

Medical History

David Livingstone

1813-1873

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"Dr. Livingstone, I presume?" When Henry M. Stanley, in his search for Britain's lost hero in "Darkest Africa" found him at last in Ujiji on 10 November 1871, he uttered this classically stilted sentence, which is probably the first thing that will come to most people's minds when their attention is drawn to the centenary of the Scottish missionary-explorer's death. What, however, many of them will not ask is, Where did Stanley place the accent—on the surname or on the "Doctor"? The question is not a facetious one. Although white men of any kind were scarce in East Africa in the 1870s, white medical men were absolute rarities. Stanley, with a little luck, could have come across some sort of European on the shores of Lake Tanganyika; but his chances of finding one who was also a doctor—and the most famous doctor in the whole of Africa at that time—were slender.

David Livingstone, indeed, was not only one of the first medical missionaries in Central and Southern Africa but, as Michael Gelfand has pointed out in his invaluable study of Livingstone's medical knowledge and influence, he may also "be considered one of the first medical missionaries in the world."¹

Early Life

David Livingstone was born of working-class parents on 19 March 1813 at Blantyre, Lanarkshire. At the age of 10 he was put to work in the local cotton mill on the banks of the Clyde, where he laboured for 12 years. The independent spirit of a Clydeside proletarian remained with him for the rest of his life.

It was tempered by the Christian doctrines which his parents instilled into him, and by the opportunities which he seized, in the era of the "democratic intellect"² in Scotland, for improving his education. At an early age Livingstone's restless intelligence revealed itself when he sought an explanation for "the shells found in carboniferous limestone which crops out in High Blantyre and Cambuslang."³ Any religious doubts that such evolutionary phenomena might have put into his mind were dispelled by Livingstone's reading of the comforting works on the relations between religion and science by the Scottish schoolmaster, Thomas Dick, who "sought to stabilize the minds and improve the morals of the slightly educated classes."⁴

But Livingstone had no intention of remaining slightly educated. Although his father originally opposed his desire to study medicine in Glasgow, he consented when David Living-

stone informed him that "it was not to gain a livelihood that he thought of doing so" but in order "to spend his life in the service of the Redeemer among the heathen."⁵ Livingstone spent two years, 1836-8, studying medicine at the Andersonian University; and in November 1840 he took the examination for licentiate of the Faculty of Physicians and Surgeons in Glasgow. His independent spirit displayed itself when he showed a stubborn faith in the stethoscope, which his examiners did not share. "The wiser plan," Livingstone admitted, "would have been to have had no opinion of my own."⁶ But the examiners passed him; and on 8 December 1840 he set sail for South Africa and service with the London Missionary Society.

African Service

For the rest of Livingstone's life, with the exception of two short periods in Britain when he became a national hero, wrote, lectured, and exhorted the British to stamp out the slave trade in Central and East Africa, he wandered through 29,000 miles of Africa. He gained for himself a pre-eminent position among contemporary geographers of Africa, assisted by the Royal Geographical Society, which awarded him a chronometer-watch for his discovery of Lake Ngami in 1849 and its gold medal in 1855 for his great journey from Linyanti, near the Victoria Falls, to Luanda, on the West Coast. Livingstone's name will always be associated with the discoveries of Victoria Falls in 1855 and of Lake Nyasa or Malawi in 1859. Although the Portuguese and others claimed that they had been there before him, it has been truly said of Livingstone's critics that what is remarkable is what they missed rather than what they found.

Livingstone's genius lay in his personification of the challenge of Africa. Not only did he stimulate others (missionaries, adventurers, imperialists, scientists) to take up the challenge of what H. M. Stanley—but never Livingstone—called the "Dark Continent" but he also championed the African's capacity for development at all levels. "The African," declared Livingstone, "is a man with every attribute of human kind."⁷

He could often be extremely outspoken—a characteristic which did not endear him to many. An example of Livingstone's bluntness appears in a little-known letter of his which is now in the Canadian National Archives at Ottawa. Livingstone's advice had been sought by a Canadian philanthropist who was running rehabilitation centres in Ontario for escaped American slaves. He asked Livingstone if they should emigrate to Africa and help with the modern cultivation of cotton and sugar.⁸ With the experience of black American colonization of Liberia in mind, Livingstone counselled against this. Some of the ex-slaves, he stated, "carry the prejudice of colour wherever they go . . . though many are no doubt superior to that silly nonsense."

