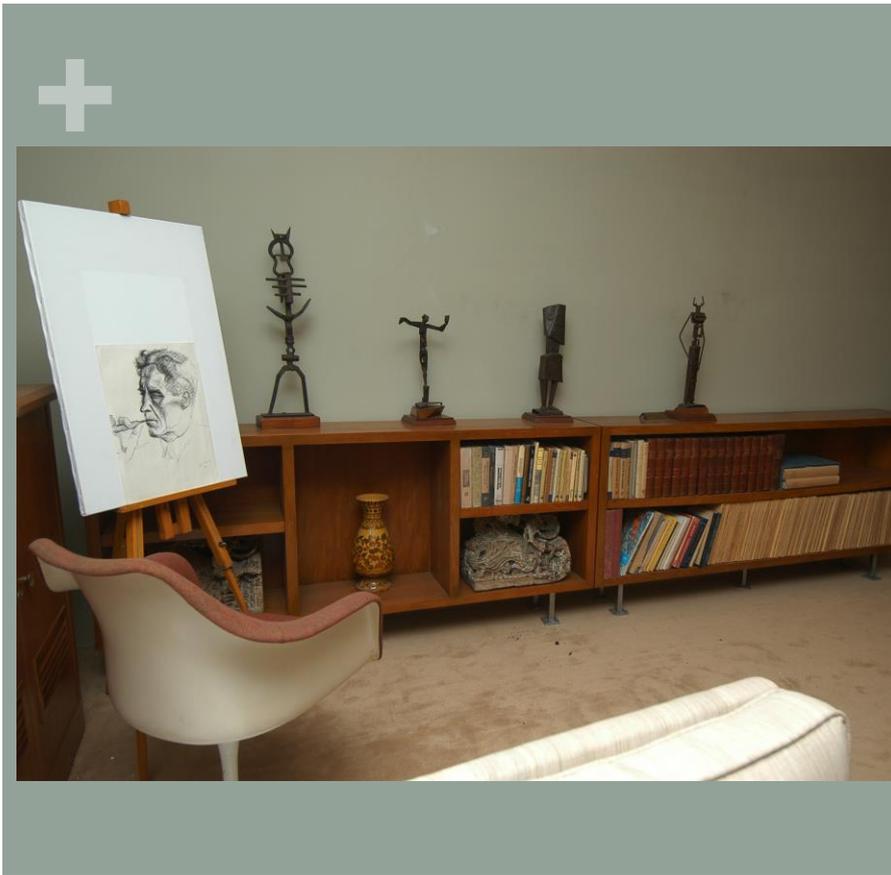




Sydney Brenner at TIFR, 1973



Who inherited Bhabha's Office? The predicaments of institutional legacy of science in postcolonial India

Indira Chowdhury



ICTS, Bengaluru
24 September 2018



“Institutions systematically direct individual memory and channel our perceptions into forms compatible with the relations they authorize. They fix processes that are essentially dynamic, they hide their influence, and they rouse our emotions to a standardized pitch on standardized issues. Add to all this that they endow themselves with rightness and send their mutual corroboration cascading through all the levels of our information system. No wonder they easily recruit us into joining their narcissistic self-contemplation.”

Mary Douglas, *How Institutions Think*, 1986



Photograph from
TIFR Archives.

A tragic ending



Air-India 707 crash on Mt Blanc
1966: Chamonix police archives.



Air-India 707 crash on Mt Blanc
1966: TIFR Archives.



Photographs from TIFR Archives.



