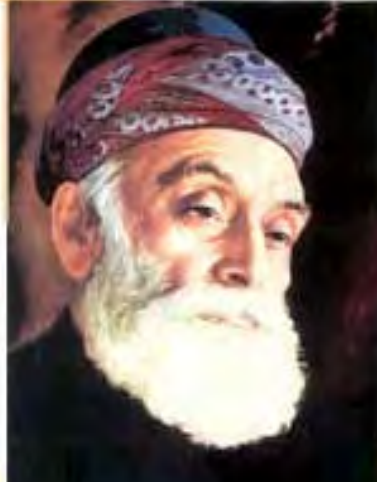
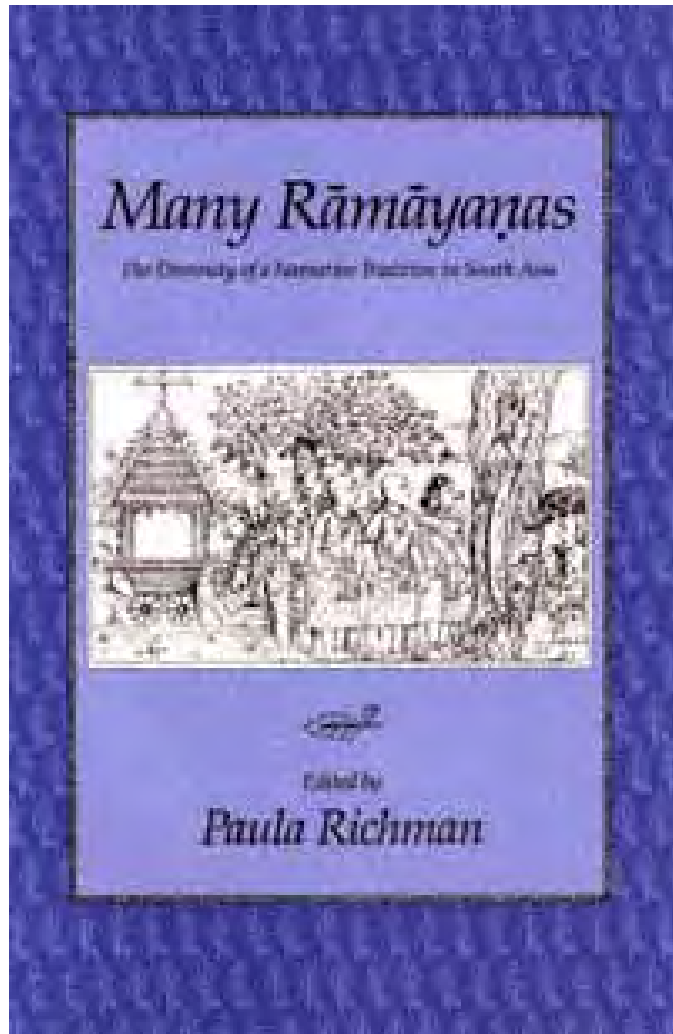


Many Ramayanas: In Pursuit of the History of the Foundation of IISc and NIAS



S Ranganathan
IISc & NIAS
Wednesday
Discussion Meeting
November 12, 2008





**Three Hundred Ramayanas:
Five Examples
and Three Thoughts on Translation**

A. K. Ramanujan

**How many *Ramayanas* ?
Three hundred?
Three thousand?**

**At the end of some *Ramayanas* ,
a question is sometimes asked:
How many *Ramayanas* have there been?**

**And there are stories that answer the question.
Here is one.**

References

On J N Tata

F R Harris

Jamsetji Nusserwanji Tata

A Chronicle of his Life, 1925

R M Lala,

For the Love of India

The Life and Times of Jamsetji Tata, 2004

Archives

India Office Library

UCL , London

National Archives

Tata Central Archives

IISc Archives Cell (2008)

On IISc

B V Subbarayappa

*In pursuit of Excellence, A
History of IISc*, 1992

S Ranganathan, *India's Sci-Tech
Powerhouse. (Indian Institute of
Science in Bangalore, India)*
World and I , December 2000:

P Balaram, *The Birth of IISc*, An
Editorial in Current Science,
Jan 2008

P Balaram, *Morris Travers:
Remembering an Institution
Builder*, An editorial in Current
Science, May 2008

B V Subbarayappa, Letter to the
Editor, Current Science, 2008

The complex interplay between Indian and British leaders, who were influenced by different traditions of higher educations throughout the world, as seen in the 16-year struggle to realize J. N. Tata's dream, is a missing chapter in the study of higher education in India. A clearer understanding of this interaction might provide a more useful perspective from which to consider the problems that universities in India face today than that offered by the 'transplantation' model. This would seem to be especially so in the case of postgraduate teaching and research.

