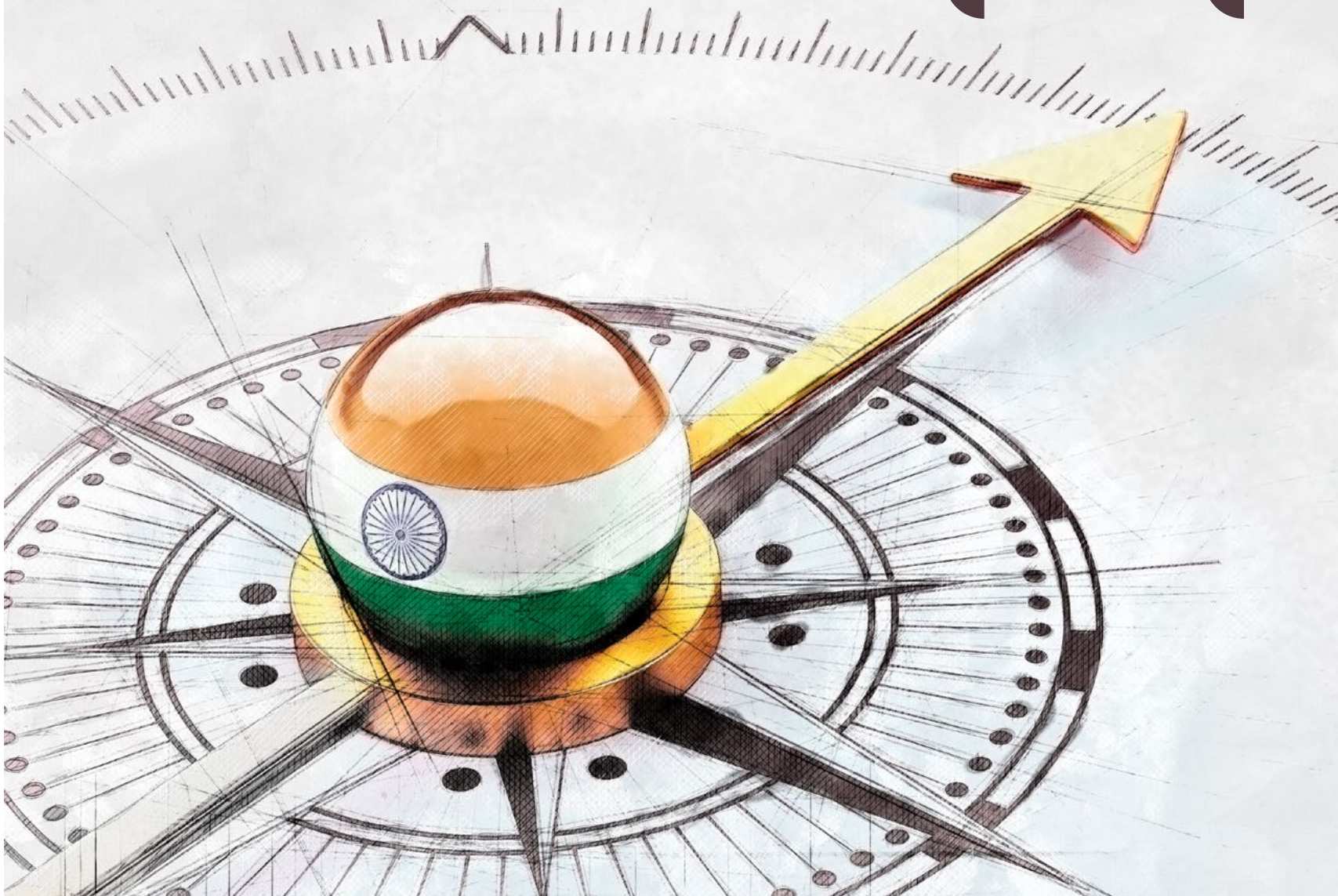


Three historical facts may offer a revealing insight into the country's vast experience in advancing knowledge, its achievements in applying science, and the lessons it can draw after recovering from overwhelming invasions.

EUGENIO VIASSA MONTEIRO

# Bringing Ourselves Closer to India



Professor Eugenio Viassa Monteiro, the Co-Founder of Portugal's first business school, has been on a mission to bring India closer to businesspeople in Western countries by raising awareness of India's history, culture, science, knowledge, and entrepreneurship, and by providing numerous answers to the question: What can we all learn from India?

One of Dr. Viassa Monteiro's main interests is to systematize information on real India, providing a better understanding of the country and its people, emphasizing several specific aspects on how to deal with its entrepreneurs, institutions, and regulatory framework, and helping Western entrepreneurs to be successful doing business in India.

This article summarizes key historical facts that Professor Viassa Monteiro has put forward to promote a better understanding of the country's roots and cultural background.

