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## India's Visionary Engineer

By: Aashique Ahmed Iqbal

*The career of M. Visvesvaraya, arch-technocrat and statesman, throws much light on how India embraced the idea of modernisation through industrialisation.*

Mokshagundam Visvesvaraya was born in Muddenahalli, a village in Chikkaballapur district, Karnataka, in 1861. He died more than a century later in 1962. Visvesvaraya's long life and career as an engineer and a statesman were dominated by a single-minded vision of modernisation through industrialisation. For India to avoid starvation and poverty, he believed the state would need to establish industries, which would provide employment and better the material conditions of the people.

This technocratic worldview continued to shape India's development long after Visvesvaraya's death, earning him a reputation as a legendary moderniser. However, it has been criticised for, amongst other things, causing great environmental damage, ignoring complex social conflicts, and hollowing out democracy in favour of rule by experts.

In *Engineering a Nation*, Aparajith Ramnath has taken on the daunting task of chronicling Visvesvaraya's 70-year-long working career. Ramnath assesses both the praise and opprobrium heaped on Visvesvaraya's legacy to paint a nuanced picture of a visionary engineer, warts and all. He argues that although Visvesvaraya's projects did not invariably achieve the successes he envisioned, they served a crucial ideological purpose. These initiatives demonstrated India's capacity for industrialisation, thereby refuting British colonial claims that asserted otherwise. In providing proof of concept for industrial projects from dams to steel plants to aircraft factories, Visvesvaraya was able to set a template that would become the mainstay of the Indian state after independence. Indeed, Ramnath illustrates that Visvesvaraya's key historical contribution might lie more in his role as ideologue for industrial development than in his work as an engineer.

### Nuanced picture

Understanding Visvesvaraya's political position involves placing him in the context of liberal colonial politics. From the beginning of his studies at Poona Civil Engineering College, Visvesvaraya had to contend with colonial racial prejudices, which held that Indians, as a race, were ill suited for careers in engineering. When he topped his class and was selected as an engineer for the Public Works Department (PWD) in 1884, he had to work hard to win the acceptance of the largely white engineering establishment.

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Despite establishing collegial relations with his white superiors and distinguishing himself as a skilled engineer, Visvesvaraya was prompted to leave the PWD after becoming convinced that, in a system which saw Indians as inferiors, he would never breach the glass ceiling. As Ramnath poignantly recounts, Visvesvaraya was awarded the Kaisar-i-Hind medal in 1906, ostensibly in recognition of his services to the British Raj, but was denied the gold edition of it because he was an Indian.

Visvesvaraya subsequently turned to a new career as a freelance engineer for the Indian princely states. As many scholars, notably Manu Bhagwan, have pointed out, the princely states emerged as alternative sites of modernity during the colonial era. In 1909, Visvesvaraya oversaw flood prevention measures in Hyderabad, culminating in the establishment of the Osman Sagar reservoir.

Visvesvaraya would exercise levels of authority otherwise denied to Indian engineers in British India. This included the power to directly intervene in city planning. For instance, he transformed mediaeval Hyderabad into a metropolis with modern sanitation. As reservoir construction melded seamlessly into city planning, engineering steadily turned into technocratic administration, a field that Visvesvaraya would make his debut in as the dewan (prime minister) of Mysore.

### Belief in industrial development

Visvesvaraya's emergence as India's arch-technocrat was a consequence of his professional training as an engineer. Like many engineers, he was tempted to propose technical solutions for social and political problems, an instance of which was his insistence that

state projects ought to be profitable enough to pay for themselves.

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However, two other factors cemented his belief in the importance of industrial development. First, Visvesvaraya had been closely affiliated with the 'moderate' liberal politicians in Pune, the most prominent of whom were Mahadev Govind Ranade and Gopal Krishna Gokhale. Liberal reformists argued that Britain had drained India of its economic resources and turned it into an agricultural colony, immiserating most Indians. Only industrialisation on a large scale would pull Indians out of poverty and famine. Although these statements might appear unremarkable today, they were groundbreaking at a time when British officials claimed that colonial rule benefited India and insisted that industrialisation along European lines was impossible in the country.

Second, Visvesvaraya's numerous foreign trips had a profound impact on him, as he actively sought out ideas to improve engineering and administration in India. Although he was impressed by the industries of Europe and America, it was Japan that captivated him the most. Japan demonstrated that building railways and factories could lift a nation out of poverty. As Ramnath notes, Japan's rapid industrialisation challenged the widespread belief that only white nations could industrialise. However, Ramnath points out that like many Indian thinkers of his era, Visvesvaraya overlooked the role that imperial conquest had played in Japan's rise to prosperity.

## At Mysore

Visvesvaraya returned to his homeland, Mysore, in 1910 to run the princely state's public works department. His work would increasingly embroil him in the state's politics. The construction of the Krishnaraja Sagar dam brought him into direct confrontation with an entrenched state bureaucracy that opposed costly megaprojects. Somewhat amusingly, it also put him on a collision path with the Madras government, which opposed the damming of the Kaveri, foreshadowing the riparian conflicts between the present-day governments of Karnataka and Tamil Nadu.

Ramnath points out that the completion of the early phases of the dam in 1911 represented a major triumph for engineering in Mysore, preceding not only the great Nehruvian dam building projects of the 1950s, but also the American Tennessee Valley Authority dams that came up in the 1930s. The construction of modern dams helped the Wodeyar rulers of Mysore legitimise their dynasty at a time when princely states faced growing challenges from both the nationalist movement and colonial authorities. This infrastructure development also paved the way for Visvesvaraya to assume almost complete political authority as dewan of Mysore in 1912.

