

The story of C. V. Raman's resignation from the Fellowship of the Royal Society of London

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In 1924 the first Asian Nobel Laureate in the field of Physics – C. V. Raman (1888–1970) was elected as the fourth Indian for the Fellowship of the Royal Society of London. Raman is the only Indian FRS who resigned from the Fellowship of the Society. The documents regarding this issue were obtained from the archive of the Society. In this paper the results of their analysis are presented.

C. V. Raman is known for the discovery of the effect named after him. The effect deals with change in frequency of the monochromatic light, after scattering through a medium. For his work on light-scattering and the discovery of the effect, he was awarded the Nobel Prize in 1930. Before that, another great honour came to him in the form of his election to the Fellowship of the Royal Society, London. Various biographies of Raman exist^{1–7} which deal with different aspects of his life.

Here, I first comment on the existing literature regarding Raman's resignation, and second I produce the primary documents to show that it might not be possible to solve 'the puzzle of resignation'.

Raman's election to the Royal Society

These are well-known facts that in 1907 Raman came to Calcutta as a bank officer and in the following ten years, in his spare time, accomplished his research at the Indian Association for the Cultivation of Science. In 1917, he was offered Professorship at the University of Calcutta. Until the end of 1921, i.e. the year of his nomination to the Fellowship of the Society, his fields of research were musical acoustics and optics. Raman's nomination certificate to the Royal Society shows that he was nominated by the following Fellows of the Royal Society: Sidney G. Burrard (1860–1943), John Evershed (1864–1956), Gilbert T. Walker (1868–1958), George C. Simpson (1878–1965), Charles S. Middlemiss (1859–1945), Alfred W. Porter (1863–1939) and Edwin H. Barton (1858–1925). The nominators sent a list of publications by Raman and about his scientific achievements. They stated that: 'Although trained

entirely in India (he) has made considerable additions to our knowledge of sound and light, having published about fifty memoirs. The chief are: 'Experimental investigations on the maintenance of vibration'; 'The dynamical theory of bowed strings'; 'Vibrations of bowed strings and of musical instruments of the



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violin family'; 'On Kaufmann's theory of the pianoforte hammer'; 'On the photographic study of impact at minimal velocities'; 'On Hertz's theory of impact'; 'Photometric measurement of the obliquity factor of diffraction'; 'The curvature of lines in diffraction spectra'; 'Colours of the striae in Mica'; 'The diffraction figures due to an elliptical aperture'; 'The colours of mixed plates' (Nomination certificate).

Raman's name was proposed in November 1921 and he was elected as a Fellow of the Royal Society on 15 May 1924.

Raman's resignation from the Fellowship of the Royal Society

Raman was associated with the Society for a long period (44 years) and resigned from the Fellowship in March 1968. About his resignation, R. S. Krishnan, a respected Indian scientist and a close associate of Raman, wrote: 'Nearly two years ago (i.e. in 1968), Prof. Raman had sent a paper describing his new findings on the physiology of human vision for publication in the *Proceedings of the Royal Society of London*. This was returned with some unfavourable remarks by a referee. He got so annoyed about it that he sent in his resignation from the Fellowship of the Royal Society which he held for 45 years⁸.'

In Raman's biography, the author G. H. Keswani also refers to the above statement (see ref. 2, p. 105).

In order to check the correctness of this version, I enquired of the Information Officer of the Royal Society and was informed that, 'the library holds referee's reports on papers submitted for publication . . . checked through all the referees' reports for papers submitted in 1967 and 1968, and there is nothing by Raman amongst them' (Broad, C., Information Officer, Royal Society, London, Private commun., dated 3 December 1999). This clearly shows that the information given by Krishnan is not correct.

Wali gives another version regarding the resignation. He quotes a talk with the famous astrophysicist and Nobel Laureate S. Chandrasekhar as follows: 'I believe, I heard the story from P. M. S. Blackett. Apparently, *The London Times* had an article on Fellows of the Royal Society who had received the Nobel Prize, and it did not mention Raman. Raman blamed the omission on the Society and wrote to Blackett (who was President of the Royal

Society at that time) saying that unless a satisfactory explanation was forthcoming, he would resign his fellowship. Blackett wrote back saying that it was a *London Times* article; the Society had no part in it. . . . Blackett's response, however, did not satisfy Raman. He resigned anyway; he was not satisfied with the explanation⁹.

As Wali did not refer to the issue of *The Times* (London), it is obvious that he has not verified Chandrasekhar's statement. In order to check the truth about this version, I browsed *The Times* issues from January 1967 to 8 March 1968, i.e. the time period in which the suspected list of 'The Fellows of the Royal Society who won the Nobel Prize' might have appeared. To the best of my knowledge such a list has not been found. Also the 'Catalogue of P. M. S. Blackett's papers and correspondence' in possession of the Royal Society Library does not contain any entry about Raman. Obviously, there was no communication between Blackett and Raman.

The next source to find the truth is in Raman's resignation letters. In the following paragraphs the content of Raman's letter which he wrote to the Secretary of the Society (but not to Blackett as Wali mentioned), are reproduced.

In the first letter dated 9 March 1968 Raman wrote to D. C. Martin – the Executive Secretary of the Royal Society that, 'I am writing to inform you that I have decided to withdraw from the Royal Society. I have taken this decision after careful consideration of all the circumstances of the case. I would request that my resignation be accepted and my name removed from the list of the Fellows of the Society'.

Just after four days, i.e. on 13 March 1968 Raman wrote a second letter to D. C. Martin. It reads: 'I am writing in continuation of my letter No. 132 dated

the 9th March 1968, informing you of my resignation of the Fellowship of the Royal Society. I desire that this resignation should take effect immediately. Further, if the Yearbook of the Royal Society for 1968 has not yet been printed, I would request that my name be left out from the list of the Fellows'

Raman's own letters give hardly a clear picture of his action. The last reliable source left with is the record of the Royal Society. On page 96 of the Council Minutes dated 4 April 1968 it has been recorded: 'Reported intimation in a letter dated 9 March 1968 from C. V. Raman of his decision to withdraw from the Royal Society and his request that his resignation be accepted and his name removed from the list of Fellows and, in a letter dated 13 March, of his desire that his resignation should take effect immediately. Resolved – That Sir C. V. Raman's request be accepted.'

The date of acceptance of Raman's resignation is in accord with that given by Kochhar¹⁰.

Like Raman's letters, the record of the Society does not give a clear picture about Raman's resignation. But the fact remains that his resignation was accepted by the Society.

Though Raman was no more a member, after his death due place was given to him in the *Memoirs of the Fellows of the Royal Society*¹¹. The author S. Bhagwantam who knew Raman for more than 30 years, also did not mention anything about this incident.

Conclusion

Raman was elected as the Fellow of the Royal Society, London for his achievements in the field of acoustics and optics. Raman did not resign when his paper was rejected by the referee of the *Proceedings of the Royal Society of London*.

The primary sources like Raman's resignation letters and the available record of the Society did not give a definite answer to the puzzle. Under these circumstances, Raman's resignation remains a mystery.

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