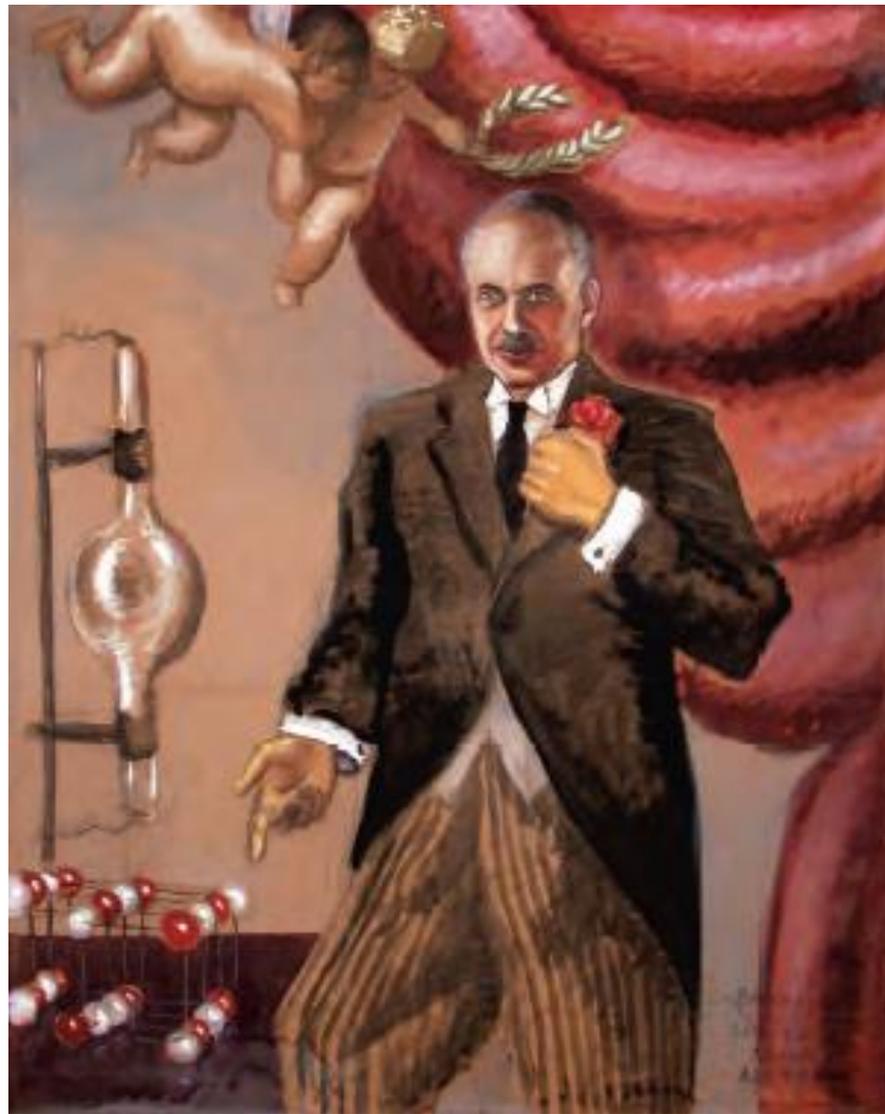
Self portrait at age 17, before leaving for Cambridge in 1926 for which he won the Bombay Art Society medal.



Bhabha at Cambridge 1928

“He who would pursue Science or Art must give up thoughts of wife or home, country or race, and do whatever he may, not for any small part of the race, but for Man. I am driven to pursue Science and Art at all costs. Science shall be my wife, Art my mistress.”

Homi Bhabha to Homi Seervai, 3 July 1930.



Portrait of Sir Lawrence Bragg done with Hugh Carmichael at the Cavendish Laboratory, Cambridge.

479th Meeting - Nov. 16th 1937.

Absorption of soft X-rays in metals. H. Jones

480th Meeting Nov. 23rd 1937.

News from the bottom of the Atlantic. B.C. Brown.

481st Meeting Nov 30th 1937

Capture of orbital electrons in β -decay theory J. Hoyle.

Can neutrons be polarized by low temp + magnetic field. Hoffmann

482nd Meeting Jan 11th 1938

Theoretical prediction about distribution of neutrons emitted from excited nuclei

H. H. L. Pryce

483rd Meeting Jan. 18th 1938

Discussion on He II.

J. F. Allen H. Jones.

484th Meeting Jan. 25th 1938

Low temperature heat conductivity in metals

Hollnagel

485th Meeting Feb. 1st 1938 The heavy electron. H. J. Bhabha.

486th Meeting Feb. 22nd 1938

Nuclear theory + Stellar evolution

R. E. Anderson.

The Russian physicist Pjotr Kapitza founded The Kapitza Club in Cambridge in 1922. Bhabha spoke at the Kapitza Club on 1 February 1938 on the heavy electron.