Kim P. Sebaly



[History of Education](#), Volume [14](#), Issue 2 June 1985, pages 117 - 136

Highlighting the Role of B Padshah

From Prof P Balaram's talk on Jan 21, 2008

OUTLINE

- Inventing IISc
- The TATA Enterprise
J N Tata, Dorab Tata, Ratan Tata, Burjori Padshah, J R D Tata
- The British Empire
Lord Reay, Lord Curzon, Lord Minto, Sir William Ramsay, Prof Morris Travers
- The Mysore Durbar
Krishnaraja Wodeyar, Regent Maharani Kempa Nanjammani Vani Vilasa Sannidhana, , Dewan Sir K Seshadri Iyer, Dewan Sir M Visvesvaraya, Resident

THE FOUNDER OF IISc



JAMSETJI NUSSEERWANJI TATA
PARSI CITIZEN OF BOMBAY
BORN MARCH 3, 1839
DIED MAY 19, 1904
TO HIS FORESIGHT AND PATRIOTISM
THE INDIAN INSTITUTE OF SCIENCE
BANGALORE OWES ITS ORIGIN
AND TO HIS MUNIFICENCE
A GREAT PART OF ITS ENDOWMENT
AS A DISTINGUISHED CAPTAIN OF INDUSTRY
AND PATRON OF LERNING
HE PERCEIVED THE BENEFITS TO HIS
COUNTRY
OF ADVANCED RESEARCH IN SCIENCE
ARTS AND INDUSTRIES
AND FOUNDED THIS INSTITUTE
The FIRST OF ITS KIND IN INDIA
THIS STATUE OF THE FOUNDER WAS
ERECTED IN 1916
BY THE COUNCIL OF The INDIAN INSTITUTE
OF SCIENCE

Journey to the West

- The world's first university is Taxila
- Taxila (Takshashila), near Islamabad (BC 700-460AD)
- Nalanda University in Bihar (425-1040 AD)



Harshavardhana receiving Xuan Zang at Nalanda

British Universities

- Oxford University



The university traces its roots back to at least **the end of the 12th century**.
Oldest University in the English Speaking World

- Cambridge University



in **1209** by scholars leaving Oxford after a dispute with local townsfolk
There
Octocentenary Year

February 2, 1835

Thomas Babington Macaulay Minute

*“creating a class of persons ,
Indian in blood and colour, but English in taste,
in opinions, in morals and intellect“*

July 9, 1854

Charles Wood

President of Board of control of East India Company

Magna Carta of Indian Education *“ Turning away
from the traditional Hindu teaching and
Muslim Madarasa teaching in Arabic,*

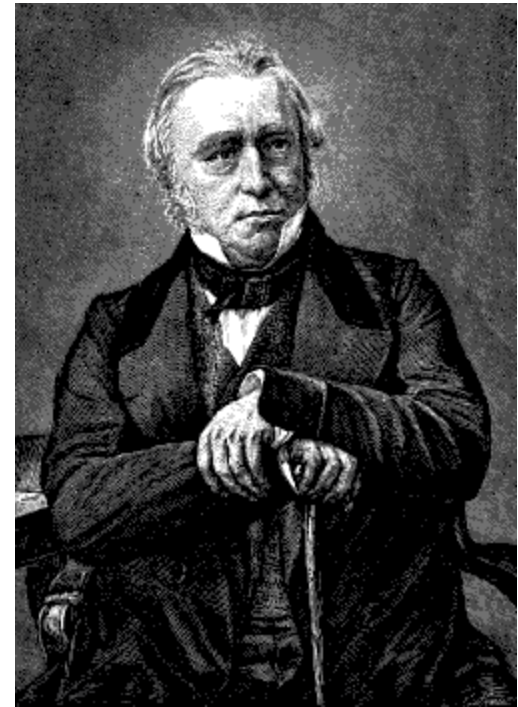
*the aim was to extend European knowledge
throughout all classes of people and recommended
that the form , government and functions
of the **University of London** are best adapted to the wants of
India*

1857

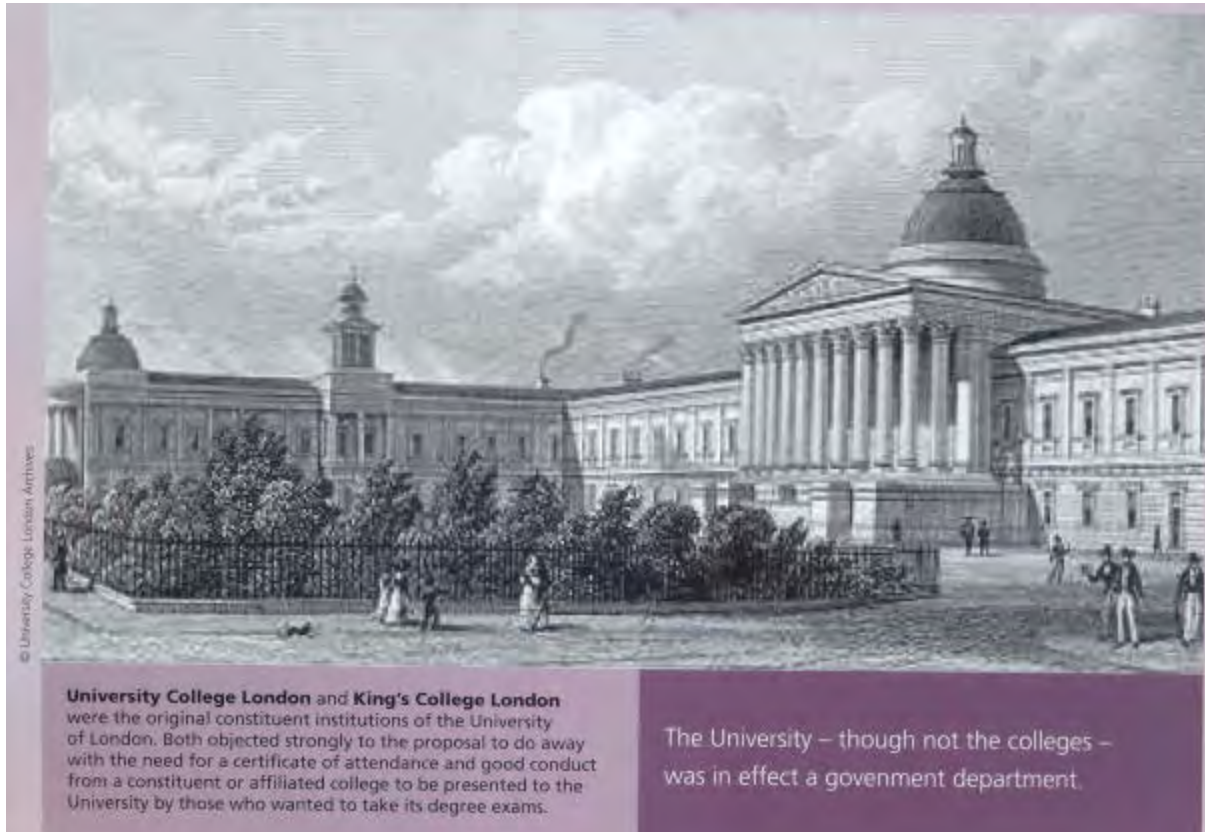
Three Indian Universities were founded
in Calcutta , Madras and Bombay

