

Boshi Sen—Scientist and Karmayogi—II

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Boshi became an excellent research worker under the guidance of Dr Bose. He accompanied Dr Bose during his visit to England and Europe for lecture and demonstration which were a great success. The Bose Institute of Fundamental Research in Physiology was opened in 1917. Boshi had brought Sister Nivedita's ashes from Darjeeling—some of which were kept in Belur Math and some part had been kept by Boshi in his little Shrine at 8 Bose Para Lane. Dr Bose had asked Boshi to embed some of her ashes in the new Institute building which was done. In 1923 an American scientist, Glen Overton, and his wife came to India and visited the Bose Institute. On seeing Boshi's work there they were very impressed and took him to USA to visit some research institutes which were doing similar work. After returning from USA Boshi wanted to pursue independent research work in the Bose Institute. But he was denied permission by Dr Bose. It was a blessing in disguise.

He left Bose Institute in 1924 and started his own laboratory in his renovated kitchen on 4th July, the date on which Swami Vivekananda attained Mahasamadhi, and named it *Vivekananda Laboratory*. His infectious enthusiasm and energy brought him many friends and unexpected donations started pouring in from India and abroad. The instruments including an ultramicroscope were kept in two boxes with wheels and which served as his bed at night. While Dr J. C. Bose had carried out his research on

plant tissues, Boshi's work was on single plant cells. The relation between Boshi and Dr Bose though had been temporarily strained, but later it got repaired. Dr Bose wrote a letter to Boshi expressing his happiness that his former student was keeping the light of his faith undiminished. In reply Boshi wrote: 'So long as life endures, wherever I might be or whatever fate may bring, you will have at least one disciple, I ask for your blessings.'¹⁹

While setting up his nascent 'Vivekananda Laboratory' named after Swami Vivekananda, who was his Guru's Guru and whom he had never met, Boshi had vowed to work to the best of his ability believing that Swamiji would arrange to provide all that he needed for the laboratory. Devotees of the Ramakrishna Math and Mission, both Indian and foreign, gave lot of support to Boshi in his venture.

Boshi and Sister Christine

Sister Christine had joined Nivedita's School in December 1902. She was gentle and unassuming, but always affectionate and warm. Students and their guardians were all drawn to her. However, her health could not bear the strain and she returned to America in 1914 to regain her health. To her dismay, she could not return to India due to the outbreak of World War I. She could return only in 1924 after an absence of ten years. However, she felt that she was unwelcome and had no place in the school of which she was in charge for many years. Her health, on the

other hand, was very poor and was not in a position to serve the school. It was at this point Boshi offered accommodation to Sister Christine at his home on 8, Bose Para Lane, the same house where Boshi, his brother Tabu and others had nursed Swami Sadananda. Sister Christine gratefully accepted the offer.

Apart from being in poor health, she was penniless except for a yearly allowance of 500 dollars from Miss MacLeod, a lifelong friend of Swami Vivekananda. About this time, an American couple, Earl and Achshah Brewster—both artists—had arrived. As neither they nor Christine could stand the heat of Calcutta, Miss MacLeod (Tantine) proposed that all of them should go to Almora for the summer under care of Boshi.

Boshi took on rent at Almora an old building known as 'Kundan House' where Miss MacLeod had stayed earlier. Sister Christine had spent the last two summers of her stay in India at Kundan House with Boshi. As the Kitchen Laboratory at 8 Bose Para Lane could not keep pace with the increasing number of equipment and plants, Boshi decided to move most of his equipment to Almora in 1926. Here the laboratory was set up in the drawing-room. There was a lot of free space around the house where Boshi could accommodate his plants. Boshi regarded Almora as a preferred place of Swami Vivekananda. Apart from this, he felt that a secluded place in the bosom of the Himalayas was the proper place for carrying out spiritual practice. Moreover, his scientific endeavour involving plants would interest the villagers, he thought. The Vivekananda Laboratory thus continued to function at Almora at least for summer months for some more years till 1936 when it was permanently located at Almora.