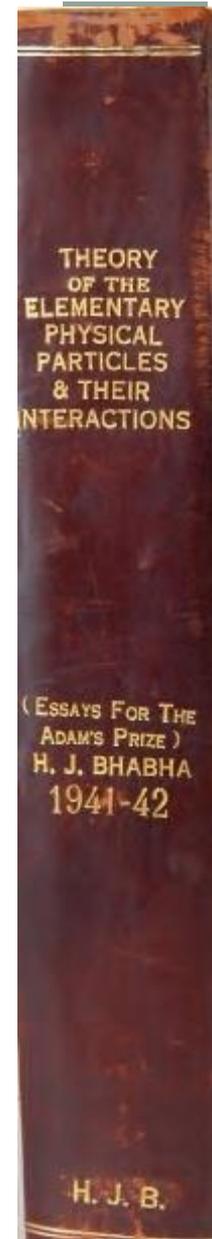
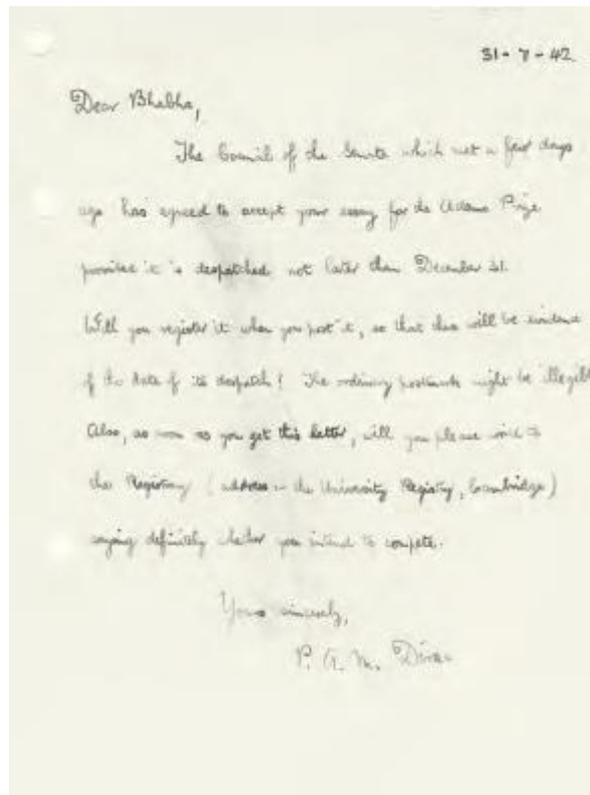




**Homi Bhabha seen here with CV Raman and R.A. Millikan
at the Indian Institute of Science, 1940**



Bhabha and Dirac, Bombay, 1954.





1945: Kenilworth, Pedder Road.

