

Michael J. Aminoff

University of California, San Francisco, USA

The man from Mauritius: an erratic visionary of science

Charles Edouard Brown-Séquard (1817-1894) was born in Mauritius, a British subject, but grew up with the language and culture of France. He studied in Paris to become a physician-scientist. Perhaps because of his colonial roots, he never seemed quite at home anywhere, crossing the Atlantic more than 60 times and spending some six years of his life at sea. He held important posts in Britain (as a founder physician of a famous neurological centre), the United States (as a professor in Richmond, Virginia and later at Harvard), and France (lecturer at the Sorbonne and – after becoming a French citizen – successor to Claude Bernard as Professor of Medicine at the Collège de France).

Despite his peripatetic lifestyle, he illuminated several areas of scientific enquiry – he emphasised functional processes in the integrative actions of the nervous system, discovered the vasomotor nerves, and showed that the adrenal glands are essential to life, being thus regarded as the father of experimental endocrinology. His later work on organotherapy – the use of organ extracts to treat disease – led to ridicule but was the beginning of hormone replacement therapy.

He clarified the sensory pathways in the spinal cord, showing that the sensory (pain) fibres cross soon after entering the cord and that a lateral cord hemisection led to ipsilateral hyperesthesia and paralysis below the level of the lesion, and to contralateral analgesia. He later showed that this was not due simply to cutting a hard-wired system, as originally believed. Rather, changes in dynamic cord mechanisms (excitation and inhibition from peripheral and central inputs) also contributed to the altered sensation, a view that only now is gaining scientific acceptance but that clinicians have yet to endorse.

Brown-Séquard challenged the scientific pieties of his day, examining how the organism functions as an integrated unit. If success is measured by the extent to which one advances a topic or stimulates its advance by framing new concepts and insights that can be verified experimentally by others, then he is certainly a grandee of science.

Suryakanthie Chetty

Stellenbosch University, South Africa

The scientific life of William Anderson Soga

William Anderson Soga has been hailed as the first indigenous western-educated medical doctor in the region that would become South Africa. As a medical missionary he epitomised the union of medicine and religion as the means of promoting 'civilisation'. His own position was the product of an ethos of progress that began with his grandfather and continued with his father, even as the expanding eastern frontier promoted conflict between white settlers and the Xhosa, eventually leading to the conquest of the latter.

This paper explores the world inhabited by the Sogas, a world that comprised both the 'traditional' and the modern. It seeks to contextualise the figure of William Anderson Soga in late nineteenth-century South Africa that was marked by possibilities as well as limitations for Black, middle-class South Africans. The paper uses as a case study Soga's thesis on the Bomvana as a means of understanding his own position as a figure of mixed racial heritage

at a time when racial identity was a key marker of difference. As a medical missionary, Soga's analysis of the health and indigenous healing practices of the Bomvana straddled the fields of medicine and ethnography with a further focus on the ways in which the environment of the Bomvana influenced health and healing, an environment that was rapidly changing as a result of modernisation.

While Soga was unequivocal in his preference for western medical practices and condemned the 'superstition' associated with indigenous healing practices, he nonetheless addressed the efficacy of herbal remedies. It was part of his attempt to record aspects of indigenous culture as it was being eroded by the pervasive influence of western knowledge systems, which he represented. The continuing influence of indigenous healers however also demonstrated the limits of western medicine. Finally, this paper addresses the intellectual influences that underpinned Soga's analysis, demonstrating the ambiguous legacy of modernity.

Diana Davis

University of California, Davis, USA

Decolonizing veterinary history?: reading the partial archive of the first South African veterinarian, Dr. Jotello Soga

Although the famous Dr. Arnold Thielier claimed in 1914 that the first formally trained South African veterinarian was the Boer, Dr. PR Viljoen, the true heir to the title of first South African vet is the little known but remarkable Dr. Jotello Festiri Soga (1865-1906), the child of Tiyo Soga and Janet Burnside. Jotello qualified as a Member of the Royal College of Veterinary Surgeons (MRCVS) in 1886, after studying at the Royal Dick Veterinary School in Edinburgh. He was the second veterinarian to be appointed Assistant Veterinary Surgeon for Cape Colony in 1889. He excelled in this job and made significant contributions to veterinary toxicology and livestock vaccination methods. Jotello was one of the earliest to warn of the impending disaster of Rinderpest, which struck in 1896. He played an instrumental role in the containment and eventual eradication of this virulent disease, helping Dr. Koch briefly in his research.

Half Xhosa, Jotello played a vital role in being able to communicate with many of the indigenous South Africans about livestock diseases, their prevention and treatment. By highlighting his remarkable trajectory, this paper hopes to help to 'decolonise' the history of veterinary medicine which has been long dominated by the 'great deeds' of a succession of men, nearly entirely white. This sort of knowledge decolonisation has been increasingly called for by numerous scholars, including myself, and a growing number of students, recently in South Africa, as well as elsewhere around the world. The case of Dr. Soga, half Scottish and descended from Xhosa nobility, however, brings to light some of the complications of this process. In our age of racial reckoning, the process of decolonising our knowledge is far from simple, especially when the archives are partial.