To Sister Christine this was an unexpected blessing. As Swamiji had told her

that Raja-Yoga was the preferred path of her spiritual practice, Christine engaged herself full time in spiritual pursuit. She was penitent that she never asked Swamiji any question as long as he was alive. One day she conveyed her pain to Boshi. 'The same night Swamiji came to Christine and advised her not to do this, not to do that'.²⁰

In the meanwhile, a relation grew between Boshi and Gertrude Emerson, an American woman. Gertrude was a graduate of Chicago University, Fellow of the royal Geographical Society, founder-member of the Society of Women Geographers, member of American Asiatic Society and editor of *Asia Magazine*. The relation was that of a respectful love for Gertrude who had come to India a number of times. She had also stayed in a remote village in Uttar Pradesh to get acquainted with the conditions prevailing in rural India. She came to know this country and wrote in the *Asia Magazine* many articles and wrote a few books. Rabindranath Tagore wrote introduction to her book *Voiceless India*. She wrote another book named *Pageant of India's History*—an authoritative account of India before European invasions. The book was published in 1948 and received wide acclamation and was awarded the prestigious Watmul Prize. On reading the book, Swami Virajananda, the then Head of the Ramakrishna Math and Mission wrote, 'We know how much Swami Vivekananda longed to see India's true history written in the national line. You have fulfilled that hope of his.' Gertrude Emerson was married to Boshi Sen in Calcutta on 2 November 1932 as per Hindu rituals.

Initially Boshi's friends from the Ramakrishna Math and Mission did not approve of his marriage with Gertrude Emerson as they had expected him to join the monastic order. But their resentment was short-lived as Gertrude had won them over

and became their beloved sister, mother, or 'bouma' (daughter-in-law). Though the Vivekananda Laboratory was Boshi's greatest contribution, it was actually a successful joint venture of Boshi Sen and Gertrude Emerson.²¹

Going back, Gertrude first visited Almora as per request of Sister Christine and Boshi in August 1927. She stayed there in the Kundan House for two months. Boshi used to call Christine his mother and Christine used to treat Boshi as her spiritual child. She had given him all her treasures—rosary, mementoes and letters of Swami Vivekananda—her everything! She wanted Boshi to be a monk but in this she did not succeed. Boshi made his own way. Boshi and Gertrude would take long walks, while Christine would accompany them in 'Dandi'. Gertrude and Christine would read Swami Vivekananda's *Works* together. Later Gertrude learnt from Boshi about his Guru Swami Sadananda. Boshi loved Sister Christine as one would love one's mother—he also has a deep feeling of continuity with Swami Vivekananda, his guru Sadananda and Sister Christine. Swami Atulananda (Gurudas Maharaj) was at that time staying in Almora Math and would visit Sister Christine and Boshi at breakfast time once in three days and would have a cup of coffee with them. Once Sister Christine, who was with Swami Vivekananda at Thousand Island Park, told Gurudas Maharaj, 'What a blessing to have been born and to have met Swamiji. But, oh, how little ready I was for that marvellous man. It has taken me twenty-five years to appreciate him better'.²²

Gertrude returned to America in 1928. Shortly thereafter Boshi and Christine also left India. Boshi had to go to London in connection with the acceptance of a research paper and Sister Christine went to USA to recover her health. Sister Christine's last

days were spent in a nursing home of her friend which was one of the best in New York. Boshi had also reached New York. In spite of the best care she left her mortal body on 27 March 1930. Boshi was in tears and told Gertrude that 'Now she has joined Swamiji'.²³

Applied research

The agonized cry of Swami Vivekananda—'Bread, Bread! I do not believe in a God who cannot give me bread here, giving me eternal bliss in heaven. . . '—had always haunted Boshi. Slowly, he shifted from fundamental research to applied research that would make possible better crops, improved techniques of cultivation, introduction of new food and fodder crops, etc. The horror of Bengal Famine of 1943 only served to further reinforce Vivekananda's call against hunger and starvation in his mind. So his attention went now to the problems of practical agriculture. His research in agriculture involved plant introduction, plant breeding and production of hybrid seeds of maize, jowar, bajra, and onion. Without going much into technical details, it can be said that Boshi was successful in his efforts and one of the achievements of the Vivekananda Laboratory was the production of hybrid maize seeds. The yield potential of hybrid onions worked out to about 370 quintals per acre and onions produced from these hybrid seeds were found to do equally well in the plains and hills. His research work included improvement in fodder grass, cotton, vegetable fibre, mushroom cultivation etc. More than 200 scientific papers covering the fields of cellular physiology, biochemical studies, plant breeding and agronomy were published by Boshi Sen and his small band of devoted scientists in journals in India and abroad. He was a member of the prestigious Societies in India and

abroad. He was awarded Padma Bhusan in 1957 and received Watmull Award in 1962 for his outstanding contribution to Indian agriculture. At a special convocation held by the Agricultural University Pantnagar, Boshi was honoured along side Borlaug (the Noble Laureate wheat expert from Mexico) by being awarded the Honorary Degree of Doctor of Science. On this occasion, a silver plate was also presented by the farmers of the region acknowledging his services in ushering in the Green Revolution through the introduction of hybrid maize and the other improved crops in his laboratory.