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Visvesvaraya's rise and fall as dewan is perhaps the most well-known aspect of his career. Ramnath re-examines this episode to make a series of nuanced arguments on the dewan's role in reshaping Mysore. He shows how the new dewan made a strong push for industrialisation with mixed results against the backdrop of the First World War. Projects like the Mysore Distillation and Iron Works helped prove that Indian states could establish industries on a par with those in British India but, aside from making this key ideological point, failed to make a profit for decades. Turning to Visvesvaraya's educational policy, which other scholars have treated as a failure, Ramnath says that while its major goals were not met, more progress was made under him than under any other dewan.

Visvesvaraya's resignation as dewan in 1918 was as much a consequence of his inability to deal with the complexities of caste politics as the deterioration of his relationship with Maharaja Krishnaraja Wodeyar IV. In a characteristically nuanced portrayal of the dewan's politics and personality, the author shows how caste remained a blind spot for Visvesvaraya. The Mysore dewan abhorred caste and religious prejudice and did much to promote the interests of lower caste groups and minorities. Despite his progressive outlook, Visvesvaraya could not bring himself to accept – let alone support – the non-Brahmin movement, which aimed to reduce the dominance of both Kannada- and Tamil-speaking Brahmins in the Mysore state administration. This brought him into conflict with the maharaja, a non-Brahmin who needed to address the concerns of the majority of the state's population. As a result, Visvesvaraya – arguably the most inclusive dewan up to that point – was compelled to step down from his position in the Mysore administration.

## Nationalist perspective

The subsequent period, from 1918 to 1962, is far less studied than Visvesvaraya's high-profile term as dewan but this is arguably where his most important contributions as a statesman lie. Visvesvaraya continued to balance engineering and politics as head of the Bhadravati Iron and Steel Works (rechristened the Visveswaraya Steel works after his death), which was in serious trouble, as well as the head of a committee tasked with investigating the failure of a major land reclamation project in Bombay. Even as he argued for greater state funds to be allocated to the steel plant, he presided over austerity measures at the reclamation project.

In addition to uncovering new details about the former dewan of Mysore, this book throws new light on his career as an elder statesman that lasted no less than 40 years.

The book truly excels in its exploration of the often overlooked political, economic, and scientific achievements from the second half of Visvesvaraya's life. Ramnath highlights how, over the years, Visvesvaraya gradually adopted a more nationalist perspective, particularly in his efforts to secure the financial independence needed for India's industrialisation.

Remarkably, Visvesvaraya was able to maintain good relations with British officialdom despite his increasing criticisms of imperial policy. At the same time, he maintained close relations with the increasingly radical Congress nationalists. Indeed, Visvesvaraya was able to produce dozens, perhaps hundreds of documents, with recommendations on how a more autonomous Indian state ought to function. The most crucial of these were essentially manifestoes on constitution making and economic planning, which had immense implications for independent India.

The last decade of Visvesvaraya's life would see him attain the status of a living legend. He had known some of the earliest moderate Indian nationalists, including Ranade and Gokhale, all of whom passed away before India became independent. For the people of Mandya district in Mysore, Visvesvaraya was a benefactor who had brought life to their barren lands through irrigation. The cities of Bombay, Pune, and Bangalore bear his indelible mark as an engineer and administrator. Despite his deification, Ramnath describes Visvesvaraya as "An Aging Gadfly in New India" because he continued to remain highly critical of Nehruvian policies, which he considered to be populist foibles rather than democratic necessities.

## Conclusions

The book does have a few weaknesses. Attempts to strike a balanced position on the effects of colonialism throughout the book sometimes have the effect of letting the British Raj off the hook for some of its more oppressive policies. One of the reasons for the failure of Mysore to profitably export its industrial products was the unwillingness of the colonial government to allow the state to lease the port of Bhatkal. Ramnath appears to take at face value the British claim that this was because of concerns related to earning profits rather than the British policy of ensuring that large peninsular states like Hyderabad and Mysore never had access to the wider world through ports.

It is sprinkled with wonderfully minute details on the life of Visvesvaraya. We learn what subjects he studied in college, what cars he travelled around in on his inspection tours, what flowers he won a prize for at the Pune flower show of 1905.

Elsewhere, a chapter on Visvesvaraya's role in the establishment of the Hindustan Aircraft Limited factory in Bangalore focuses on the government of India's role in undermining industries in Mysore, though there is little discussion of the role played by the British government in preventing wartime industrialisation. These criticisms, however, are minor issues that should not detract from the monumental effort that has been put into the work.

*Engineering a Nation* is without a doubt the most comprehensive survey of the life of Visvesvaraya. It is essential reading for anyone with an interest in not only Visvesvaraya's life but also in histories of the engineering profession, the princely states, and the political evolution of Indian nationalism. It is deeply researched, with a bevy of sources ranging from international archives to Ramnath's interviews of farmers in Mandya district.

It is also a surprisingly poignant tale of a man who for much of his life did not have a family of his own. Further, it is sprinkled with wonderfully minute details on the life of Visvesvaraya. We learn, for instance, what subjects he studied in college, what cars he travelled around in on his many inspection tours, what flowers he won a prize for at the Pune flower show of 1905, and even what eye exercises he swore by. If Visvesvaraya was single-mindedly driven by an obsession with industrialisation, it is no exaggeration to say that Ramnath has been animated by an obsession with uncovering every detail of the great man's life. In addition to uncovering

new details about the former Dewan of Mysore, this book throws new light on his career as an elder statesman that lasted no less than 40 years.

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