Blind copying of London University as Examining Universities,
Qualification such as University of Calcutta Failed!

Additional universities in Lahore and Allahabad



**University of Madras
Sesquicentenary, 2007**



**Sir William Ramsay,
Prof Morris Travers
Lord Reay,
Sir J C Ghosh
with University College
London connections**



**With Sir Graeme Davies,
Vicechancellor,
University of London, June 2008**

Travers felt that Indian Universities should not follow Oxford or Cambridge and even London but must be modelled after Leeds, Manchester, Birmingham, Sheffield, Liverpool

Mughal Durbar



Mughal Aurangzeb Birthday Celebrations, The Green Vault, Dresden

**Proclamation
as the first Empress of India**

**Title as Kaisar -I-Hind
January 1, 1877**

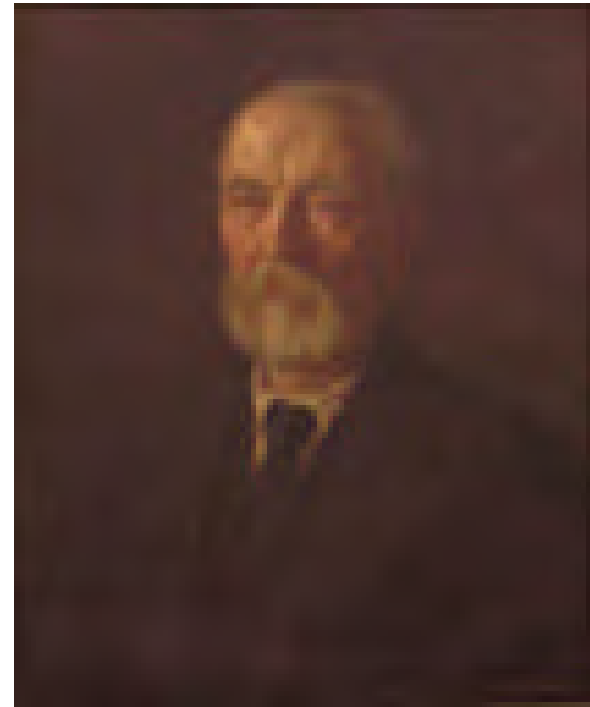
**J N Tata names his Cotton Mill
as Empress Mill**

Delhi Durbar 1877



**1889
Convocation Address
To Bombay University**

**Governor of Bombay from 1885-1890,
Under-Secretary of State for India
in 1894-1895,
President of the Royal Asiatic Society
and University College London and as
first President of the British Academy
from 1901-1907.**



**Donald James Mackay,
11th Lord Reay and 1st Baron Reay
1839-1921**

It is only by the combined efforts

***of the wisest men in England, of the wisest men in India,
that we can hope to establish
in this old home of learning, real universities
which will give a fresh impulse to learning, to research,
to criticism, which will inspire reverence and impart
strength and self reliance to future generations of our and
your countrymen'***

1892, J N Tata Endowment for Higher Education of Indians

*"There is one kind of charity
common enough among us...
It is that patchwork philanthropy
which clothes the ragged,
feeds the poor, and heals the sick.
I am far from decrying
the noble spirit which seeks to help
a poor or suffering fellow being.
[However] what advances
a nation or a community is
not so much to prop up its weakest
and most helpless members,
but to lift up the best and the most gifted,
so as to make them of the greatest service to the country."*

The maiden grant was
to Dr Freney Cama,
who became one of
the first women gynaecologists
in India and who would come
to have a maternity hospital
in Mumbai named after her.

The first step to IISc



1893, Voyage with Swami Vivekananda



SS Empress of India September 11, 1893
Courtesy APJ Kalam , Santa Clara, 2007

1898, J N Tata's letter to Swami Vivekananda

:
"Dear Swami Vivekananda,

I trust you remember me as a fellow traveller on your voyage from Japan to Chicago. I very much recall at this moment your views on the growth of the ascetic spirit in India, and the duty, not of destroying, but of diverting it into useful channels.

