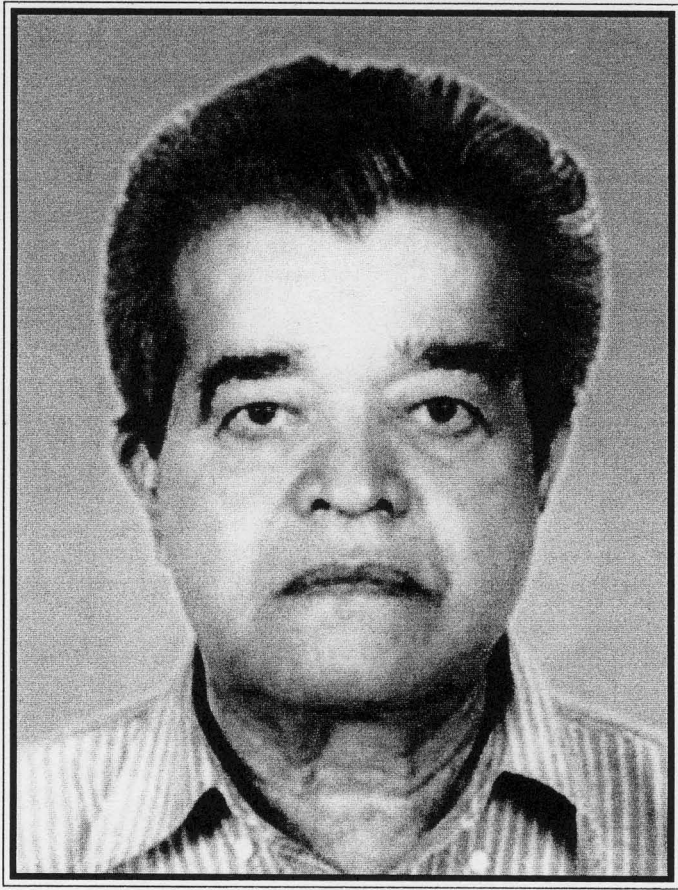


**SYED MAHMOOD NAQVI**

**(28 August 1941 – 04 September 2009)**

*Biog. Mem. Fell. INSA, New Delhi* **38** 75-90 (2010)



*[Handwritten signature]*

# SYED MAHMOOD NAQVI

(1941-2009)

Elected Fellow 1986

## LIFE, EDUCATION AND FAMILY

Being a descendent of Prophet Muhammad's daughter Syeda (hence the title 'Syed') through the 10<sup>th</sup> Shia Imam Ali Naqi (hence the surname 'Naqvi'). Mahmood's roots into science can be traced back to the 8<sup>th</sup> century AD: his 34<sup>th</sup> ancestor, the 6<sup>th</sup> Imam Jafar al-Sadiq, had founded a renowned school and his students included Jabir ibn Hayyan, known as Geber in the West, who is widely regarded as the father of modern-day chemistry. According to *Encyclopedia Britannica*, Jabir gave credit of his discoveries to his guru. Al-Khoroazmi, the father of algorithms - the science of logic and basic building block of computer programmes is based on his name - was another student of Imam Jafar. Mahmood's 20<sup>th</sup> ancestor, Ali Buzurg, migrated from Wasit (Iraq) to Punjab toward the end of the Khilji Dynasty and soon afterwards his son, Husain Sharfuddin, settled at Amroha, an ancient little town located some 130 km east of Delhi. Hazrat Sharfuddin was a sufi saint - his tomb in Amroha is famous for innocuous scorpions - but his son, Abdul Aziz, married a princess of the Tughlaq Dynasty, acquiring a sizable *jagir* in the process. It was supplemented by another *jagir* awarded by Akbar the Great to his Chief Justice (*Mir Adl*), Syed Muhammad, who later served as the Governor of Sindh. His descendents survived largely on the *jagirs* for 4 centuries, living a comfortable and settled life, occasionally helping the Delhi kings militarily in times of conflict. This continued till 1952, when the *zamindari* system was abolished. Syed Mahmood Naqvi was born at Amroha 11 years earlier - on 28<sup>th</sup> August 1941. Those were turbulent times. He was too young to remember the Independence Movement, but had vivid memories of the Partition that affected so many and divided almost every family in his clan. His maternal uncle and aunt left India for Pakistan, as did ten of his first cousins, but his father, a sworn nationalist and an ardent Congress supporter, chose to remain in India. For those times, his family was relatively small. His parents (Muhammad Ahmad and Nazima Khatoon) had only two siblings each, while he himself had only one - my father, Sibte Mahmood - who was 18 years older than him. In fact, my uncle was brought up more by my parents than his own. The age difference was half that much between him and my elder sister, and so we called him *Bhai*.