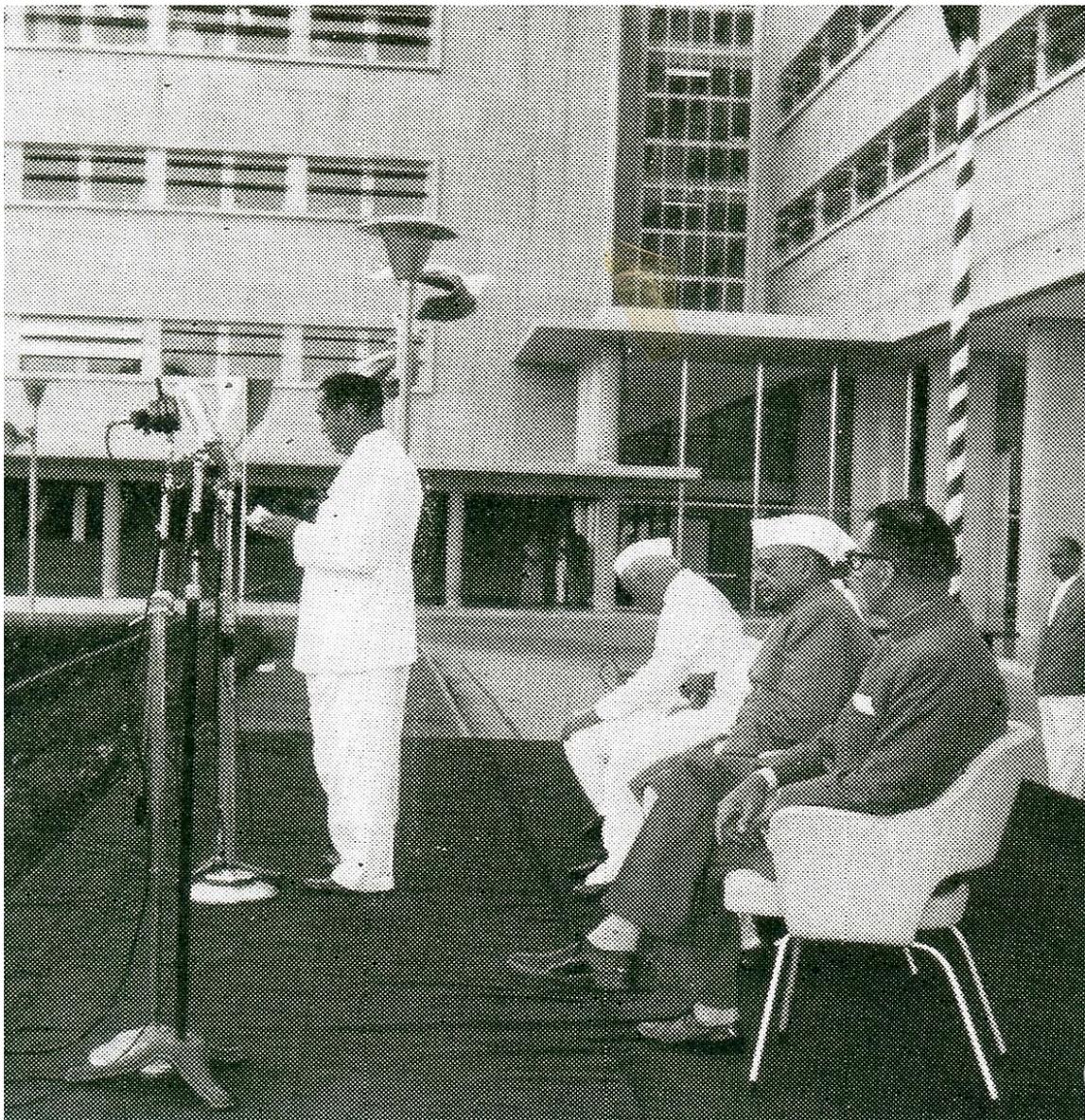
1949: Old Yacht Club



1954: Colaba Reclamation, Foundation Stone laying of TIFR new building



Photographs from TIFR Archives.



**Bhabha at inauguration of New Buildings, 1962.
Photograph from TIFR Archives.**



TIFR Building, 1962.



Photographs from TIFR Archives.



An Institute
is Born

FIGURE 1

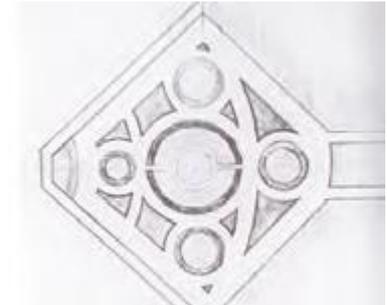
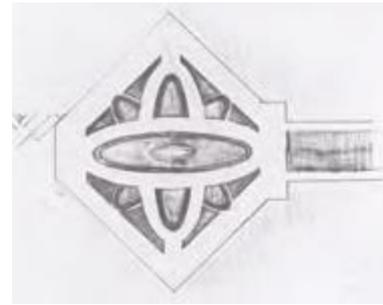
'The result, it is hoped, is a building which will not only fulfil its function but should afford a great deal of enjoyment.'

Helmuth Bartsch, Architect, TIFR, 1962.

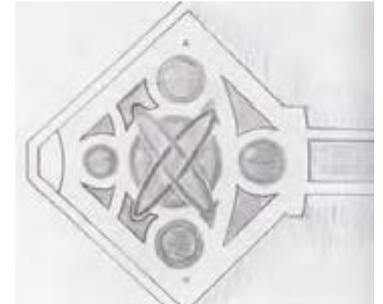
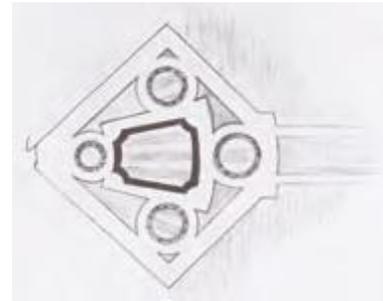
“A Larger Design for Living”



Lounge adjacent to West canteen.