I recall these ideas in connection with my scheme of Research Institute of Science for India, of which you have doubtless heard or read. It seems to me that no better use can be made of the ascetic spirit than the establishment of monasteries or residential halls for men dominated by this spirit, where they should live with ordinary decency, and devote their lives to the cultivation of sciences-natural and [humanistic](#). I am of opinion that, if such a crusade in favour of an asceticism of this kind were undertaken by a competent leader, it would really help asceticism, science, and the good name of our common country; and I know not who would make a more fitting general of such a campaign than Vivekananda. Do you think you would care to apply yourself to the mission of galvanizing into life our traditions in this respect? Perhaps you had better begin with a fiery pamphlet rousing our people in this matter. I should cheerfully defray all the expenses of publication.

23rd November 1898 Jamsetji N Tata
Sister Nivedita's Role ?

Swami , Mysore and Dr Kalam

Swamiji requested Maharaja of Mysore
in a letter to donate the land for the research laboratory.
Due to the immense respect the Mysore Maharaja had for swamiji,
he gladly agreed, and due to that we see Indian Institute of Science today.

The message I would like to convey to this audience,
dream gives vision, vision gives thoughts
and thought leads to actions.
Jamsetji brought two establishments to this country –
first one was steel plant
and the other was an educational research institution
based on the vision of Swami Vivekananda

Burjori Jampji Padshah

1864-1941

Brilliant Student
Theosophist, who later abandoned the association

Work in Cambridge with Sir J J Thomson
No degree from Cambridge

One of the few to understand Einstein's relativity
Invited by Gokhale to join the Nationalist Movement

1896 Invited by J N Tata to give Assistance to J N Tata in all his projects
(Institute for Research, Steel, Hydroelectricity)





An American University

**Johns Hopkins University, Baltimore
1875**

First postgraduate institution in the world

Johns Hopkins, however, made his great fortune by investing his money wisely in all sorts of ventures, most notably the Baltimore and Ohio Railroad, of which he became a Director in 1847 and Chairman of the Finance Committee in 1855.

In 1867, he gave consideration to the disposition of his tremendous wealth and, on August 24, he incorporated The Johns Hopkins University and The Johns Hopkins Hospital. After his death on December 24, 1873, his will was probated, and his fortune of seven million dollars was divided equally between the two institutions that bear his name.

Padshah chose JHU as a model for IISc

Proposed University or Institute of Research (Dec 13, 1898)

1. Scientific and Technical Department 1,52,000 R

(a) Physics

- (i) Mathematical Physics
- (ii) Electrical Engineering

(b) Chemistry

- (i) Advanced Inorganic Chemistry
- (ii) Organic Chemistry
- (iii) Analytical Chemistry
- (iv) Agricultural Chemistry

2. Medical Department 85,000 R

(a) Bacteriology

(b) Hygiene

(c) Physiological and Pathological Chemistry

3. Philosophical and Educational Department 63,000 R

(a) Method of Education

(b) Ethics and Psychology

(c) Indian History and Archaeology

(d) Statistics and Economics

(e) Comparative Philology

Total:

----->

3,00,000 R

22



1902, Lord and Lady Curzon



1900, Sir William Ramsay

Discoverer of Noble Gases

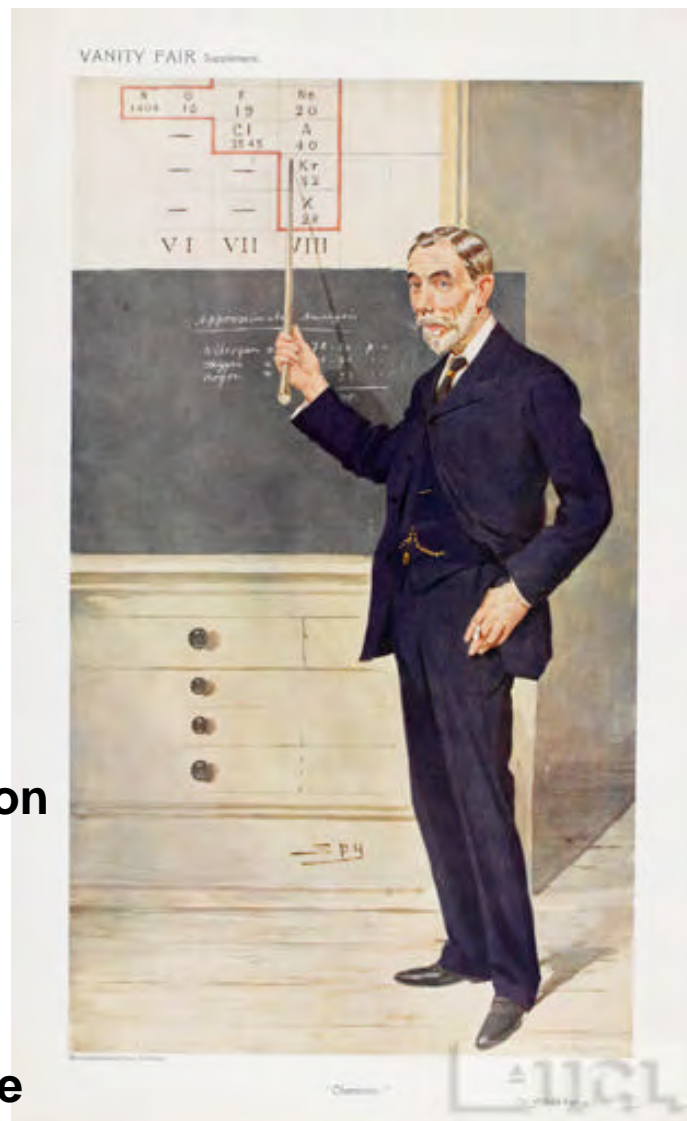
**Visit to India with Lady Ramsay
as guests of J N Tata
and recommended
by the Royal Society in 1900**