The Uttar Pradesh Government took interest in the excellent work of the Vivekananda Laboratory and acquired some vacant land adjoining Kundan House for the expression of the laboratory and sanctioned money, staff and a farm at Hawalbagh, seven miles from Almora for field experiments with new crops.

When Boshi was in England in 1928, he came to know that Romain Rolland was writing biographies of Sri Ramakrishna and Swami Vivekananda. He was eager to meet him. Boshi also had earlier correspondence with him with an introduction from Sister Christine. However, he could meet Rolland in the last week of August 1928 and had discussions regarding the lives of Sri Ramakrishna and Swami Vivekananda. Boshi told Rolland that Ramakrishna was the potential of which Vivekananda was the dynamic expression. Boshi also met Einstein in Berlin on 18th and 19th November 1930 and had detailed discussions on Science and Religion.

Ram Maharaj, an elderly monk of the Ramakrishna Math, Almora, had lived at Almora for thirty-five years. He had in his youth met Swami Vivekananda and was initiated by Raja Maharaj. The Ramakrishna Math at Almora was established in 1916 through the joint efforts of Hari Maharaj

(Swami Turiyananda) and Mahapurush Maharaj (Swami Shivananda). Ram Maharaj had helped them in this effort. Though all of them had left for their heavenly abode, Ram Maharaj continued to work.

Both Boshi and Gertrude were deeply attached to Ram Maharaj who would visit Kundan House daily—once in the morning, then again in the afternoon and then again in the evening. He was fondly remembered in the Ramakrishna Order as ‘Ramer Icchā’ as he found God’s hand even in very trivial happenings. He truly believed that one, who has given himself totally to God, cannot do anything wrong. He would never preach but by telling small stories he would impart important teachings. It was Ram Maharaj who had found Kundan House for Boshi. Earlier, it used to be a haunted house. Though initially troubled about Boshi’s and Gertrude’s way of living by keeping their house open to all and sundry, he accepted it as ‘Ramer Icchā.’ Visitors, Indian or foreign, of whom there was a regular stream in Boshi’s place would be charmed by Ram Maharaj.

Swami Virajananda, Head of Belur Math, had arrived at Shyamalatal—his favourite abode in the Himalayas. While there, he got a letter from Boshi inviting him to come to Almora and stay with them. Boshi used to address Swami Virajananda as ‘Chāchā’ as his Guru Swami Sadananda was his brother-disciple. Swami Virajananda used to call Gertrude ‘Bouma’. Along with Boshi she had also written—‘Uncle, you must come.’ Swami Virajananda reached Almora on 28th October and stayed for six days.²⁴

Boshi and ‘Bouma’ spared no efforts to keep Virajanandaji in comfort. Maharaj was pleased to see Boshi’s Shrine in Kundan House. One day during conversation he said, ‘though Boshi is so busy in his work, he is regular in meditation, japa and puja—he

offers the best flower of his garden to Sri Sri Thakur.'

Almora carried a lot of sweet memories of Swami Vivekananda. He visited Almora three times. First time he came to Almora as a wandering monk. The second and third time he came after returning from USA. Sister Nivedita was with him during the last trip. He was accompanied by Swamiji's young English disciple, Mr Goodwin, in his second trip. Swamiji's inspiring memory during his one month's stay at Almora during his third trip has been captured by Sister Nivedita in her book, *Notes of Some Wanderings with the Swami Vivekananda*.

Earlier, Boshi and Gertrude had visited Swami Virajananda at Shyamalatal. Boshi prostrated himself before the Sanghaguru who affectionately patted him on his back. Then turning to his wife, Boshi jovially remarked. 'You see dear I am his nephew' 'And I am his niece', she quickly answered. Hearing this, the Swami laughed and lovingly placed his hands on her head in blessing. For two happy days they stayed at Shyamalatal.²⁵

Boshi and Gertrude visited Mayavati Ashrama in October 1940. Swami Pavitranaanda, the President of the Ashrama, heartily welcomed them. They stayed there for two full days and three nights. As it was very cold, the swamis had lighted a huge fire in the library. One day they had all a picnic up on a windy ridge. Boshi and Gertrude used to take armfuls of books to read from the library.