Sketches for the parterres, BARC

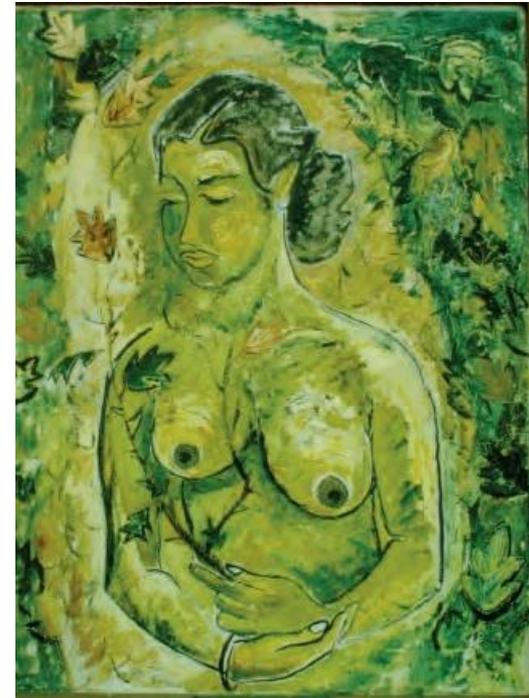


The Amoeba Garden.

Science and Art in cosmopolitan Bombay



MF Husain, "Yellow Face Tempera", 1954.



Krishen Khanna, "Spri"



TATA INSTITUTE OF FUNDAMENTAL RESEARCH

I saw Dariuswala's show.
He said Air India wanted the
"Mundabird", ~~but~~ He was waiting
for your word. I think it is
rather nice. I felt it would
have shown up much better
if it had a pedestal which
looked more slender. He
agreed. I liked the
standing figure in iron
printed on his "brochure".
It would like very nice
if exhibited in proper surroundings —
not that horrible place.

K.C.
9/3/62

Dr. H. T. S. S. S.

gys



“The designing of the buildings was done with great care. There was constant talk between the architects and the scientists in the designing and at the last stage the architects actually asked the scientific workers to mark on the plans every piece of major equipment and even the furniture that was going into each place so that the areas and the rooms and the buildings should be very intimately correlated. Indeed, this is one example of what Le Corbusier described, “A house for a building is a machine to live and work in” and I think this indeed has been designed as a machine in that sense.”

Homi Bhabha, inauguration of new buildings, 15 January 1962.



It seems to me that the purpose of the modern section of the Indian exhibition in London is to give the world a picture of the achievements and cultural life of modern Indian society in the sphere of the plastic arts, and in particular painting. This cultural life is not made up only by the work of Indian artists; artists of foreign origin domiciled in India also make their contribution to it. To exclude Mrs Nachman Acharya's work from this Exhibition on the ground that she was born abroad would be like sending Uday Shankar's troupe abroad to a dance festival and insisting on the omission of Simkie, who was his chief dancing partner on the ground that she is French. It should also be remembered that one of our best modern artists, Amrita Shergill, was of half Hungarian descent and received her entire artistic training in Paris. The point of view I take is the one taken in all progressive countries.

Art like Science knows no frontiers and we should not only not put any impediments in the way of foreign artists coming to this country but should rather encourage them to do so...