**On the verge
of the Nobel Prize in 1904**

**Prunes Tata's Scheme
from a University to an Institute**

**Recommended Bangalore as a location
Recommended Morris Travers
for the Directorship**

**Foster father of IISc
Diary of Lady Ramsay- a rich resource**



Morris Travers

Morris William Travers:

January 24, 1872 - August 25, 1961.

Ramsay and Travers obtained neon
by distilling liquid argon obtained
by passing air over hot Cu and hot Mg
to remove oxygen and nitrogen.

University College London &
Bristol University

First Director of IISc at age 34 !



Padshah vs Ramsay & Travers

- *“Willie fell into the hands of his private Secretary, a truly ferocious person, and worse still our master (he is called our servant, but we know better)”*

From Lady Ramsay's Diary

“He is sort of anchorite; he is a theosophist, vegetarian, and thamaturgic, altruistic, son of a sea cook, but an admirable Crichton after the Indian model”

William Ramsay

- An evil Genius

An Admirable Crichton

[The Admirable Crichton](#), a critically-acclaimed social commentary with elaborate staging, about an aristocratic household shipwrecked on a desert island, in which the butler naturally rises to leadership over his lord and ladies for the duration of their time away from civilisation.

The Admirable Crichton is a comic stage play written in 1902 by [J. M. Barrie](#). It was produced by [Charles Frohman](#) and opened at the [Duke of York's Theatre](#) in [London](#) on [4 November 1902](#)

Dunbhai Tata & Burjori Padshah



1861-1871



1864-1941

Relationship

Married?

R M Lala

Engaged?

R M Lala, Tata Central Archives

Cause of death at the age of 10 not known

Delhi Durbar 1903

Lord Curzon
& Lady Curzon
Imperial
Pageantry

J N Tata was not invited!

He attended all the same!



New York Times 1902

Plans for Magnificent Delhi Coronation Durbar

**Imposing Ceremonies Which Will Take Place Near Scene
of Many Deeds of British Valor and Heroism Performed
During the Days of the Mutiny**

Location & Land Donation



Contenders: Bombay, Roorkee, Bangalore

The Mysore Durbar

- Krishnaraja Wodeyar IV
- Regent Maharani Kempa Nanjammani
Vani Vilasa Sannidhana
- Dewan Sir K Seshadri Iyer
- Resident:

Third Meeting of the Provisional Committee
held at the Residency, Bangalore,
on Monday' the 13th July 1908. at 11-30 A.M.

V P Madhava Rao Esq CIE
Dr. Morris W. Travers, F.R.S., Director.
Dr. Alfred Hay, M. I. E. E.
B. J. Padshah, Esq.
Mr. D. J. Tata was present by invitation of the Chairman

The Director stated that he had addressed the Hon'ble the Resident with regard to the channel of communication between the Committee of the Institute and the Mysore Durbar and received the following reply:—

I am directed to acknowledge the receipt of your letter of the 25th April 1908, and, in reply, to state that so far as the Resident can at present foresee, Correspondence between the Provisional Committee and the Mysore Durbar may be conducted direct without reference to the Resident, **but any question involving the jurisdiction of the British Government over the lands assigned for the purpose of locating the Indian Institute of Science should be referred to the Residency.** " (Minutes No.7.)

Delhi Durbar 1911

King George V and Queen Mary
Autographed Portrait in Council Chamber

Morris Travers is an honoured Guest

Monument to the Founder: March 10, 1922



Sir Dorab Tata

- 1859-1932
- Engineering
in Cambridge University 1879
- Medical School



Sir Dorab was the quintessential entrepreneur, working tirelessly to make his father's visionary ideas a reality — roaming the jungles of what is now Jharkhand in eastern India in a bullock cart to set up Tata Steel and pioneering the generation of hydroelectric power in the wilds of the Western Ghats — while Sir Ratan was a connoisseur of the arts and a passionate votary of social development. Again their role in IISC was minor. Both the sons left it mainly to B Padshah

Sir Ratan Tata

Sir Ratan gave a grant to support Mahatma Gandhi's work in South Africa and another for Gopal Krishna Gokhale's nationalist activities in India. He also funded the first archaeological excavation at Pataliputra, which resulted in the discovery of the 100-pillar Mauryan throne room of Ashoka's palace. He donated resources that enabled the London School of Economics (LSE) to research the causes of poverty and how to alleviate it, leading to the establishment in 1912 of LSE's Sir Ratan Tata Department. His role in IISc & the Steel Plant seems to have been minor.



