

CURRENT SCIENCE

Volume 94 Number 9

10 May 2008

EDITORIAL

Morris Travers: Remembering an Institution Builder

Anniversaries at institutions are a time to look back at events long past and to remember with gratitude those who have built the structures we exploit today. Memories can fade with time and the documented historical record is often meagre. Unsurprisingly, the architects of institutions are sometimes relegated to the obscure recesses of collective institutional memory. As the Indian Institute of Science (IISc) is poised to enter its hundredth year, I have wondered about its first Director and attempted to imagine what it must have been like to embark on the unprecedented experiment of building a research institution in India, at the dawn of the twentieth century. Bangalore, a hundred years ago would have been a far cry from today's bustling metropolis. Research was not a common or well-understood activity in India. The turbulence and turmoil of the first half of the twentieth century still lay ahead. The Victorian era had just drawn to a close and Gandhi was yet to appear on the Indian scene. It is in this setting that the first Director, Morris Travers, began the task of building an institution that has weathered the tumultuous century that followed. Travers is not a well-known name in India. Even at the IISc, a lecture in his memory, marking his research interests in chemistry, was established only in 1990, over eight decades after he began the work of building an institution. Travers worked in Bangalore between 1906 and 1914, resigning in the midst of a growing controversy between him and members of the governing council of the Institute. His years in India must have been difficult, but the foundations he laid have held well against the ravages of time. The story of the genesis of IISc in the form of a magnificent endowment by Jamsetji Tata is well known. Tata's vision for India's future was unparalleled in its foresight. But visions need to be translated into reality; a task that often proves impossible. Burjorji Padshah, a devoted executor of the Tata vision, spent years in securing the acceptance of the proposal by Curzon's government, leading ultimately to the visit of William Ramsay towards the end of 1900. Several more hurdles were to be crossed before the Institute became a reality and Travers arrived in Bangalore, as 1906 drew to a close. The written records available at the Institute are pitifully small. Formal minutes of meetings, however well preserved, tell little of the story. In attempting

to piece together a narrative that would capture a sense of the times, I was delighted to be handed a bundle of poorly kept letters, written by Travers to one of his successors, S. Bhagavantam in 1958/1959, when IISc marked the completion of fifty years. By this time, Travers was past eighty and nearing the end. His recollections of the events of the first years of the Institute are vivid and poignant.

Morris Williams Travers (1872–1961) was a chemist, a student of William Ramsay at the University College London. He was Ramsay's assistant in the famous experiments, which led to the isolation of the inert gases neon, krypton and xenon. These studies were carried out immediately after the Ramsay–Rayleigh discovery of argon and Ramsay's work on helium. The experimental skills of Morris Travers must have been formidable; the fractionation of liquid air yielded three new elements in a few weeks of work. The first British scientists to win Nobel Prizes were Rayleigh (Physics, 1904) and Ramsay (Chemistry, 1904). Travers appears to have been a meticulous documenter of events and experiments and an author of uncommon talent. In 1901 he published an *Experimental Study of Gases* (Macmillan, London); an original edition sits by my side as I write. This is a book that is remarkable for its experimental detail and I believe it is testimony to the care and devotion that Travers brought to his work. At 29, Travers had completed a major piece of work and published a scholarly treatise. Five years later, at a remarkably young age, he would begin building an institution, working in an environment that would bear no resemblance to his London laboratory. Travers authored a second book, *A Life of William Ramsay* (Edward Arnold, London, 1955), written between his 'eighty-first and eighty-third' birthdays. The Ramsay biography is a remarkable book; extraordinary in its detail and meticulous in its documentation, providing an insight into the author's character. Travers' account of Ramsay's life and work must stand as one of the classics in the genre of biographies of men of science. The author's attention to detail and his ability to make Ramsay come alive, speak of Travers' talents as a chronicler. It is this rare talent that one must bear in mind when reading his account of his days in India, written half a century after he began the work of building the Indian Institute of Science.

