

C. V. RAMAN'S LOYALTY WITH THE IACS

RAJINDER SINGH*

It is well-known that C.V. Raman, India's only Nobel Prize winner in the field of natural sciences spent 25 years at the Indian Association for the Cultivation of Science. In 1917 he joined the University of Calcutta as the Palit Professor of Physics. The present short communication, which is based on the material from Holland and German archives, show that though he was employee of the University of Calcutta, he preferred to support the interests of the IACS.

Introduction

A number of articles and books deal with various aspects of the Indian Association for the Cultivation of Science.^{1,2,3} The only book, which deals with C.V. Raman's work at the Association is written by S.N. Sen.⁴ One of Raman's students', Prof. Kedareswar Banerjee, later 'Mahendra Lal Sircar Professor', recalled: "As the Association was not affluent in those days, he (Raman) ungrudgingly met deficits of the Association from his personal Bank Account on several occasions."⁵

The present communication shows:

- In 1928, C.V. Raman (Figure 1) identified himself not with the University of Calcutta but with the Association at the time of Arnold Sommerfeld's visit to Calcutta in 1928.
- In 1931, Raman asked the Dutch Noble Laureate Pieter Zeeman to become the Honorary Fellow of the IACS.

Arnold Sommerfeld in Kolkata

The German physicist Arnold Sommerfeld is well known for his contribution to atomic physics. His contacts with Indian men of science are explored elsewhere. It is



Figure 1: Young C.V. Raman during his Calcutta times (Credit: "Calcutta Review").

known that due the efforts of M.N. Saha and C.V. Raman he came to India.⁶

H.E. Stapleton, a member of the University of Calcutta, in a meeting moved a proposal that Prof. Arnold Sommerfeld be appointed as an University Lecturer to deliver a course of lectures on 'Atomic Structure' on remuneration of Rs. 2,000. In the meeting the motion was

* Research Group – Physics Education and History of Science, Physics Institute, University of Oldenburg, Germany. E-Mail: rajinder.singh@uni-oldenburg.de

unanimously passed.⁷ Sommerfeld was praised to be a great theoretical physicist, who like Max Planck and Albert Einstein was elected as Honorary Fellow of the Royal Society of London in 1926. The Vice Chancellor left it up to Professor Raman to tell about his scientific work. The former proposed to confer Doctor of Science Degree to the guest and hoped that the members will unanimously vote for it. Raman seconded the motion and told that Prof. Sommerfeld is already among us. Yesterday at the Asutosh Building, students heard his lecture on the findings of the new wave mechanics. After talking about Sommerfeld's world-wide recognition, Raman told an episode in reply to his question why Sommerfeld – did not go to Berlin, where he was offered position. Sommerfeld told that he stayed in München as he feared that he would not have enough time to teach.⁸ By what Raman was fascinated most, which he did not want that press should report, was that Sommerfeld declined to deliver lecture at the University of Dacca, which offered him a good honorarium, instead wished to deliver lecture at the Banaras Hindu University, because the University is facing financial difficulties and was unable to pay honorarium.

Prof. Ganesh Prasad from the Department of Mathematics wanted to say “one or two words” as a mathematician. First, he attacked Raman for not saying that Sommerfeld was a great mathematician. Strictly speaking he is a mathematician. It is only in the last ten or twelve years that he has become a physicist. Prasad boasted that he met the guest in Göttingen about 25 years ago. He can say that in him Indians can find a man who has sympathy for them.⁹

“The Englishman” of Oct. 5, 1928, under “Dr. Sommerfeld in Calcutta – German Tribute to Indian Science” wrote a long article. In it, Sommerfeld was told to have said:

“The real, independent spirit of science in India has produced some very important work. There were such men as Professor C.V. Raman of Calcutta, Professor (M.N.) Saha of Allahabad, Prof. (D.M.) Bose, a nephew of Sir Jagadis Chunder Bose, and Prof. (S.N.) Bose of Dacca, whose work on statistical physics was greatly appreciated by (A.) Einstein.”

The forgoing discussion gives impression that Raman was supporting the University in the matter of invitation. However, his private correspondence shows different story. Most of his letters to Sommerfeld, for instance, March 24, 1928; April 26, 1928; Sept. 26, 1928; Jan. 16, 1929 were

sent from the address of the IACS. Figure 2 shows that though he used letter pad of the University, he struck off his own status “Palit Professor of Physics” as well as the name of the college, where he worked. Obviously, for him the IACS had the higher status.

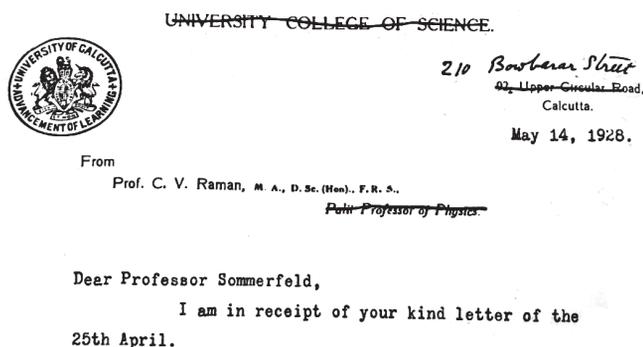


Figure 2: A part of C.V. Raman's letter to A. Sommerfeld (Credit: Deutsche Museum München).