Intimations of NIAS

The Transition :

From an Imperial University to a National Institution

Status	British	Indian
Patron/Visitor	Viceroy Lord Minto 1909 ,,,,,,,,, C Rajagopalachari	Presidents Rajendra Prasad Sir S Radhakrishnan ,,,,,
Council Chairman	Residents	V N Chandsvarkar Rustum Chokshi G K Chandiramnai Raja Ramanna K Kasturirangan
Court President	-----	Sir M Visvesvaraya 1938 Sir Ardeshir Dalal V N Chandavarkar John Msatthai J R D Tata J J Bhabha RatanTata
Director	M Travers Sir A G Bourne Sir M Forster	Sir C V Raman Sir J C Ghosh S Bhagavantham ,,,

Visitors of IISc



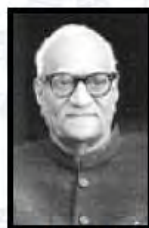
Dr. Rajendra Prasad



Dr. Sarvepalli
Radhakrishnan



Dr. Zakir Hussain



Shri Varahagiri
Venkata Giri



Dr. Fakhruddin
Ali Ahmed



Shri Neelam
Sanjiva Reddy



Giani Zail Singh



Shri R Venkataraman



Dr Shankar
Dayal Sharma



Shri K. R. Narayanan



Dr. A. P. J. Abdul
Kalam



Smt. Pratibha
Devisingh Patil

Presidents of the Court

Seven decades ago on May 23, 1938 the first meeting on which a court had met together took place under the Presidency of Sir M Visvesvaraiyah



Sir M. Visvesvaraiyah
1938-1946



Sir Ardeshir Dalal
1947-1950



Sir V. N. Chandavarkar
1950-1951



Dr. John Mathai
1951-1954



Mr. J.R.D. Tata
1955-1993



Mr. J.J. Bhabha
1994-1999



Mr. Ratan Tata
Since 1999

Chairmen of the Council

Till 1948 the British Resident in Mysore was elected as Chairman of the Council



Sir V. N. Chandavarkar
1948-1958



Dr. Rustum Choksi
1959-1977



Dr. G. K. Chandiramani
1978-1985



Dr. Raja Ramanna
1986-2004



Dr. K. Kasturirangan
Since 2004

Heads of Departments

A Committee consisting of Sir William Ramsay, K. C. B., F. R. S., Professor W. H. Perkin, F.R.S and Sir .Thomas Holland, K. C. I. E., F. R S., had been formed with Dr. R. W. Gray, of University College, London as Secretary to the Committee.

Advertisements had been inserted in "Nature", " Chemical News", and in the American paper " Science", and also in certain Continental journals.

1911 M Travers	General & Applied Chemistry
1911 Alfred Hay	Electrotechnics
1921 G J Fowler	Biochemistry
1933 C V Raman	Physics
1942 V M Ghatage	Aeronautical Engineering
1945 Frank Adcock	Metallurgy
1947 C H Kent	Mechanical Engineering

My First Excursion into History

1984

BPMS—6

Professor Brahm Prakash's Contribution to Metallurgical Education

S. RANGANATHAN

ABSTRACT

Professor Brahm Prakash spent seven fruitful years (1951 to 1957) at the Indian Institute of Science, Bangalore, in the first formative phase of his career in India and that of the Department he headed. His contributions to metallurgical education and research at this Centre are reviewed.

I. INTRODUCTION

Dr. Brahm Prakash joined the Department of Metallurgy, Indian Institute of Science, Bangalore, as Professor and the first Indian Head of the Department on January 1, 1951 and left the Department on March 31, 1957 to rejoin the Department of Atomic Energy. These seventy five months he spent at Bangalore were extremely crucial for the development of the Department. In a way they were also crucial to Prof. Prakash's own development. Prof. M. G. K. Menon has recounted the period that Dr. Homi J. Bhabha spent at the Institute: "I believe this was the period when he found his mission in life; he became aware of the role he could play in the development of India". In a similar fashion it can be said that in the congenial and contemplative environment of the Institute, Prof. Prakash was preparing himself for his later missions in life.

In order to savour the accomplishments of Professor Prakash in metallurgical education, it may be instructive to look back upon how the Institute and the Department came into being and how he happened to join the Department.

II. GENESIS OF THE INDIAN INSTITUTE OF SCIENCE

Jamshetjee Tata was in many respects the most remarkable Indian of his time. In 1886 almost a century ago he conceived the idea of setting up an Indian Institute of Science. In September 1898 he offered property then worth two hundred thousand pounds as an endowment for organising an Institute where the best intellects of the country should come into close touch with Western science and find new careers in industry. He passed away in 1904 but created the Institute in 1909 breaking the barriers of his own lifetime.

The author is Chairman, Department of Metallurgy, Indian Institute of Science, Bangalore 560 012.

