

A FEW GLIMPSES OF PROFESSOR P.L. BHATNAGAR

By

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Professor P.L. Bhatnagar was my teacher and research supervisor of my Ph.D. thesis. But it did not end there. As it was with all of his students, his concern for my welfare and academic progress was so great that unknowingly I was drawn gradually closer and closer towards him. Let me briefly describe here a few personal reminiscences.

It was 9.30 a.m., the 9th April 1965. I had just arrived from Calcutta and I was waiting in the office of the Department of Applied Mathematics, Indian Institute of Science (IISc), Bangalore, to meet the much admired Professor whom I had not seen before. Then suddenly a tall handsome person passed by very swiftly and Mr. Srinivasamurthy (Secretary in the office) whispered, "He is the Professor". After ten minutes I was facing Prof. Bhatnagar and Dr. C. Devanathan in the discussion room where I was subjected to examination for more than two hours. This first meeting with him created in me an image of a great mathematician who was deeply interested in mathematics as well as in his students.

Whenever a distinguished visitor came to the Applied Mathematics Department of the IISc., Professor Saheb (that is how we refer to him) used to call all the members (most of whom were his students) in the seminar room for academic discussion and, while introducing them to the visitor, apart from mentioning the research work of each of them, he used to say proudly, "Here is a mini-India; you will find here a person from every State of India". It was a fact, and no other department of the IISc could boast of such a 'cosmopolitan' group.

In December 1969, I went with my wife, Mandra, to Jaipur where he was then the Vice-Chancellor of the Rajasthan University. He arranged for our stay in his own bungalow and it was here that I first got a glimpse into his personal life. He used to get up 4.30 a.m. (the minimum temperature then was near about zero degree Celsius), take a brisk walk for about half an hour in the garden and then used to study in the library till 7.30 a.m. At 7.30 a.m. he would take tea with all members of the family and the guests, he himself preparing each cup and serving. At this time he would discuss all family matters and would be in a most jovial mood. His witticism would cheer up everyone. Then after bath and breakfast he would become busy with the University administration. Again in the night he would find time to work on research problems till 11 p.m.

In April 1975 he was in Madras to conduct some interviews as a Member of the Union Public Service Commission. After ascertaining his programme, Dr. V.G. Tikekar and myself informed him that we would like to meet him and that we would arrive in Madras by a particular train. On reaching Madras we thought that we would be able to meet him only in the evening as during the day he would be busy conducting the interviews. We went to the railway canteen and when we were about to finish our lunch, Dr. Tikekar got up from his chair and said "Professor Saheb has come!" and rushed towards him. During the lunch-break Professor Saheb had rushed to the station to receive us; he had searched for us and had located us in the

canteen. This is how he would receive any one even if it meant inconvenience or personal discomfort to him. Likewise he was most hospitable in his house. He never kept any watchman at his gate. Anybody could meet him without any formality.

On 3rd November 1975, I reached Allahabad to join the Mehta Research Institute (MRI) as a Visiting Scientist for one year; Prof. Bhatnagar had joined this newly established institute a little earlier as its first Director. At that time, including the Director, the MRI had altogether only five persons on the staff (academic and administrative) and there was nothing except a rented building, which he had furnished tastefully in a simple and moderate way according to his own design. He was extremely happy to get my help at that stage but it was at this very time that he had started realising that he had not been given a full and correct picture about this project by those who were responsible for starting the MRI. However, he got excellent support from the Government of India through the Atomic Energy Commission and from the U.P. Government. At this time, his sole concern was to establish the MRI as an international centre of research in Mathematics and its applications. He worked ceaselessly, sometimes sleeping only for a couple of hours in the night, and concentrated his full energy to nurture the infant Institute. As he put it: "Anybody, who helped and participated in the academic activity of the MRI, is its member".

He was very critical of the poor quality of research in Mathematics and its applications in India. He attributed the poor standards of research and teaching to the existence of persons in key positions in the universities who were more interested in retaining their positions, their powers and a host of personal benefits unchallenged than in devoting their valuable time for study. In his concluding talk in the one month course on the "Hyperbolic systems and nonlinear waves", held at the MRI in May-June 1976, he advised the research students to revolt against supervisors who were incapable of guiding their research students properly and who kept them only to get some joint research papers. He personally told me once, "I am more anxious to get devoted bright workers in the Institute than to obtain financial support for it".

Little children were attracted to him like iron to a magnet. He could communicate with them with great ease and simplicity. My two children, Deepika (6 years) and Amritanshu (one year), were happiest when in his company. On returning from school, Deepika would first run to his office room, hold him by both hands and for a minute or two would keep on repeating "Baba, Baba.....". He would join by himself uttering "Baba, Baba.....". This was a daily feature no matter, how busy he might be, and even on days when he was busy conducting interviews. During this brief period, he used to be transported to a different world altogether. Whenever Amrithanshu got a chance, he too would run to his office, repeating the same words "Baba, Baba,".

After the death, in January 1973, of his wife, who used to look after every aspect of the household, he became completely broken and his personal life was filled with great sadness. In that state of depression his food intake was reduced to only once a day, and his health began to deteriorate rapidly. After six months he asked himself, "Why am I wasting my life?" Then he took courage and decided not to continue to brood over what he could not get back; he decided to live once again a dedicated life in the service of mathematics and his country. Gradually he recovered his health to a considerable extent. But his personal life at Allahabad was far from comfortable and sometimes loneliness used to be unbearable to him. He compounded his inner discomfort by sacrificing his personal comforts for the sake of the MRI. He would not utilize for personal use the car given to him as the Director, he did not allow the MRI even

to keep a watchman for the Director's residence. Once or twice, when his personal servant left the job, he did every household work himself and stubbornly refused any help from the Institute employees. Once on a Saturday evening a member of the administrative staff and a Research Fellow of the MRI told him that they would come to his residence at 11 a.m. the next day. It was apparent that they wished to offer help for his personal work. The next day Professor Saheb finished all household work very early. When the two persons reached his residence at 11 a.m. he was sitting comfortably working on a research problem. He requested them to sit and be comfortable. He prepared tea and offered it to them together with lots of sweets and other eatables. All that they did was to spend a few delightful and memorable hours with him.

