was the organization of teamwork, transportation, housing and other logistics. Methods had also to be included that would ensure the indispensable participation of the communities themselves. These conditions could not reasonably be met without a thorough analysis of the needs and tasks at hand.

The system was implemented intelligently by doctors impatient to bring relief to a tedious routine. They ferreted out mistakes and touched up or corrected their methods when necessary. This process of constant assessment and improvement was admittedly empirical, but all the more effective because it was performed live, nor should the advantages of inter-team emulation be forgotten.

All this corresponds generally to the establishment of a system of mobile medicine which was harshly criticized by the theoreticians, who believed their ideas about public health to be the only valid ones. Despite this opposition, practice in the field proved that the mobile teams were (and still are) necessary in a considerable number of specific circumstances. The field experience gained by these flying squads prefigured the later basic health services (BHS) and primary health care (PHC), since vertical action became far more acceptable and credible when accompanied by a growing spread of communal out-patient facilities. These, in their turn, led to the network of rural dispensaries set up in the Eastern Province and the Lower Congo Province, from 1930 onwards.

Their contact with the rural Africans made the doctors aware of the surprisingly complex structures existing within these societies who sought to live in harmony with nature. The discovery of the community-based dimension of health and the fact that sociocultural groups existed caused the mistaken presupposition of a cultural void to be corrected.

### *The pitfalls of colonialism*

The doctor intervenes at crucial moments of human life: birth, sickness and death. He knows that, even when medicine can no longer help, he will, by the nature of his function, remain the last resort of the patient and the patient's family. This transcends the role assumed by western medicine when it limits the value of medical acts to that of intellectual exercises. With the aim of treating the disease more effectively, western medicine removes the patient from his environment and family and expects him to turn over to the doctor all responsibility for action. The art of healing becomes a type of intellectual technology seeking to dominate nature. Westernization creates a dichotomy between the secular and the sacred domain.

Traditional African medicine treats the patient in his family, in his community, and on the basis of a spiritual relationship which will accompany him right to the end.

The doctor is perplexed by the confrontation between medicine learned in the west and socio-cultural attitudes whose meaning he does not understand. While medical aspects may be universal, the sociocultural aspect has countless facets. Africa's cultural roots were difficult to understand and many fanciful interpretations resulted from the few early attempts to do so. This obstacle was only partly overcome and much later, notably through the work of Father P. Tempels\* and other ethnologists.

Anyone who has spent time among people of a so-called primitive culture knows that this background does not exclude intelligence which may be extremely sharp, surprising memory, astonishing powers of observation and remarkable common sense. Their behaviour also involves courtesy and *savoir-vivre*. The "*hodi*" with which the visitor announces himself and the "*karibu*" which invites him to get nearer reveal the contrast between the distinguished Swahili manner and the lack of consideration or boorishness of the person who enters a hut without seeking permission to do so or making himself known.

The African lives in a hostile environment. He is constantly on the lookout for events that he must endure without a plausible explanation. It is thus understandable that he attributes them to supernatural causes; and he feels the need to call on people recognized by the community in order to contact the Supreme Being or the world of gods and ancestors. The living becomes no more than a link in the chain between the ancestors and the as yet unborn; and, as such, the individual belongs to the group. In this context sickness and health care are experienced

(\* ) P. TEMPELS (1945), *La philosophie bantoue*, Lovania, Elisabethville (presently Lubumbashi), out of print.

quite differently, as the individual is secondary to the community.

The human being incorporates facets of his physical and social environment. The mountaineer differs from the countryman, the shepherd from the farmer, and the forest-dweller from the bushman. Human ecology is in tune with its biocenosis. Tradition is stamped in the group's flesh and blood, and behaviour is influenced by the past, which has a symbolic value.

All these elements must be part of — and find their balance within — a natural harmony. If the relationship among them is upset, a disharmony results that may lead to illness. In such a context the doctor's role could not be limited to combat precise aetiological influences. Medicine is part of a sociocultural, economic and political whole, in which the most modern medical practices and scientific knowledge about pathogens, molecular biology and pharmacological mechanisms will be of little use — or almost none — when faced with the complexity of psychological and sociocultural problems.