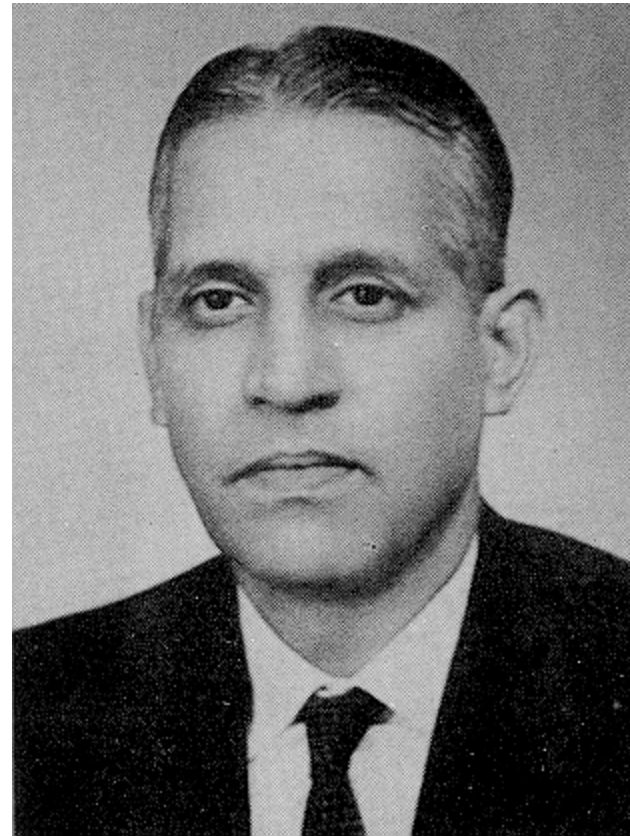
It is an interesting coincidence that the same year the Institute came into being, Homi J. Bhabha was born. After his study at Cambridge, he came on a holiday to India at the age of 30. World War II broke out and he was unable to return to Cambridge. He joined the Institute as Reader in Physics and he became Professor in 1941. On August 19, 1943, he wrote in a letter to J. R. D. Tata that "lack of proper conditions and intelligent financial support hamper the development of science in India at the pace which the talent in the country would warrant". Sir Dorab Tata Trust offered him necessary support. Thus was TIFR born and the rest is history. On June 1, 1945 TIFR began functioning in Bangalore. However, Dr. Bhabha always felt that the Institute should be located in Bombay. In December 1945 the shift to Bombay had occurred.

It is around the same time that the Department of Metallurgy came into being, even though the idea had been mooted a few years earlier.

III. ORIGINS OF THE DEPARTMENT OF METALLURGY

The Court met on 28.3.1942 and the Council met on 30.3.1942 and resolved that in view of the fact that metallurgical industries are rapidly developing in India, a Department of Metallurgical Research should be established in the Indian Institute of Science at an early date. Funds were obtained from the Mysore State and the Government of India and the Department came into existence in 1945.

Dr. Frank Adcock joined duty as Professor and Head of the Department on 24.9.1945. It is interesting to note that his appointment was based on the recommendation of a selection committee consisting of Dr. C. H. Desch, FRS, Dr. A. McCane, FRS, and Sir Charles Darwin, FRS. Dr. Adcock is known for his work on Fe-Cr diagram.



Brahm Prakash
1951-1957

Head, Department of Metallurgy³⁹

The Beginnings of Metallurgy

1901

Chemistry , including metallurgical engineering, applied bacteriology

1906

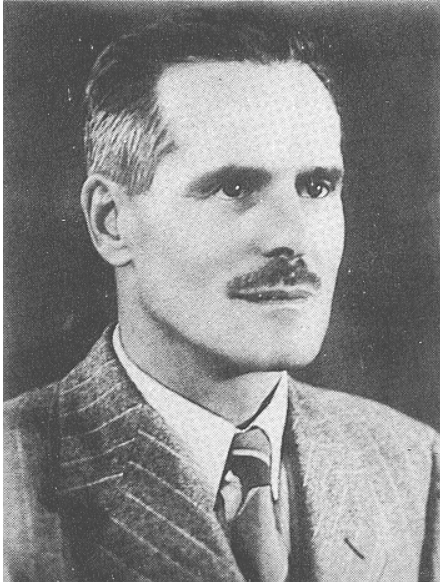
In connection with the three main departments of chemistry it is proposed to develop sub-departments of agricultural chemistry, pictorial chemistry, metallurgical chemistry, etc. These sub-departments may in time develop into separate departments, but at present it would be impossible to establish a full department of dyeing,

Similarly, metallurgy, in the modern sense of the word, could only be dealt with in





J C Ghosh, Student
of P C Ray, University College London
Director, IISc & Director, IIT Kharagpur