Our family was pretty well-off even after the abolition of *zamindari*, but my father was now required to earn a living, something that he was not used to. He was only moderately educated. However, both he and his father wanted *Bhai* to obtain

the best education possible – they dreamt of him becoming a civil engineer! The only problem was that *Bhai* was not interested; he was more attracted to Urdu literature. In his nomination form for INSA Fellowship he stated, "During my school days the late Mr. Nazim Hussain, who was in-charge of the school's literary activities influenced me. He trained me for oratory competitions in Urdu". The 'school' (*Imam-ul-Madaris* Intermediate College) was run by the late SM Taqi Hadi, MLA, his father's cousin, with his father himself deeply involved with its management. So, there was no dearth of opportunities, but *Bhai* was not doing well, with a double promotion to the higher class to celebrate Independence not having helped his cause. My father decided to shift him to Lucknow and got him admitted to the Shia College after he passed the High School examination in the Third Class, but that did little to improve his academic performance. At last he passed the Intermediate examination on the third attempt and with the lowest grade. By then both my father and grandfather had given up on him becoming an engineer. So, when he expressed his desire to go to Aligarh in 1960, they had no objection, but no hope either!

Not forced any more to study Physics and Mathematics, however, he underwent an incredible transformation. All of a sudden he made up his mind to become a Geologist. I believe this decision was jointly taken by him and his roommate, Masood *bhai*, a brilliant student, probably motivated by the fact that Aligarh Muslim University (AMU) then had an excellent Geology Department, headed by the late Professor Fakhruddin Ahmad, FNA. His B.Sc. results took everybody by surprise. My grandfather distributed maunds of *laddoos*. *Bhai* did not look back thereafter. However, when he was in his final year of M.Sc., the family was abruptly confronted with severe financial hardships. My father, who was then based in Bareilly and had a flourishing business as a civil contractor and furniture merchant, incurred a very heavy loss in a huge contract he had bagged to supply furniture to the army. My grandfather had to dispose off big chunks of land including several mango orchards to make up the losses. The last few months at the AMU must have been very testing for *Bhai*. As a consequence, after he passed the M.Sc. examination in 1964, his immediate task was to find a job - some job - to save his family from starvation. Luckily, he found one quickly, even though it was a lowly position of Junior Scientific Assistant (JSA) in the National Geophysical Research Institute (NGRI), Hyderabad. He joined NGRI in November 1964. *Bhai* often used to say that after Akbar the Great our family only served CSIR (Council of Scientific & Industrial Research). And with my elder brother, Masood Ahmad, and myself following suit, this continued to be the case until the 1990s. It took my father nearly three years to get over the shock of near-bankruptcy before he started his activities as a contractor again, albeit on a much smaller scale, and in those testing times *Bhai* not only supported the family but also motivated us to pull the family out of the doldrums.

*Bhai* was married to his childhood fiancée, *Bhabhi* Rehana, in 1966. Besides being the lady of the house, she played several other roles, often accompanying him on

frequent field trips and acting as a full-time nurse in the last 20 years or so of his life. They have three sons, Viqar Mahmood, Farrukh Mahmood and Zafar Mahmood. Ironically, *Bhai* did not want to become an engineer himself, but his sons, as indeed all other males in the family except for my elder brother and myself, are engineers, although not civil engineers, thus still not fulfilling my grandfather's dreams.