The respect for African cultural values, often disconcerting for the westerner, forces the doctor to place his professional practice within a halo which links medical and health problems to the life-style, habits, traditions and cultural concepts of the community. Confronted with these complex situations, the doctor should be careful neither to overestimate the western approach nor to underestimate cultural and anthropological constraints. His authoritarian instincts must give way to an attitude of understanding when the community or its members express their hopes and pressing needs. To be more heedful of basic African values, he must also adopt a stance which is neutral, rather than intransigent or hostile, towards healers and the practitioners of traditional medicine.

#### *Community involvement and health education*

Any health promotion inevitably involves effective participation by the parties concerned. For their information to be accessible to these recipients, health programmes and activities must be grafted onto the population's heritage of African mentality and traditional values.

Doctors, health officers and auxiliaries strove to find techniques that would transmit their message. They tried various methods: talks, drawings, trapping and dissecting disease-vectors and revealing the living pathogens they harboured, and demonstrating village drainage operations and drinking-water supply systems. More elaborate techniques — flannelgraphs, slides and films — were also used, but were not necessarily more productive than the simpler and more direct methods such as discussion, story-telling and

flip-charts, especially if the latter were accompanied by a commentary suited to the audience.

Some scattered trials revealed criteria for choosing the most appropriate methodology, as follows:

- dialogue should not be carried out only with the authorities, literate classes and teachers;
- the poorly-known and variable threshold of acceptability is definitely rising, as a result of the more widespread use of transistor radios;
- themes should be presented in a simplified and lively manner, and repetition is quite useful;
- communication is easy to establish, for Africa is the continent of verbal contact;
- enthusiasm for empty words and slogans will lead to disappointment.

Moreover lasting results can come only via the participants themselves. The motivating power of charismatic educators is limited, as are the improvements newly-confident villagers can achieve. Overstep these bounds and you are building on sand, a fact that has been proved on numerous occasions. To promote a sense of personal responsibility is better than to impose solutions, and infinitely better than to tell the villagers what their needs should be.

#### *Research*

For a health service to be built on solid foundations, scientific investigation is essential. The importance placed on medical research by the African International Association and the Belgian Society for Colonial Studies of the Congo Free State from almost the very beginning, even in the 19th century, is remarkable. To create a research laboratory first at Boma and then in Leopoldville, and to hire (so many years ago) first one and then two full-time doctors from the still very meagre medical corps to work there, were proofs of this concern.

The laboratories performed analyses, prepared vaccines, conducted the methodical study of diseases and tested new treatments. The Belgian staff were quickly supplemented by Africans, trained on the spot. Of these assistants, the microscopists proved exceptional.

The takeover by the Belgian State did not disrupt this well-established work. The Leopoldville laboratory and the embryonic Pasteur Institute in Elisabethville found their place in the Colonial Medical Service. Their coverage of the territory was extended gradually by the creation of provincial laboratories. The optimal scientific output was never attained, for as the health services expanded so the routine work became more time-consuming. Luckily African sleeping-sickness escaped this pitfall, although research in this area developed more through the particular interest of investigators than as a result of planning.

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Many of the laboratory doctors managed to strike a balance between routine tasks and research. The latter was usually aimed, quite logically, at problems that had cropped up in daily work or during epidemics. Interest thus focused on malaria, intestinal parasites, schistosomiasis and filariasis. In addition, surveillance programmes and studies of bubonic plague, yellow fever and poliomyelitis were carried out. However, little by little scientific research unfortunately lost ground in the hierarchy of medical priorities, although the number of doctors rose steadily.

The Prince Leopold Institute of Tropical Medicine acted as a catalyst from its premises at Brussels and Antwerp; but the ministry to which it was accountable confined its support to education. The scientific research undertaken by the staff of the Institute depended mainly on personal initiatives and on finding the necessary funds.

Spacious laboratories were set up in Antwerp in 1933; but then the Second World War delayed the start of research, while the planned twinning of Antwerp and Leopoldville's institutes was never achieved.

The war years were, paradoxically, quite fruitful from the standpoint of medical research. The post-war era was marked by a revision of objectives and the rapid extension of infrastructures, which were completed by the establishment of IRSAC\*. However the biomedical sciences were eclipsed by a theoretically excellent but over-ambitious multidisciplinary effort that contributed little to medical science. Nutrition was the exception.