Bhabha to Maulana Azad, 24 July 1947



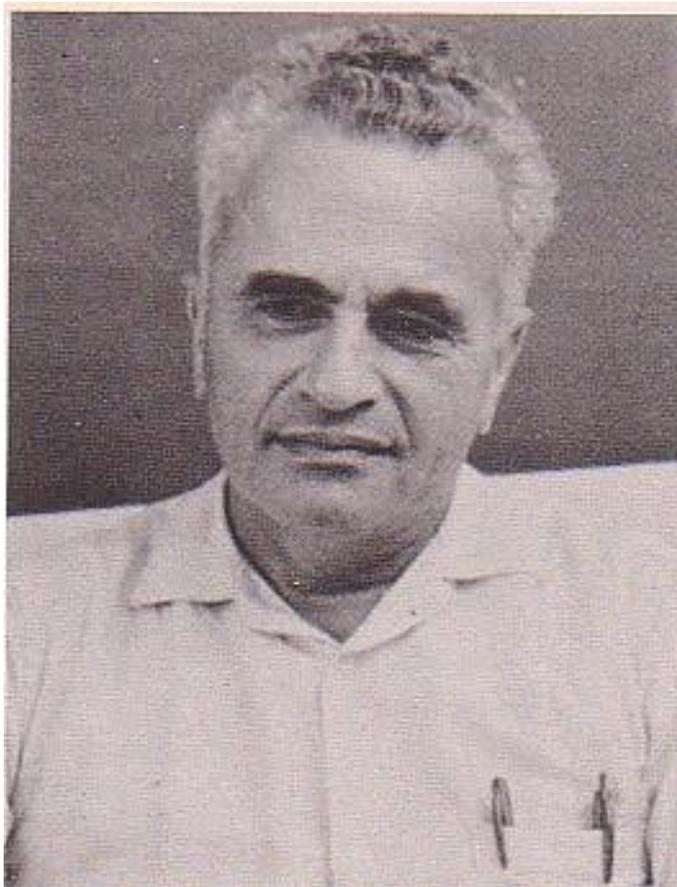
Shiing-Shen Chern, 1975

Kosambi and I have read with concern of the spread of the war in China and the approach of the fighting to the region where your Institute is located. Although we know the patriotism which prompted you to prefer to work in your own country despite the many attractive offers from abroad, we realize that the present conditions must make work in your neighbourhood extremely difficult, if not impossible.

...I am therefore, writing to offer you the hospitality of this Institute, and to enquire if you would like to spend one year in the first instance with us as a Visiting Professor? ... If you desire that some of your close collaborators should come with you, will you please let me know their names and their academic status so that, if possible, we might be able to do something for them too.

Homi Bhabha to S.S. Chern, 16 December 1948

Bernard Peters, Strange Particles and the McCarthy era



TIMES OF INDIA
19 APR 1954

**'Tata Institute
Expert A Red'**

**DR. OPPENHEIMER
ALLEGES**

"U.P.A." & "The Times of India"
News Service

NEW YORK, April 17: Dr. J. Robert Oppenheimer told a House investigating committee in 1949 that Dr. Bernard J. Peters, a fellow-atomic scientist, criticised the Communist Party in America for being "not sufficiently dedicated to the overthrow of the Government by force and violence," the *New York Daily News* reported today.

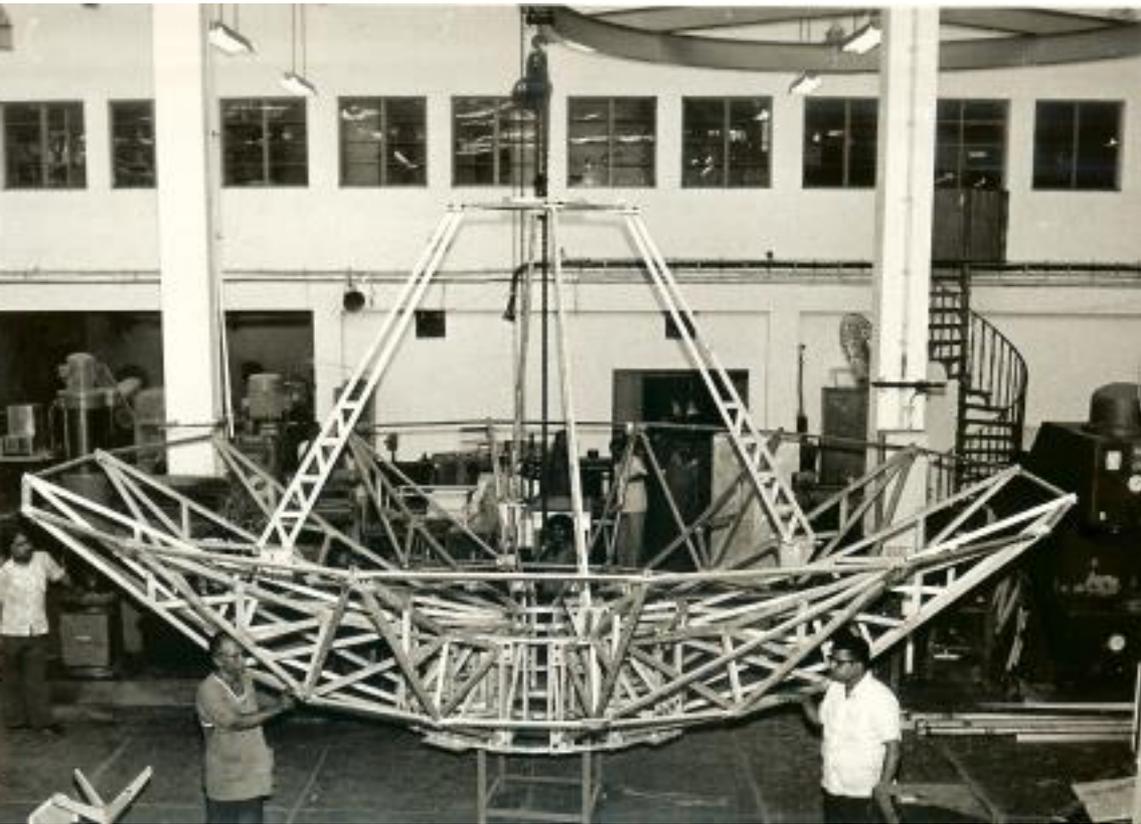
In a story copyrighted by the News Syndicate Co., the newspaper said Dr. Oppenheimer agreed with the House Un-American Activities Committee that Dr. Peters was "a dangerous man and quite Red" when he testified in secret session before the group on June 7, 1949. Dr. Peters was an Assistant Professor of Physics at the University of Rochester at the time.