His other reason for advising against Negro American colonization in Africa was that "they are as liable to be attacked and cut off by African fever as Europeans"⁹—a remark which indicates Livingstone's continual observation of diseases in Africa.

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In his African explorations Livingstone displayed a stubbornness which was sometimes a source of strength and sometimes of weakness. In his last great African journey he persisted, against all the evidence, in believing that, by pushing southwards into what is now Zambia, he might find the true source of the Nile—when in fact it rose a thousand miles to the north in Uganda. Indeed, if he had followed the advice of the famous Edinburgh

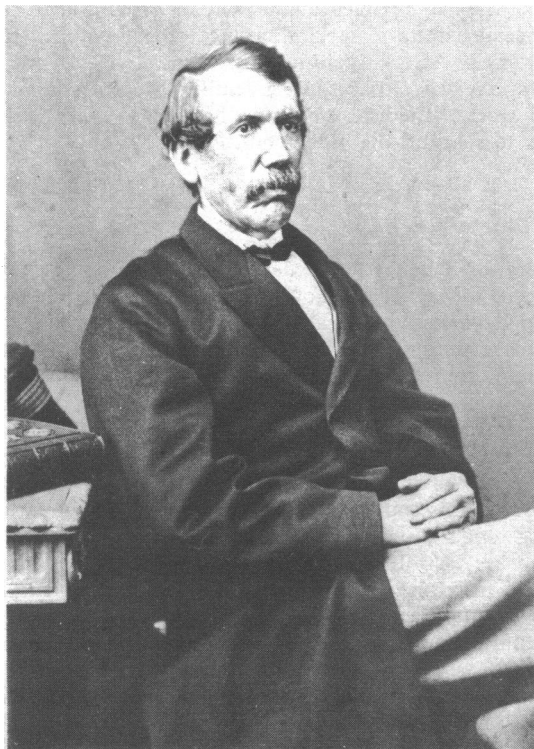


FIG. 1—David Livingstone, aged 51.

surgeon, James Syme, whom Livingstone had consulted about his haemorrhoids in 1864 on his return from the Zambezi expedition, he would have undergone an operation. But Livingstone was so determined to go back to Africa that he neglected to do this; and severe bleeding haemorrhoids most probably brought him to his death. Yet without such obstinacy Livingstone would not have been the man that he was, and his great achievements in the advancement of science and human development in Africa might never have taken place.

Livingstone the Medicine Man

One of David Livingstone's sources of strength in his relations with Africans was his willingness to listen to their arguments about their customs and medical practices. Although he often employed such contemporary terms as "barbarism" and "degradation" when talking about African societies, he shared the approach to underdeveloped peoples of the ethnologist, James Cowle Prichard, who, from the time of his Edinburgh thesis of 1808 entitled *De Humani Generis Varietate*, outlined a philosophy of the unity of the human race. When Livingstone's many notebooks are collected and edited with the scrupulous degree of scientific attention which they deserve, it is possible that they may disclose valuable information about African medical practices.

While his medical supplies lasted, Livingstone was always willing to minister to sick Africans; and this gave him a reputation that secured him an entry into many African societies. In this, he contrasts strikingly with the other Scottish explorer, Mungo Park, who rarely used his medical training in Africa.