It is reassuring that medical research, which plays such an important part in the march of progress, can justly claim a great and long-standing tradition in Belgium's former African territories. This is good, for developing countries need research as much as they need proteins. Countries overseas have an almost unlimited demand for scientific research that only their own nationals can meet; so training for new researchers is vital. Moreover university education requires research, both basic and applied. It is high time to abolish the facetious distinction between pure and applied research, which actually have a constant and reciprocal relationship.

Biomedical scientific research is currently the responsibility of national authorities and researchers, who must fix priorities appropriate to local problems and, if necessary, surround themselves with competent advisors. However medico-scientific cooperation has been and will long remain indispensable. It must necessarily include training for the native staff who will have to ensure the programmes' continuity. The time when foreign scientists came to collect

material and data for their own programmes and objectives is definitely at an end.

### *Training of personnel*

All the aforementioned activities required the training of appropriate manpower; and the colony's medical service showed a constant concern to meet this need.

The ground was prepared right from the start. Training was initially limited to teaching intelligent or practical young people, sometimes former patients, the simplest and necessarily most widespread techniques. This correspondingly freed the doctor of time-consuming routine jobs. On-the-job training gradually gave way to formal education in the vernacular, then in French. Schools mushroomed: schools for nursing aids, nurses, midwives' aids, midwives, health wardens, laboratory technicians, medical assistants and, as a last achievement, physicians.

Qualifications were developed methodically, as the various strata of the schooling pyramid expanded and the services were structured. Long-considered and systematically-planned forecasts were thrown off balance by the abrupt acceleration of the lead-up to independence. The university structures were operational as of 1953, and the first two native doctors graduated in July 1961.

However 140 medical assistants, who had completed a six-year curriculum and gained qualifications equivalent to those of what were known as African doctors in other countries, were already at work. If the number of doctors seemed unacceptably low to international bodies, the coverage of the population by qualified personnel (including medical assistants) was justly on schedule. The subsequent growth in the medical corps bears this out. According to planners, there would be one native doctor per 17,000 inhabitants in 1974; and the ratio today is 1 to 12,000.

### *The legacy*

This, in broad outline, is the legacy to public health by three-quarters of a century of efforts, observations, research, thought, and bursts of solutions or strategies. It demonstrates a tenacious and patient desire to offer less privileged peoples the opportunity for progress, and to ensure that medical and health activities maintained a high profile in the colonial undertaking whose civilizing and social objectives their priority emphasized.

The conception, organization and potential of this legacy were analysed with remarkable objectivity by S. Btsh (Operation Congo, WHO)\*. This high-

(\*) Institut de Recherche Scientifique en Afrique Centrale.

(\*) Dr. S. Btsh, *Health Services in the Congo Republic* – WHO/PA/37.61.

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quality but rather cumbersome heritage was transferred as it stood to the newly independent states, placing the new national leaders and their international advisors in a difficult position. The young states faced responsibilities they could barely assess, as well as the need to run complex and highly technical services without qualified technicians. Also they were overwhelmed by a multitude of tasks they could not set in order. To cross such a bridge during a period of political and administrative instability is far from easy; nor were solutions facilitated by the assorted offers of aid in which incompetence often outweighed goodwill and was a source of many useless conflicts.

Responsibilities shouldered with conviction create new vitality. The gradual increase in the number of competent Africans in the public health services eventually produced the proportion needed in order to conduct a productive survey of local aspirations. Thus it was possible to set priorities, formulate practical proposals and seek realistic national and regional solutions.

The thirty-odd years since independence have witnessed the active participation of the local people, and then the transfer to public health decision-making powers. This development resulted in a thorough

examination of the inherited health infrastructure, with a view to maximizing its usefulness by adapting it to the means available.

At these crossroads, where *acculturation* must give way to *enculturation*, dialogue with the past cannot but be fruitful.

In at least the initial phase of colonization, paternalism seemed to offer the only possibility for action. This was interpreted as a domestication of minds and a source of alienating largesse; but one should avoid disparaging descriptions. To recall this bygone era without apology, nostalgia, attempts to evade guilt or to camouflage unsatisfactory relationships can only be beneficial. Interpreting the present in the light of the past teaches us from whence we come, and the heirs can take full possession of their heritage. Now it is up to them to make use of that dialogue to build on their future.

A mass of information has been assembled, rich in potential for thought and analysis, to allow an intermingling of ideas and to ensure a safe passage from an old situation to the new one which is taking shape. And during this period of transition, the foundations of Central Africa's future medical complex will be laid.

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