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Book Review

Beyond Biryani: The Making of a Globalized Hyderabad, D.C. Sharma (Westland Non-Fiction, an imprint of Westland Books, a division of Nasadiya Technologies Private Limited) 2024. 314 Pages. Price ₹ 799.

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When offered to review this book, I wondered how I could hold the interest of readers of the IJMR. My curiosity was ignited when I flipped through its pages. While at the ICMR, I had a ringside view of the establishment of some of the institutes and the development of drugs and vaccines, and I knew a few of the personalities mentioned in the book. This aroused my interest to dig deeper into the book.

I have known the author for several years through his dispatches in *The Lancet*, though I have never met him. As a science journalist, he has perfected the art of story-telling – *à la dastangoi*. Throughout the book, one can palpate the lucidity of a skilled narrator. Simplifying complex scientific terminologies and concepts without diluting the essence or losing the readers' interest is his forte. His writing style is easy and engaging, and the book is rich in anecdotes and strong in narrative. His passion for Hyderabad is evident, making the book more than a historical account, one that is teeming with stories and anecdotes.

The purpose of the book is to decipher the factors behind Hyderabad's transformation from a sleepy medieval town to a globalized city. The author hypothesizes that the creation of institutes of higher learning is the first and key step. He traces the trajectory of Hyderabad through the setting up and growth of institutes of higher learning. Rulers and politicians, culture and social dimensions, policies and personalities - all have played critical roles. He uses a science and technology lens to weave a compelling argument to support the hypothesis. The book takes deep dives into the processes of institution building and comes across interesting people, people with foresight, and people with ideas, successive Nizams, and Chief Ministers with a vision to make Hyderabad great - providing a continuum of sustained nurturing. This makes the book stand out and creates interesting reading.

He draws examples to support his hypothesis from three timeframes in history. The first spans the period, 1908-1948. Though Hyderabad was not under British rule, but in this period had appointed British officers to influential positions, and they impacted the development of education, industrial research and city improvement. The second timeframe is the post-independence period, 1948-1991. This period saw the establishment of public sector enterprises, defence units and research laboratories and the availability of a large pool of workforce with scientific and technical skills. In the final segment of 1992-2022, there was exponential growth in areas of IT, pharmaceuticals and vaccine manufacturing, and newer areas such as space, semiconductor design, artificial intelligence, *etc*. Greenfield projects like Cyberabad and Genome Valley gave a new identity to Hyderabad globally. Adopting a science park model facilitated attracting Indian and foreign companies to HITEC City and Genome Valley for setting up companies in the information technology and biotechnology sectors, respectively, showcasing Hyderabad as much more than *biryani.*

The credit for the transformation of Hyderabad is generally given to the IT industry. This book reminds us not to forget the contribution made by the backroom operations of multinational and Indian corporates, which earned the city the label of 'backroom of the world'. Encouraged by the success of backroom operations, corporates started outsourcing high-end work to Hyderabad. The city at one time boasted of housing global capability centres of some 250 multinational corporations. All this was possible because of the availability of skilled human resources.

The book describes in great detail the process of setting up one of the first institutions of higher learning - the Osmania University from 1917. Inspired

by Japan, which had achieved industrial progress and modernization through an indigenous education system in the Japanese language, it was decided to make Urdu the language of instruction at Osmania University at all levels. A vision of developing Hyderabad as India's intellectual capital with Osmania University at its centre and Urdu as the medium of instruction was taking shape. The book describes in great detail the trials and tribulations it went through and the accompanying whirlpool of language politics. Though teaching at Osmania University started in 1920, it took another fifteen years for it to get its own building. All this makes a very insightful reading.

The Nizams of Hyderabad were always open to newer ideas, supported modern science, and were eager to adopt, if it was useful to its subjects. Unlike in other States under the British *Raj*, where Britishers were providing the thrust for introducing modern areas of study, the impetus in Hyderabad came from within. One of the earliest examples cited is of Nizam Nasir-ud-Daulah, whose diabetes could not be controlled through the Unani system of medicine. An improvement in his condition through modification of his diet by a practitioner of modern medicine instilled faith in the system. Soon, he approved the opening of medical schools. The Nawabs also encouraged people to learn the English language. Diwan Salar Jung I patronized the introduction of English in Darul-Uloom (an Islamic seminary). Salar Jung also advocated scientific methods of observation and evidence generation. Nizam Mir Mahbub Ali Khan even funded a visit by a team of international experts to witness experiments using the 'Hyderabad technique' of administering chloroform as an anaesthetic agent (which resolved the controversy of its adverse effects on the heart and established the efficacy and safety of chloroform). The Nizam was convinced that if Hyderabad wanted to industrialize, investment must be made in utilizing the raw material available in the state on an industrial scale. The Nizam Government had also supported the refining of the process of producing acetone (to make explosives), and alcohol (primarily for use as motor spirit) from mahua flowers. Zafar Jung is credited for introducing modern astronomy in Hyderabad.

Details of the discovery of the life cycle of the malaria parasite by Roland Ross and experiments by Shrinagesh Mallannah to show that tobacco leaves could kill rat fleas (vectors of plague) are very engrossing.

It was fascinating for me to read the details of the working of the Nutritional Research Laboratories (precursor of the present-day ICMR's National Institute of Nutrition), which operated in Nilgiri Hills, Coonoor, for 30 years before moving to Hyderabad. The State Government in Hyderabad promised a large plot in the vicinity of Osmania University at Osmania General Hospital and Niloufer Hospital for Women and Children. Incidentally, this paved the way for almost 200 knowledge institutions to be relocated to Hyderabad.

The Osmania University and Central Laboratories for Scientific and Industrial Research (CLSIR) – the two most important knowledge institutions and legacy of the Nizam era, were the nucleus for the development of Hyderabad's first knowledge cluster. A biochemistry division was created in CLSIR, and new studies in cellular and molecular biology were initiated.

The chapter on Vaccine Wars and Genome Valley is the one I enjoyed reading most. The story of the setting up of Shantha Biotechnics, which produced the first affordable recombinant DNA Hepatitis B vaccine in India priced at $1 a dose, is an eye-opener. To bridge the gap between R&D and industry, ICICI Knowledge Park (now known as IKP Knowledge Park) was developed. The various companies which came to the Genome Valley were engaged in drug research, biological manufacturing, pharmaceutical formulations and provided research support. The emergence of Genome Valley as the country's first biotech cluster benefited from pre-existing resources of knowledge creation, and production facilities in Hyderabad. The development of COVID-19 vaccines by vaccine companies based in Genome Valley also spotlighted Hyderabad.

There are very interesting segments in the book on the development of drugs, especially the antibiotics and analgesics in laboratories based in Hyderabad, and how an indigenous drug and pharma industry took root with the objective of achieving self-reliance and making medicines available at an affordable price. Hyderabad became the bulk drug capital of India. Indian Drugs and Pharmaceuticals Limited (IDPL) - a public sector pharmaceutical, bulk drug manufacturing and drug discovery company was the first large manufacturing industry to come up in Hyderabad. It is very absorbing to read how it became the cradle for aspiring entrepreneurs who later set up independent manufacturing facilities in the city.

This book is a treatise of visions, processes, personalities and policies which enabled Hyderabad to reach where it is today. It is also a tribute to the vision of successive Nizams and Chief Ministers, to forward-looking Diwans and bureaucrats, and to countless people associated with the translation of the visions into making a globalized Hyderabad. Better photographs with better quality printing could have further enhanced the joy of reading this book.

Beyond Biryani is a must-read for those who believe in studying the past to define the future.

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