It was revealed earlier this week that Dr. Oppenheimer's testimony brought an angry warning from Dr. Edward U. Condon, then head of the Bureau of Standards, to make amends to Dr. Peters for the damage done to his reputation or face consequences of having his own record exposed. Dr. Oppenheimer was the Director of the Los Alamo, New Mexico, atomic laboratory and had access to atomic and hydrogen secrets until his status was placed under review by the Atomic Energy Commission.

The *Daily News* said Dr. Peters went before the Committee the day after Dr. Oppenheimer's appearance and denied all the charges made by the scientist under oath.

Dr. Peters, a German-born anti-Nazi, has since gone to India where he is staff physicist at the Tata Institute for Fundamental Research in Bombay.

Dr. Oppenheimer testified that he first met Dr. Peters in 1938, in the early period of development of the atomic bomb, the *Daily News* said. He said Dr. Peters had just arrived in California and "violently denounced the Communist Party as being a do-nothing party."



“Even if it takes away our time from scientific research, our efforts for designing the antenna in India would be of great advantage in the long run when ‘we want to do bigger things’.”

Govind Swarup, ‘Homi Bhabha: Personal Reminiscences’,
Current Science, 1991.



Interviewer: What is your most serious problem?

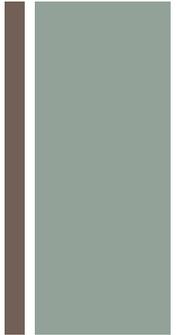
Homi Bhabha: [Long pause] An answer which may surprise many people – the right administrative setup. Our administration is not adapted to the requirements of the technological age. We have inherited from the past a very high grade of administrators. In their own line they are first-class. For example, our civil services have been of a very high caliber, but their whole background is that of the administration of justice, of law and order, tax collection, or the routine administration that is done in a Secretariat. It's not adapted to the administration of laboratories, plants, factories etc.

Interview with Homi Bhabha, *International Journal of Science and Technology*, 1963

RN: It's difficult to blame Dr Bhabha because he was doing so many things. He was not around – for a good part of the year, he would be traveling around. He was taking care of atomic energy –building a reactor – he was taking care of, what later on became Sarabhai's empire. There were so many people always waiting to have appointments with him. But so far as the administration in TIFR was concerned, the chief man was Allardice. His next level was Puthran – Puthran was at that time at the second level. He was the one who should have talked to Dr Bhabha. But the discrepancy between the levels was so large that one couldn't imagine that Puthran would go and talk to Dr Bhabha. Also the administration at that level had become rather politicized – there was this difference of opinion between Bhabha and Chandrasekharan, between Chandrasekharan and Menon and it would have taken a lot of effort and understanding in order to keep all the people equally satisfied because they all had opinionated views about how things should be. Dr Bhabha, I think, tried to get round some of these problems, by keeping on recruiting new people.

Interview with R. Narasimhan, 11 May 2005.





MGK Menon holding down a balloon, c. 1958.



MGKM: I think he made one quite telling remark. He said that he would have no difficulty in appointing me on the basis of my background as a professor, [but] that would not be in the interest of the institution. Not my interest and certainly not in the interest of the others who were already there. ... His idea was to appoint me at the bottom of the scale as a reader ...

IC: You didn't think it was disappointing?

MGK: No, No. I didn't feel disappointed at all. in those days - its quite different today – let me point out. In those days, very few people in the institute really bothered about what they were titled and called and paid. They wanted to have a position which enabled them to do some things. And they were interested in a salary, which enabled them to live.

IC: And where did you start living?

MGKM: Oh! That was a problem. Because he told me very clearly that there was no accommodation really available and that I would have to fend for myself. It was not so easy in Bombay of those days for the salary levels you had...because the rents may appear to be very low in today's context, but it was two-thirds of the salary.