The attitudes of Africans towards Livingstone's medical skill went far beyond simple appreciation of his curative qualities. Livingstone was often turned by Africans into the figure of a great medicine man who had the power of bringing about fundamental transformations in their societies. He bears witness to this in a letter from Linyanti in 1853. "Everyone," Livingstone wrote, "seemed possessed with the idea that with a missionary some great indefinite good had arrived . . . Many expected to be transformed at once into civilized men possessing the clothing, goods, arms, horses, waggons, of the more favoured portions of humanity. They would not believe that all I could do would be to elevate them by plain open preaching and teaching. They expected a great deal from medicines used in the way of enhancements."¹⁰

Livingstone and Kirk

On his Zambezi expedition of 1858-63 Livingstone took with him as economic botanist and medical officer a young Edinburgh trained doctor, John Kirk. Kirk's medical education was more extensive than Livingstone's, and he had had the benefit of being resident physician at the Edinburgh Royal Infirmary,

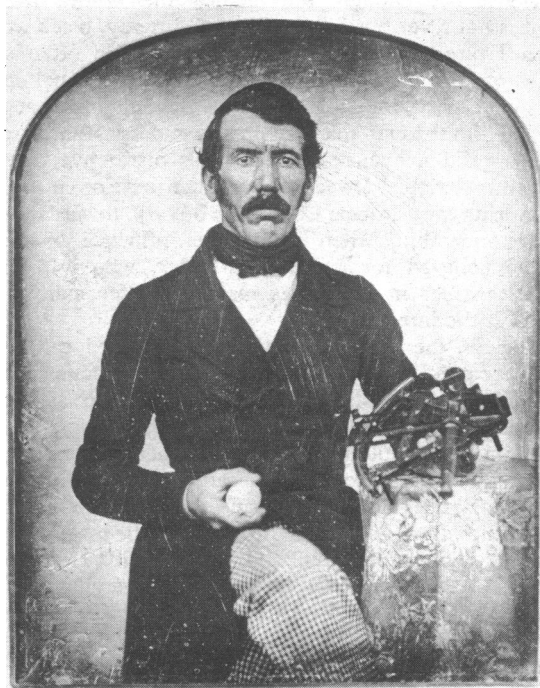


FIG. 2—David Livingstone with sextant and chronometer, from a miniature.

where he was a contemporary of Joseph Lister. Kirk's journals and correspondence from the Zambezi expedition therefore illuminate many aspects of David Livingstone and medicine.

The overall impression that one takes away from a reading of Kirk's notes on this expedition is of continual and unrelenting illness among its members. Although David Livingstone had learned of the value of quinine mixed with a purgative (the substance of his famous "rousters" or purgative pills) from J. O. M'William's *Medical History of the Niger Expedition* and this had helped to control malaria amongst the staff of his Zambezi expedition, "fevers," dysentery, and mysterious maladies beset its members. It can be argued that it was this continual sickness as much as if not more than the faults of Livingstone's leadership (pronounced though these most certainly were) which was responsible for the many difficulties that led to the expedition's recall by its Government sponsors.

In particular Kirk noted the strain to which Livingstone was always subjecting himself. Extracts like the following from his journal for 4 and 5 May 1863 are not unusual: "Of course, one cannot start, Dr. L. being still unwell. During the night he had severe straining, some vomiting. The Hypogastric pain seems now to have shifted to the region of the rectum . . . Dr. L. had again some straining in the morning. Nothing passes but mucus, rather thick and white with a little blood. Another morphia injection as before."¹¹

Kirk knew well that Livingstone, with his two decades of African experience, could cope, in a way that none of the other Europeans on the expedition could, with the difficulties of relations with the Africans of the Zambezi. But would his health permit him to do this? As Kirk wrote in 1859, "If the Doctor keeps good health he can manage them . . . but if his digestive system don't go all right, he loses his diplomatic power wonderfully."¹²

Mosquitoes, which Livingstone associated with malaria, though he did not know their exact role in its transmission, kept the members of the Zambezi Expedition miserable. "They have fairly done me up," wrote Kirk, "and the Doctor looks desperately seedy and clears his throat with emphasis, a sure sign of something wrong."¹³

Livingstone bore it all with a patient shrug. If one kept on the move all would be well. "African fever," he once wrote, "is in all conscience bad enough, but medical men know that frequently it is not fever but folly that kills—brandy, black women and idleness are worse than the climate."¹⁴ He often spoke scathingly of the effects of overindulgence in alcohol in the tropics, sometimes with a broad, Clydeside humour that must have helped him through many moments of despair and stress.