Lawrence Dritsas

University of Edinburgh, UK

‘Pure research in developing countries’: the career of Thomas R. Odhiambo

The early career of Thomas Risley Odhiambo (1931–2003) transits the era of independence in east Africa. Born in Kenya, he completed his first degree at Makerere University in 1953 (Botany and Zoology), and then held a series of posts in local scientific institutes. In 1959 he began studies toward a PhD at Cambridge on the reproductive physiology of the desert locust, supervised by Sir Vincent Wigglesworth, and he completed this in 1965.

Odhiambo returned to an independent Kenya after his studies. Alongside his significant work in entomology he became a global spokesperson and advocate for science in developing countries. This paper uses features of Odhiambo’s career and his extensive writing to bring into focus key features of science in Africa during the latter half of the twentieth century: institutional transitions from colonial to independent science; the relationship between scientific research and true ‘independence’ in post-colonies; latent pan-Africanist politics; and the emergence of UNESCO and other international organisations to support science in developing countries.

Matthew Daniel Eddy

Durham University, UK

‘The false theories of anthropologists’: Dr Africanus Horton and the relationship between race and climate science in 19th-century Sierra Leone

In 1868 the Black West African scientist and physician Dr James Africanus Beale Horton published a powerful critique of ‘The false theories of anthropologists’ that were holding back the advancement of public health in Britain’s African colonies. A native of Sierra Leone and a distinguished graduate of two British medical schools, Horton sought to arrest the alarming ascent of racially biased medical information-gathering systems that framed the delivery of public health and wellness for both African and European inhabitants who lived across the 3,000 miles of West African coastline controlled by Britain during the 1860s to the 1880s.

Horton was especially keen to challenge the increasing proliferation of misleading data, that is, incomplete, inaccurate or irrelevant information that obscured the true causes of health and illness in Africa. This paper investigates the historical context that enabled Horton to use his robust knowledge of evolution, climate and statistics to promote health equity within British West Africa and within the global south more generally.

Nancy Jacobs

Brown University, USA

Not an ornithologist but the bird expert, nonetheless: Jali Makawa of Central Africa

No one knew more about living, flying, singing, and nesting birds in south-central Africa than Jali Makawa (c. 1914–1995). He first met birds as a boy in rural Mozambique and Malawi, and as a young man demonstrated an exceptional interest and knowledge of them.

Makawa's half-century career as a birder was extraordinarily distinguished. Ornithologists just couldn't stop praising him. Through the combination of his own superlative ability and the relative liberalism of his employers, he received extensive credit in the historical record.

Makawa collaborated with scientists from Harvard, Yale, and Cambridge universities, but his expertise was in the bush, not in the museum or library, and his position was that of a servant; others always commanded his activities. What was in it for Jali Makawa? Despite all our evidence of what he knew and did, he recorded little about himself and almost nothing about birding. Because Makawa did not record his motivations and rewards of his work, we have to read his behaviour to solve the mystery of how he worked between vernacular birding and ornithology. How did he experience being the best bird expert, but always as a subaltern savant?

Abena Dove Osseo-Asare

University of Texas, Austin, USA

The Very Reverend Professor B.W. Garbrah of Ghana and the interchangeability of nuclear physics from the Soviet Union to the UK

The Ghanaian physicist and theologian Benjamin Woarabae Garbrah was the first person in the Gold Coast Colony to receive a degree in physics at what became the University of Ghana at Legon. After Ghana's independence in 1957, he went on to pursue graduate studies in physics in the Soviet Union through a government training program. Garbrah hoped to be one of the scientists tasked with running a proposed nuclear reactor the Ghanaian government expected to import from the Soviet Union. However, after Ghana's first president Kwame Nkrumah was ousted in a coup d'état in 1966, the Soviet Union did not fulfil its agreement to provide a reactor.

Instead, as person in charge of Atomic Energy for the Ghana Academy of Sciences, Garbrah organized the growing cadre of Ghanaian physicists to continue their nuclear pursuits abroad. In his case, he wrote a PhD thesis at the Scottish Research Reactor Centre in East Kilbride near Glasgow from 1965 to 1967 through an International Atomic Energy Agency scholarship. He returned to Ghana to help the Ghana Atomic Energy Commission in its pursuit to either import the remaining parts for the Soviet reactor, or obtain a new reactor altogether. Through video clips of interviews with Garbrah from 2006 to 2014, this talk discusses Garbrah's personal experiences learning physics in both Russian and English to show how a generation of post-independence scientists viewed the interchangeability of nuclear physics from both the theoretical level to the practical level of reactor parts.