IC: What was your salary?

MGKM: Rs 650 if I am not mistaken.

Scientific internationalism and the norms of institution building



International Colloquium on Function Theory 1960



A storm in a tea cup?

Rutherford has been dead for many years, and the description of the Cambridge tradition given by the Director is rather incomplete, since even food is free for Fellows at Cambridge. We are not a university, and the comparison with Cambridge does not seem quite right. The Institute for Advanced Study at Princeton, and similar Institutes in the US have had tea served in their Common Room every day of the week free of charge. This has helped to build an atmosphere, which even Dirac would, I am sure, recognize. If this is impossible to secure, in a building of our size, I would give it all up.

K. Chandrasekharan to Homi Bhabha , 16 February 1962.



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Photograph
from TIFR
Archives.

Nehru, Bhabha, JRD
Tata and
K.
Chandrasekharan, 1962.



Prime Minister Jawaharlal Nehru looks at the Facsimile edition of the Srinivasa Ramanujam Note Books published by TIFR in 1962.

Photograph from TIFR Archives.



D.D. Kosambi
TIFR 1945-1965



“I suspect that the letter refers to his claims – obstinately repeated – that he has proved the Riemann Hypothesis, something which Weyl, Sigel, Andre Weil, Vinogradov and Linnick have failed to do. Every time that a mistake is pointed out, he claims, it seems, that he can correct it! This is not the first time that Vinogradov has pronounced ‘our friend’s’ attempt as hopeless! However, the claim goes on, like Goebbels’s claim about victory in World War II. *The whole business has become an international scandal.* When I was in the midst of a meeting in Zurich, Professor Peter Hilton of Birmingham nagged me by saying: “It seems Indian Mathematics is very good. I am told that you have a colleague who has proved the Riemann Hypothesis in his own way.” *I had to hang my head down in shame.*”

K. Chandrasekharan to HJ Bhabha 7 July 1960



IC: So, coming back to your first day [as director], where did you sit?

BVS: Yeah, that is another thing. You see after Dr. Bhabha died, Prof. Menon, who had spent the whole night talking to Bhabha the day before he left, just could not reconcile himself to sitting in the same room. This was in spite of J.R.D. Tata insisting he occupy the same room. He continued like this for 9 years right from 1966-'75. I did not want to violate that either. But the room was open for Council meetings and I made it available for all other meetings. However J.J. Bhabha and J.R.D. Tata would always tell me at all Council meetings that I should shift my office there.

Interview with BV Sreekantan, 31 March 2005



Elements from the
Bhabha office, TIFR,
c. 2008.





SSJ: Compared to the effort in introducing the new academic structure and in getting the deemed University status – and the sense of accomplishment felt by me in doing so, my moving in 1997 to the office occupied by Homi Bhabha was not such a great event. I renamed the office as the Homi J. Bhabha Room. I was able to convince most of the staff members that Homi Bhabha's desk and other articles including many things kept in the storage should be moved to a new room to be created in the foyer exhibition area in front of the Homi Bhabha Auditorium, as a memorial to Homi Bhabha. In this way, it would have easy access to most of the visitors to the Institute. Dr. J.J. Bhabha and other members of the TIFR Council also thought it was a good idea.

Email interview with S.S. Jha, 9 June 2014



Photographs from TIFR Archives.



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Photograph
from TIFR
Archives.

Nehru, Bhabha, JRD
Tata and
K.
Chandrasekharan, 1962.



DL: You know, the main thing is that there was this culture, everybody in Tata Institute knew how science was done internationally. They even spent two or three years, some of them longer periods of time abroad. This facility, for example, didn't exist anywhere else in the country. Then these people came back and we would then expect them to do things on their own, and develop new things. But I do not know how or to what extent TIFR was successful in that. My greatest complaint has been that a person who is doing *nothing* in India does so well abroad. I do not know *why* this is so! See, TIFR had a tremendous potential. This is what drove me to say bad things in my J.R.D talk, and I think they should realise and acknowledge their own history.

Interview with Devendra Lal by Indira Chowdhury, 12 January 2007.



...institutions and people in institutions do not mechanically reproduce the past. Rather they work the past, re-presenting it each time in new but related ways for particular purpose, in particular form that uses the past to create a particular desired present and future.

Charlotte Linde, *Working the Past: Narrative and Institutional Memory*, 2009.