John Kirk did not share Livingstone's distinctive brand of humour, and relations between the two men were often strained, not only during the Zambezi expedition but also towards the end of Livingstone's life, when under the influence of H. M. Stanley he believed for a time that Kirk, who was British consul at Zanzibar in 1872, was responsible for many of his difficulties in the interior.

Nevertheless, the two men have correctly been called "the Zambezi doctors." Livingstone's original instructions of 18 March 1858 to Kirk illustrate their relationship as well as Livingstone's medical ideals. Speaking of the African peoples among whom Kirk would travel in the Zambezi regions, Livingstone gave him the benefit of his decade and a half of medical practice in Africa. "One special means of gaining their favour," he wrote to the young Edinburgh doctor, "will be by giving them the benefit of your medical skill and remedial aid. They possess medical men among themselves who are generally the most observant people to be met with. It is desirable to be at all times on good terms with them. In order to do this, slight complaints, except among the very poor, ought to be referred to their care, and severe cases before being undertaken should be enquired into by the doctor himself and no discouraging remark ever be made on the previous treatment in the presence of the patient. This line of conduct will lead to the more urgent cases only being referred to you; time and medicine will both be saved, while your influence will be extended. Never," concluded Livingstone to Kirk, "neglect the opportunity which the bed of sickness presents of saying a few kind words in a natural respectful manner and imitate in as far as you can the conduct of the Great Physician, whose followers we profess to be."¹⁵

Livingstone in Medical History

Livingstone's place in the history of medicine is obviously not a major one. Professor Gelfand puts it into perspective when he writes, "Livingstone's observations remain some of our earliest records on the diseases of Africa and he also made a few original contributions on disease."¹⁶ Livingstone stands out as a medical man who, in difficult circumstances in remote regions, tried to keep up with the latest advances in medical science. It has been

suggested that he was one of the first to use a clinical thermometer. Livingstone had medical periodicals and books sent out to him whenever it was possible; and, when he was able, he delighted in discussing their contents, as his criticism of the physiological studies of Dr. Martyn Paine, of New York, indicates.¹⁷

Medicine was more important for David Livingstone than he was for medicine. Though his scientific approach to Africa and its peoples had its origins in the many-sided Scottish Enlightenment of the late eighteenth and early nineteenth centuries, he paid especial tribute to the importance of his medical training for his work in Africa. Writing in his journal on 24 June 1872, Livingstone revealed that it had given him the necessary caution for such work: "medical education has led to me a continual tendency to suspend the judgement."¹⁸

Livingstone's Death

The story of Livingstone's death at Chitambo's village in Zambia on 1 May 1873—not 4 May as has sometimes been supposed by writers and makers of monuments, probably mistaking the time of the burial of his viscera for the date of his death—has often been told. And the courage of his African followers who embalmed his body and brought it back to the coast has often been praised. There is, however, still a mystery about their motives. Professor Gelfand suggests that it is just possible that "Livingstone's African carriers might have been instructed on this course by him."¹⁹ Certainly a cryptic jotting in Livingstone's Rovuma notebook for 8 December 1862 indicates that he was interested in embalming. With the American civil war in mind, he wrote, "Liquid glass & gypsum chloride of alum (calcium silicate of soda = soluble glass) employed in embalming dead bodies in the American war—It hardens the body into a sort of stone."²⁰

When Livingstone's own body was brought back to London, as Sir William Fergusson's report in the *British Medical Journal* of 18 April 1874 noted, it was so shrivelled that the features of his face were unrecognizable. But thirty years earlier Livingstone had been mauled by a lion. The injury to his left arm enabled Sir William to identify the body as Livingstone's beyond any doubt. He concluded his report by calling David Livingstone "one of the greatest men of the human race"—a sentiment which continues to command attention a century after Livingstone's death.

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