Raman's love for the Association continued even after he got the Nobel Prize. Figure 3 shows that he asked the Dutch Nobel Laureate to become the Fellow of the IACS.

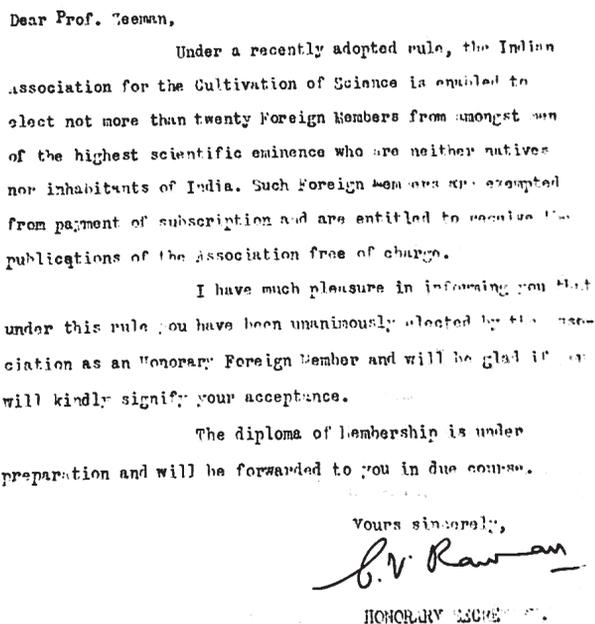


Figure 3: In a letter of June 12, 1931, C.V. Raman offering honorary membership of the IACS to Pieter Zeeman. (Credit: Rijksarchief in Noord – Holland, Haarlem).

In a letter of July 11, 1931, Zeeman thanked Raman and accepted the Fellowship.

It is to be mentioned that after the retirement of Zeeman in 1937, Raman was asked to take his chair in Amsterdam. However, he was not successful as the local authorities opposed due to language deficiency and age factors.¹⁰

From Saha-Raman controversy due to “Mahendra Lal Sircar Professorship” or “Palit Chair” we know that Raman was forced to resign as the representative of the IACS.¹¹ This seems to be the reason that Raman did not ask other physicists to become the Fellow of the Association.

Conclusion

Raman, who spent about 25 years of his life at the IACS, had true feelings for the Association. One can say that he almost “betrayed” the University of Calcutta, which gave him livelihood from 1917 to 1932.

Pieter Zeeman’s and C.V. Raman’s Correspondence suggests that the latter had plans to raise the status of the IACS in future. Probably, he wanted to make it international Institute like Niels Bohr’s Institute in Copenhagen. Unfortunately, he did not stay longer in Calcutta.

Acknowledgements

Thanks are due to the following archives: ‘Deutsche Museum München’ and ‘Rijksarchief in Noord – Holland, Haarlem’, Raman Research Institute, Bangalore; for sending me the documents, referred to here. Last but not the least, I thank Prof. Dr. Michael Komorek, Head of Research Group – Didactic and History of Science, Physics Institute, University of Oldenburg, Germany; for providing research facilities. □

References

- 1 For biographical sketch see, C. Palit, Mahendra Lal Sircar 1833-1904: The quest for national science (in: K. Kumar (Ed.), Science and empire – Essays in Indian context: 1700-1947, Kumar D. (Ed.)), (Anamika Prakashan Delhi, 1991), pp. 152-168. A.K. Biswas, *Journal of the Asiatic Society* (Calcutta) 39, 11-116 (1997). A.K. Biswas, *Journal of the Asiatic Society* (Calcutta) 60, 1-82 (1998).
- 2 C. Palit, (*ibid*).
- 3 For the history of the Association, see, U.R. Ghatak, S.C. Mukherjee, A.K. Chaudhuri, *et al.*, A Century, (Indian Association for the Cultivation of Science, Calcutta, 1976). J.B. Lourdasamy, *Journal of Science Education and Technology* 12, 381-396 (2003). R. Singh, *Indian J. Phys.* 82, 969-985 (2008).
- 4 S.N. Sen, Prof. C.V. Raman – Scientific work at Calcutta, (Indian Association for the Cultivation of Science, Calcutta, 1988).
- 5 K. Banerjee, Professor Raman - The first Palit Professor of Physics (in: A. Basak, J. Basu, *et al.* (Eds.), The Calcutta municipal gazette - C.V. Raman birth centenary, special number), (The Calcutta Municipal Corporation, Calcutta, 1988), pp. 59-64.
- 6 R. Singh, *Curr. Sci.* 81, 1489 -1494 (2001).
- 7 Minutes of senate and faculties, (University of Calcutta, Calcutta, 1928), pp. 190-191.
- 8 *Ibid*.
- 9 Minutes of senate and faculties, (University of Calcutta, Calcutta, 1928), pp. 730-744.
- 10 R. Singh, F. Riess, *Curr. Sci.* 78, 351-353 (2000).
- 11 For more detail see, *The Illustrated Weekly of India*, Sept 24, 1989. S. Chatterjee, *Indian Physical Society*, Diamond Jubilee Number 43-47 (1995). G. Venkataraman, *Journey into light - Life and science of C.V. Raman*, (Penguin Books India (P) Ltd., New Delhi, 1994), pp. 57-59.