In 1890, when Vivekananda and his brother-disciple Akhandananda were climbing the steep slope to Almora (there was no motor road then) from Kathgodam, they felt exhausted having no food for many hours and sat on the outskirts of the town. A Muslim fakir seeing their condition had offered a cucumber which had practically

saved their lives. Many years later, returning after a triumphant tour to America, in his next visit to Almora, Swamiji spotted the Fakir in the crowd and thanked him profusely though the Fakir had forgotten all about the incident. Boshi and Gertrude decided to build a resting place on the very spot where the two swamis had sat exhausted. Gertrude made a lump sum donation for the maintenance of the memorial while the latter was built with small contributions from friends all over including a bank draft for Rupees one thousand only from Indira Gandhi.

Boshi's Kundan House had frequent visitors. After release from Almora jail in 1945, Nehru had a quiet lunch with Boshis. Tagore also visited Kundan house and stayed for about a week and had a restful time. How much Tagore valued Boshi's views could be known from the fact that he asked Boshi to read the manuscript of his only book on science, '*Biswa Parichaya*', and was very happy when Boshi praised it. The Father of Indian Planning, Shri Prasanto Mahalonobis, and his wife also visited Boshi's Kundan House.

In 1939, Boshi and Gertrude became instrumental in setting up Uday Shankar Cultural Centre at Almora. Uday Shankar had already earned great fame in India and abroad as a dancer and his American patrons, Mr and Mrs Elmhurst, asked Boshi and Gertrude whether they could suggest a place for a cultural centre. They suggested the name of Almora which was agreed upon. The finest talents available in India gathered together. Many interesting number and major ballets were produced at the centre and the centre was a great success. Sadly, however, the centre only lasted five years as Uday Shankar resigned in the winter of 1944 from the centre for personal reasons. Boshi was very much hurt.

Last days

Boshi was not keeping good health. On Christmas day, 1970, Boshi was down with pneumonia. After a day or two he was taken to the Military Hospital at Ranikhet. Gertrude had taken with her the dust of Sri Ramakrishna's feet and the flower Holy mother had given to Boshi. A book by Swami Vivekananda was kept on his chest. Boshi had been in coma for almost a day. Then he suddenly opened his eyes, looked towards the ceiling and said in a clear voice, 'Mother I am coming'. Then he closed his eyes. The end came at 9.45 on 31st morning. Entire Almora including friends, admirers and colleagues of Boshi were immersed in grief. Tabu, nephew of Boshi, performed the last rites at Almora and accompanied by Gertrude proceeded to Varanasi for immersion of Boshi's ashes. Some of the swamis of the Ramakrishna Math, who had a long association with Boshi and Gertrude, were at that time in Varanasi and received her on 6th January. To her surprise, they all accompanied her on the boat next morning which happened to be Swamiji's birth *tithi*. As she scattered the ashes, Boshi's chanting was played on tape recorder and before that a priest had chanted a beautiful hymn from the *Rigveda*.

Due to Gertrude's efforts, the Vivekananda Laboratory was later absorbed into the Indian Council of Agricultural Research (ICAR) Laboratory as an autonomous unit with full administrative and

financial powers. All this was in line with Boshi's wishes and the laboratory was named 'Vivekananda Parvathiya Krishi Anusandhan Sanstha'. The laboratory was formally transferred to ICAR on 1 October 1974.

Boshi wrote a letter on 27 August 1941 to his old friend Bibhuti:

Dear Bibhuti, these days—on morning hours I remember you and Tabu. I remember those days of 1910 and 1911—Jai Swami Sadanandaji Ki Jai—I do not understand business. The only thing I understand that the place where you took me—may not give anything but it can get me God. Further I know that he is definitely holding our hands. He will definitely give us things which will help us.²⁶

Once when Gertrude was visiting Boshi and Sister Christine at 8 Bose Para Lane during her visit to India in 1926, Boshi in course of conversation had told her: 'Down here I am a pure product of the West but upstairs I am wholly Indian'. To Boshi Science and Religion were two faces of the same coin as both involved profound thinking and a search for truth. Perhaps, the last words in the matter have been said by Swami Vivekananda when he said "Science informs but religion transforms".

In spite of being modern, liberal, and a famous scientist, Boshi Sen accepted that religion and spiritual thinking were his main strength in his pursuit of science. Boshi Sen is no more but he has left behind his laboratory at Almora. ■

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