On 4th October 1976 I spent nearly two hours with him in the evening. He cooked his dinner and I joined him on the dining table. He was feeling slightly giddy and so he went to his bed and I sat near him. This giddiness was nothing unusual for he used to get such a feeling quite often and, therefore, we did not feel much concerned about it. When I got up to take leave of him for the day he asked me to sit for some more time. We talked about many things; about the MRI, about our monograph on nonlinear waves and about the future academic programmes, etc. When I finally left him, it was 9 p.m. As usual he came up to the outer gate of his residence and closed it himself after seeing me off. I could never have imagined that this was to be our last meeting. The next day around 11 a.m. I was discussing a research problem with my student, Mr. Krishnan, when all of a sudden I heard noises and cries. When I came down running, I saw Professor Saheb lying on the back seat of the car. The immediate thought was that he was just unconscious. However, within a few minutes the realization dawned that he had left us for good for his heavenly abode. This dim awareness struck us all like a thunderbolt. For the MRI and for us the supporting central pillar was gone. We transferred him immediately to his residence and gently laid him down on the ground. Then, Kashi, the driver told us the complete story. Professor Saheb had gone to the Hospital at 9.30 a.m. with the complaint of a minor pain in his chest but, after a check-up, he was declared to be in normal condition. The doctors even told him that he could go to Delhi for an Indian National Science Academy (INSA) meeting the same afternoon. However, after leaving the hospital barely had his car gone half a kilometer when he had a massive heart attack and passed away within ten seconds, at 10.45 a.m. We were also told that he was quite cheerful that morning. When I went to his kitchen, I found that all the cups and plates which were left after the dinner the previous night had been cleaned and I knew that, except for him, there was nobody else in the house to do this job.

Gradually I started realising the irreparable loss which the MRI and I had suffered. To me the Institute looked like a graveyard. I decided to say goodbye to the MRI and on 7th December 1976 left Allahabad to return to the Indian Institute of Science, Bangalore.

Reproduced here in facsimile is a short Hindi poem in his own hand, which seems to be the last one written by him only a week before his death. I am grateful to his third son, Kamal Bhatnagar, who has very kindly permitted me to include it here.

पिता - पुत्र का खेल

पिता के हम कितने ही पुत्र थे
 हमें वे प्राणी से भी अधिक ध्यारे थे
 नयनों में उनकी कृति सदैव समाई रहती थी
 पिता सदैव हमारे साथ रहे
 यही हम सब की अभिलाषा थी ।

एक दिन पिता ने कहा " तुम मुझे जाने दो "
 हम ने सब साथ कहा " यह कैसा संभव हो सकता है ? "
 वे मौन हो गये ।

हम प्रसन्नजस में पड़ गये ।
 दिन और रात पूर्यचित् वीरते गये ।

एक ^{दिन} उन्होंने कहा " आषो आज हम एक ~~खेल~~ खेल खेलें "
 हमारी प्रलम्बता की सीमा न रही ।

एक दूसरे का हाथ पकड़ एक वृत्त बनाने का आदेश (पिता) ।
 पिता बौद्ध हो गये, स
 हम परिधि के अंग बन गये ।

फिर आदेश मिला " तुम मेरे चारों ओर चक्कर लगाओ । "
 हमने आज्ञा का पालन दिया ।

पिता की आकृति कुछ मलीन होने लगी
 हमारी गति धीरे धीरे बढ़ने लगी ।

पिता की आकृति कुंचली होने लगी ।
 हम देखते ही रहे पिता की आकृति अल्पान हो गई ।
 हमें कुछ शोभ हुआ ।

परन्तु हमारा खेल भङ्गता ली रहा ।

हम खेल में इतने मग्न हो गये कि हमें पिता के अभाव
 का अनुभव नहीं हुआ ।

समय के चिहरे ने हमारे स्मृति पहल पर
 धीरे धीरे विस्मृति की धालिमा पोत दी ।

हमें यह भी भान न रहा कि हम ^{जीव} जीव हैं ;
 और हम यह परिष्कभा ~~विस्मृत~~ ^{बने} ~~हो~~ रहे हैं ।

An English translation follows:

FATHER PLAYS A GAME WITH SONS

We were several sons of our father
We loved him more than our lives
His image was constantly before our eyes
Father should for e'er and e'er be with us
This only was our yearning.

One day said Father, " Now you let me go "
With one voice we exclaimed
" But how can this be ?"
Father was mum, we were perplexed
Passed the days and nights as before.

One day he said. " Come let's play a game today ".
Hearing this we're filled with great joy
Holding hands we were asked to form a ring
Of which Father became the centre
And we the parts of the circumference.

Then we were told, " Now move around me "
We did as we were bid
Father's form began to get somewhat blurred
Our pace began to increase gradually
And Father's form began to fade
And e'en as we looked on
It melted away into nothingness.

We felt somewhat upset
But our play suffered no let
In fact so engrossed we got
That not for a moment we missed
The presence of Father.

Gradually painter Time
Covered the screen of mind
With the black of oblivion
We couldn't even recall who we were
Or why we kept going round and round.

In the light of what happened, the poem seems to be prophetic, describing as it does the vanishing of a father while the children are asked to play a game moving around him, round and round. Dip Professor Saheb have a premonition that the call for him from Above had come ? Who can say ?