Frank Adcock
1945-1947

March 28, 1942

Court under the Presidentship of
Sir M Visvesvarayah

March 30-3-1942

Council

Dr J C Ghosh, Director

September 24, 1945

Prof Frank Adcock

Head of the Department

The Selection Committee

Dr Ch Desch FRS

Dr A McCrane FRS

Sir Charles Darwin FRS

July 1948

Foundation Stone laid

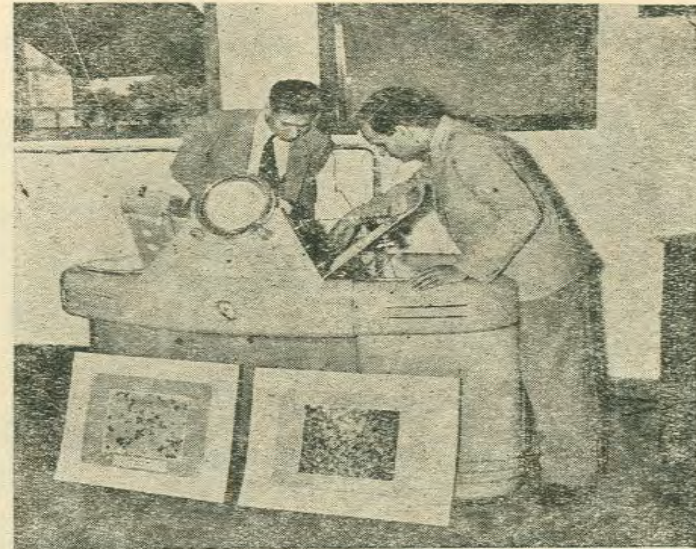
by Sir M Visvesvaraya

The First Electron Microscope

DEPARTMENT OF METALLURGY

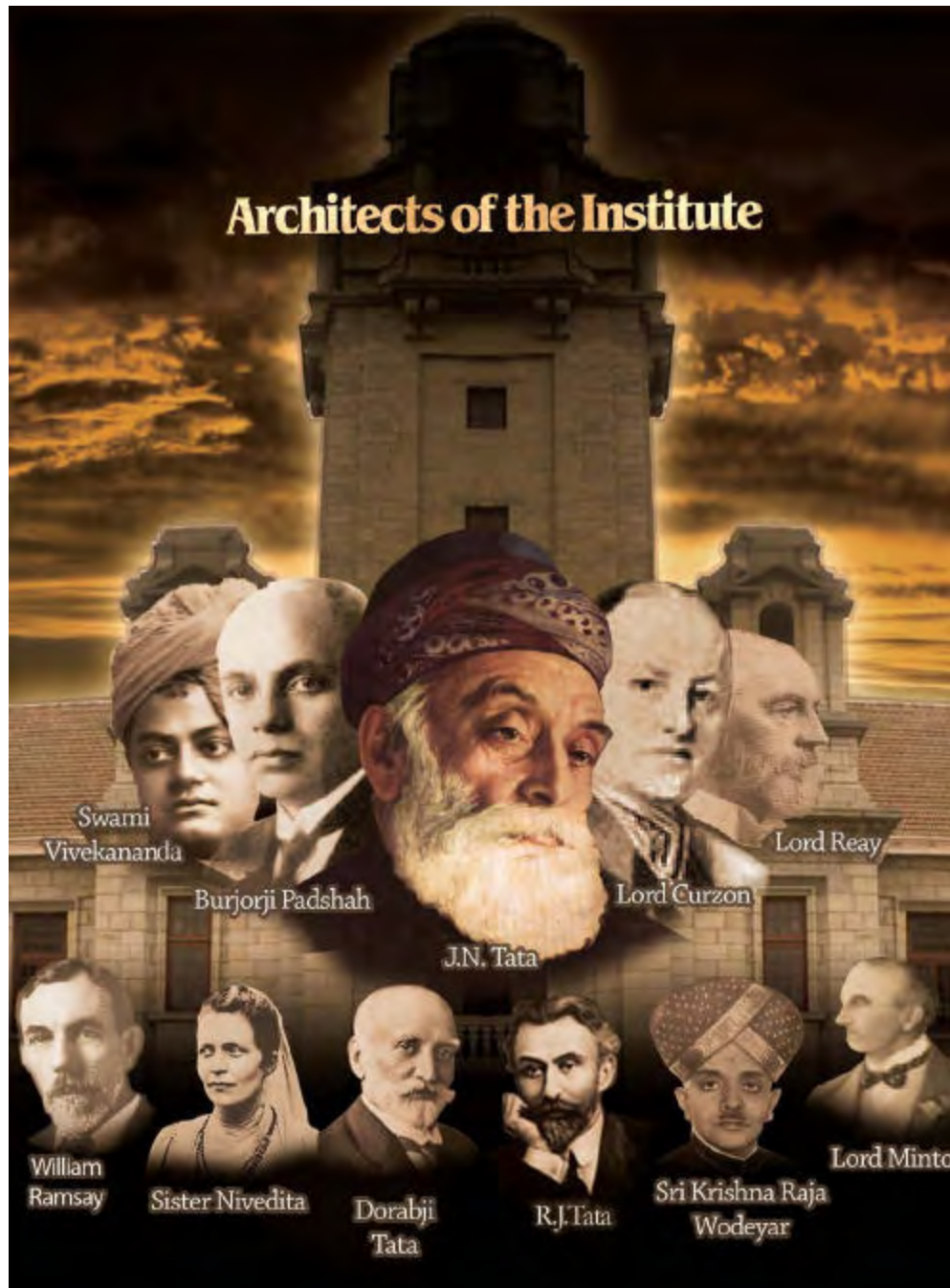
This Department was started in 1945 with the object of providing a course of instruction in Metallurgy to graduates in Physics, Chemistry and Mathematics and also offering facilities for fundamental and applied research in all branches of Metallurgy. Since last year, a one-year course in Iron and Steel Technology has also been started to train mechanical engineers for the steel plants of the public sector.

The Department is well equipped for instruction and research in all branches of Process and Physical Metallurgy. The equipment includes a Wilfley Table, a Humphrey Spiral, an Isodynamic Separator, a High Frequency Induction Furnace, a Wild Barfield Globar Furnace and an Electroanalyser in the Process Metallurgy Division and a Vickers Projection Microscope, a Leitz Metallograph, a Siemens X-ray diffraction unit, a Philips



The Philips 100 KV Electron Microscope

(26)



AnYang to Beijing



Nalanda to Bangalore