*Bhai* was an extremely obedient and loving son. Indeed, he was perfect in every relationship as a son, brother, brother-in-law, uncle, husband, father, father-in-law, grandfather, friend and teacher. He was most attached to his *Ammaji*, who mostly lived with him. Her death in February 1987 devastated him. He suffered a heart attack next year, and with that began a long period of poor health. He underwent three cardiac surgeries, in 1989, 1992 and 2006. The last two operations were performed in absolutely hopeless situations, but he survived. This was just because he was not afraid of dying. Incredibly, he did not allow his poor health to affect his work. He still went on field trips to Chitradurga, Karnataka, about which he had once written to my grandfather as follows: "*Is zameen ne mujhe izzat bakhshi hai. Amroha aur Aligarh ke baad iska meri zindagi mein teesra maqam hai*" (This land has bestowed a distinction upon me; its importance to me is next only to Amroha and Aligarh). He went around the country attending meetings and conferences to share his results, and for giving lectures. He also spent some time in his home town taking care of "Mahmoodwala", the mango orchard planted by his father, brother and himself, when he was only nine years old, and the ancestral house. It was on one of these trips that he fell very seriously ill in the summer of 2009. Amroha does not have the kind of medical facilities he required. He returned to Hyderabad and was hospitalized almost immediately. He breathed his last on 4<sup>th</sup> September 2009.

### PROFESSIONAL CAREER

Having joined NGRI as a JSA on 9<sup>th</sup> November 1964, Mahmood Naqvi rose steadily through the cadre, retiring as a Scientist G in 2003. He served as the Acting Director of the institute from February to October 2001. He was a '100% CSIR man' and did not leave it even when he was offered a Professorship by his Alma Mater, the AMU.

In 1964, NGRI was mostly engaged in geophysical research, and Mahmood Naqvi was initially assigned to work with a team of geophysicists led by the late Dr MN Qureshi that was engaged in preparation of the gravity map of India. However, he soon found his own niche. With the encouragement and support of Dr Hari Narain, the then Director, NGRI, and Dr Qureshi, his Head of the Division, Mahmood Naqvi initiated the first systematic geological/geochemical studies at NGRI. As his PhD project he undertook intensive studies of the structure, petrology, geochemistry, gravity field and tectonics of the central part of the Chitradurga Schist Belt, Dharwar Craton; he received the PhD degree from the AMU in 1970. For the next 35 years, he continued to explore the Precambrian Geology of South India by

generating and interpreting diverse geochemical data. The NGRI did not have the facilities required for this purpose. He worked tirelessly to build state-of-the-art geochemistry laboratories at the institute that continue to meet analytical needs of a large number of research organizations and universities in the country. He also established linkages with some leading geochemists outside India. Among the many projects he led was an Indo-US collaborative programme with John JW Rogers of University of North Carolina, Chapel Hill, on "Precambrians of South India", which was highly successful.

Mahmood Naqvi contributed immensely to human resource development in geochemistry by guiding about thirty research students for PhD, most of them are presently occupying high positions in academic and research institutions and industry.

After his superannuation in 2001, Mahmood Naqvi continued to work as CSIR Emeritus and INSA Senior Scientist at NGRI. In fact, despite failing health this was scientifically one of the most productive periods of his life during which he wrote several books.

### RESEARCH ACHIEVEMENTS

During his research career spanning nearly 45 years, Mahmood Naqvi made many outstanding contributions to earth sciences. These include:

- (1) Recognition and early description of the oldest crustal nucleus in Dharwar Craton around the Holenarsipur schist belt;
- (2) Importance of horizontal and plate tectonics in the Meso- and Neo-Archaean;
- (3) Identification, petrogenetic and tectonic characterization of a variety of rock types from the Archaean greenstone belts of southern India such as ultramafic komatiites, high-Mg basalts, anorthosites, boninites, adakites, Nb-rich basalts, grey-wakes, banded iron and manganese formations, the distinct phases and types of the TTG gneisses and granitoids;
- (4) Evidence for Archaean life; and
- (5) Studies on Precambrian metallogeny such as gold mineralization in different geological environments within the Kolar, Ramgiri, Hutti and Gadag fields as well as in the banded iron formations at numerous localities both in southern India and Madagascar and the base metal deposits at Ingaldhal and Kalyadi.

Apart from catapulting the Dharwar Craton onto the canvas of global Precambrian terranes, Mahmood Naqvi's studies contributed new dimensions and leads toward unraveling several basic problems in Precambrian geology especially the relevance of uniformitarianism and paradigms such as plate tectonics to the early geologic history of the earth. He strongly advocated an early beginning of modern-style plate tectonics as far back in time as the Neo-Archaean (2700 million

years). He strived relentlessly to obtain critical evidences in the rock record of southern India to demonstrate his crust evolution model. His approach in this journey was holistic encompassing a range of earth processes involving interactions among atmosphere, hydrosphere and lithosphere in space and deep time.