Travers did not complete an autobiography, but left behind at the University College London's Archives a typescript, notes and diaries. His biography of Ramsay contains a chapter entitled 'India'. It begins on an intriguing note: 'A reason for wishing to finish the work on the rare gases in July 1900, was that Ramsay had arranged to visit India in the autumn. As Travers sat at the balance on Monday, July 7th making weighings in determining the first density of pure neon, he gave him an outline of the proposal. They had seen little of one another the previous six weeks. A wealthy Parsee, Mr Jamsetjee N. Tata of Bombay, proposed to establish in India what he called an *Institute or University of Research*, said to be on the lines of the Johns Hopkins University of Baltimore. Ramsay asked Travers if, in the event of the scheme materializing he would consider going out to India as the first Principal. Travers replied at once that he would not; though he was very ill at the moment, he was confident that at no distant date he would obtain a chair in a British university institution, and he did not relish the idea of exile, though the salary offered was large' (p. 194). Travers presents an account of Ramsay's visit to India quoting his mentor, who said that it was 'like reading the index of a book, without time to read the book itself'. The young Travers had visions of a chair of chemistry in a British University. But circumstances were to force him to accept the task of building IISc as its first Director, undoubtedly attracted by the annual salary of £1800 and a promised pension.

Travers arrived in India towards the end of 1906. A notice in the journal *Science* (1906, **24**, 710) notes that he 'left Marseilles, on November 2, in the mail steamer *Victoria*, for Bangalore to take up his work as first director of the Indian Institute of Science'. He was then only 34 years old. In letters to his mother he describes vividly the sights, sounds and smells of India, a century ago. The notes available at the University College London Archives present a fascinating picture of an era long gone. Travers' first sight of the land destined to be the IISc campus follows a ride on horseback from the West End hotel in Bangalore. He recounts a tale of buying a horse 'from a native' for the then princely sum of Rs 250. In a letter written in 1959 to S. Bhagavantam he says: 'During the period 1906–1914, I gave myself to India and the Institute. I left England in November 1906 knowing little of Indian Education. The India Office had given me a copy of the Report of the Royal Commission on the Universities of India of 1902. I read it thinking it just rubbish; but when I got to India I learned that when Lord Curzon received the Report he summoned the Commissioners, told them what he thought of their Report, tore it across, stamped on it and dismissed them'. Travers worked

against many odds in getting the Institute to a stage where students were admitted in 1911. In a letter addressed to the Registrar of IISc, A. G. Pai, in July 1954, Travers writes: 'When I first went to India one of the first things I did was to look into the question of housing and feeding students drawn from all over India. I came to the conclusion that I should have to have several messes. Then I was right, for when we opened I found that we had to have five. Then a Muslim student turned up, and as no mess would take him in, I had to make a one-man mess for him. I still wonder how fish-eating Bengalis get on with meat-eating Punjabis.'

Travers fought an unceasing battle with Padshah and Dorab Tata on the academic directions of the Institute. Padshah favoured starting subjects like archaeology and the humanities, while Dorab Tata had visions of bacteriology and a tropical diseases institute. Travers was sharply focused, realizing that resources, both human and material, would permit only a more limited approach. In many ways he set the agenda for the century that followed. His troubles with the Tatas were compounded by problems with the task of erecting the magnificent structure which symbolizes the Institute today. He fell afoul of the governing council and eventually resigned in 1914, forced out by opponents who converged from different directions. In his letter of 1959 he reflects on the end: 'My last visitor in June 1914 at Bangalore was Lord Willingdon. After going round the place he said to me: "I had no idea that there was anything like this in India". I said: "There is nothing like it in India; and nothing better in Great Britain"'. Travers involved himself in research, despite great odds, setting an example for his successors. He reflects: 'A particularly happy memory at Bangalore is the work in my laboratory during my last three years. Ramsay always said that our discoveries are our students'. Travers' side of the story is compelling, but his opponents prevailed. In 1954, he notes, with some regret: 'Spite exceeded wisdom'. He adds: 'I had achieved, so far as was possible, what I undertook when I left for India. But I had to accept as true "that it is in the nature and essential constitution of things, calumny and abuse are essential parts of triumph" (Edmund Burke)'.

An apt way to pay a tribute to Morris Travers would be to borrow the words used by the President of the Royal Swedish Academy in presenting William Ramsay in 1904. Travers triumphs with the noble gases and the establishment of the Institute could 'not have been acquired without great toil, being not merely a combination of fortunate circumstances but the result of a well planned persevering and tiresome work'.

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