Mahmood Naqvi had a penchant for writing books. He has authored/edited six books/monographs, the most notable of which are the *Precambrian Geology of India* co-authored with John JW Rogers and published by the Oxford University Press, and a more comprehensive treatise on *Geology and Evolution of the Indian Plate (From Hadean to Holocene - 4 Ga to 4 Ka)* published by Capital Publishing Company. These books have become must-read material for all students of Indian Geology and of Precambrian Geology anywhere in the world.

### AWARDS AND HONOURS

Mahmood Naqvi was vigorously involved with the activities of the Geological Society of India. He was a Fellow of the society and served on its council as the Secretary for ten years before becoming its Vice President. He also served as the Vice President of the Geological Mining and Metallurgical Society of India and the Indian Society of Applied Geochemists (ISAG). In addition, he was Fellow of the Association of Applied Geochemistry, Indian Geophysical Union, Andhra Pradesh Academy of Sciences and Indian National Science Academy.

Mahmood Naqvi was a member of several important national and international committees such as International Committee on Proterozoic Geochemistry. He chaired the Indian National Committee for International Commission on Lithosphere.

Mahmood Naqvi received numerous awards: Gold Medal of the Geological Society of India (1978), Shanti Swaroop Bhatnagar Prize in Earth Sciences (1983), Andhra Pradesh State Council for Science and Technology (APCOST) Award (1986), Taqi Hadi Award (1992), Amroha Gavrav (1994), Decennial Award of the Indian Geophysical Union (2001), Role of Honour, Bundelkhand University (2005), Excellence Award from the Friendship Forum of India, New Delhi (2005), and Life Time Achievement - National Mineral Award for Excellence (2006). He delivered many prestigious lectures such as Professor Sadashiviah Memorial Lecture, Dharwar (1987), Prof. Sampat Iyengar Memorial Lecture, Bangalore (1998), and Special Lectures at AMU (2000) and Wadia Institute of Himalayan Geology (2004).

### EXTRA-CURRICULAR ACTIVITIES

*Bhai* had a great interest in Urdu literature and excellent command over the language. He expressed in wonderful eloquence in prose - he has left an unpublished manuscript of his autobiography - and could recite an Urdu couplet in any context. His favourite poet, of course, was Mirza Ghalib, whose one of the most

famous *ghizals* begins with “*Dil hi to hai na sung-o-lhisht, dard se bhar na aaye kyon?*” (It is only a heart, not a stone or brick, why would it not fill up with pain?). *Bhai* obviously preferred *sung* (rock) over *khisht* (brick) by becoming a geologist rather than a civil engineer. He had no such preference between *dil* (heart that was of a poet) and *sung* (Geology), though; he loved both with equal intensity. Like Ghalib, he was passionate about mangoes, continuing the 5-centuries old family tradition of developing new varieties of mangoes (the famous *Rooh-e-Rawan* is originally from one of his father’s orchards). He could identify a mango variety by smelling the leaf of the tree. His other hero was *Allama* Sir Mohammad Iqbal. He was also greatly motivated by his father-in-law, Nafees Hasan.

### PERSONALITY

*Bhai* was extremely open-handed and loved to feed others, frequently organizing big *dawats*. Therefore, many people in Amroha looked forward to the visits of *Meer Sahab* to his hometown. If he had money, he would spend it lavishly even when the family faced hard times in the mid-1960s. He would often quote Ghalib, “*Qarz ki peete thihe mai lekin samajhte thihe ke haan, rung laayegi hamari faqa masti ek din*” (I drank on credit but knew that I would face someday the consequence of enjoyment in poverty). He had an extremely good sense of humour. Once in the *Bada Bazar* (Amroha) he saw chopped pieces of the water melon being sold that were kept on slabs of ice in the open. He asked the vendor, “*Bhai, yeh laiza (cholera) kis bhau bech rahe ho?*” (How much are you charging for spreading Cholera?). He was an extrovert and made many friends, but because of his openness and courage to call a spade, a spade, a few enemies as well. He had tremendous regards and would do anything for his teachers and mentors especially Professor F Ahmad, Dr Hari Narain, Professor CS Pichamuthu and Professor BP Radhakrishna.

### ACKNOWLEDGEMENTS

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