There are so many things we, in the Western world, do not know about India, but three historical facts may offer a revealing insight into the country's vast experience in advancing

knowledge, its achievements in applying science, and the lessons it can draw after recovering from overwhelming invasions.

#### **THE UNIVERSITY TRADITION IN INDIA**

It is surprising that when one looks up information on the history of the creation and dissemination of knowledge, one will find listings of European Universities, without any mention of universities that existed much before that time in other parts of the world. The oldest university in Europe – *Universita di Bologna* – was founded in 1088. But, in fact, the first universities in the world were established in India 17 centuries (that's 1700 years!) before European universities. And we are not talking about one random university or two, but a number of them, operating over several centuries, with great intellectual standing, attended by tens of thousands of young people, and with many people eager to learn and apply knowledge for the benefit of humanity over an expansive geography.

The concept of a university covering comprehensive subjects, requiring students to meet strict eligibility requirements, and promoting

Aerial, reconstructed view of Taxila (Takshashila) University.



open discussions to bring about improvement in knowledge and rigor in logical thinking has existed in India for centuries.<sup>1</sup>

A notable example is India's Takshashila – or Taxila – university, which had an active student life between the 6th Century BC and 5th Century AD, in the kingdom of Gandahar – located in modern-day Punjab, in Pakistan. The minimum age required to attend this university was 16. Over 60 different subjects were taught there to a student body of over 10,000, including people from Babylon, Greece, Syria, China and the Hindustan peninsula. The university's Masters had great knowledge, teaching various topics including Vedas, languages, grammar, philosophy, medicine, surgery, archery, politics, war strategy, astronomy, accounting, commerce, documentation, music, dance, representation, futurology, occult sciences, and complex mathematical calculations.

The faculty included famous Professors like Kautilya, Panini, Jeevak, and Vishnu Sharma – among many others. For those of us who know very little about them, here are some of their accomplishments:

- **Kautilya** was a statesman between the 4th and 3rd centuries BC. He was Prime Minister of Chandragupta Maurya and founder of the Maurya Empire (322-185 BC). His thoughts are collected in the Arthashastra, a treatise dealing with economics, politics, and military strategy.
- **Panini** was the author of the Sanskrit treatise on grammar, written between the 6th and 5th century BC. This work is hailed as the beginning of the classic Sanskrit model. Written in the form of 4000 sutras, or aphorisms, the treatise summarizes the science of phonetics and grammar.
- **Jeevak Kaumarbhritya** (525-450 BC) was a contemporary of Buddha, and he was the first physician in the history of India and the world (before Hippocrates). He studied at Takshila University, practiced Ayurvedic medicine and surgery, and treated many important and ordinary citizens, including Buddha himself.
- **Vishnu Sharma** was an Indian thinker and the author of the Panchatantra, a famous collection of animal-based fables that were used

for educational purposes. Experts have estimated that the collection was written during the 3rd century BC. Translations of his works started in Persia in 570 AD.

Another remarkable example of such ancient universities is the University of Nalanda – located in the modern-day state of Bihar in India – which was active for over 8 centuries spanning from 500 to 1300 AD, when it was finally destroyed by invaders. The university's activity earned it great fame. Its extensive campus covered 1.7 x 0.85 km, with nearly 300 classrooms and benches made of stone. It featured laboratories and other learning facilities. There was, for example, an observation tower for astronomical research and a large library designated as Dharma Gunj or Mountain of Knowledge, located in three buildings identified as Ratna Sagar, Ratnadavi and Ratnayanjak. Admission tests were very demanding, with only 3 out of 10 students gaining

admission into the university. According to Chinese traveler Hien Tsang, there were 10,000 students and 200 teachers in Nalanda.

Neither of the two universities persisted as such until the present. But, in 2014, Nalanda University was re-established on its former location – a 190-hectare campus – and Nobel Prize winner Amartya Sen was instituted as its Chancellor.

Notably, such a tradition of higher education in India did not just take root randomly. It was not just that one or two universities were established to satisfy the thirst for immortality of some wealthy king or prince, to indulge their cultural passions, or even to display their wealth. There were many such institutions, indicating that the desire for knowledge, learning, dialogue, and application of wisdom to improve everyday lives was not a luxury or a short-lived phenomenon. The list of ancient Indian universities is impressive (see Table 1).

Table 1. List of ancient Indian Universities

University	Period	Location
1 Takshila	5th century BC – 6th century AD	Punjab
2 Nalanda	5th century AD – 13th century AD	Bihar
3 Vikramashila	8th century AD – 12th century	Bihar
4 Valabhi	6th century AD – 12th century AD	Gujarat
5 Somapura	8th century AD – 12th century AD	Bengal
6 Jagaddala	11th century AD – 12th century AD	Bengal / Bangladesh
7 Odantapuri	8th century AD – 12th century AD	Bihar
8 Pushpagiri	2nd century BC – 11th century AD	Odisha

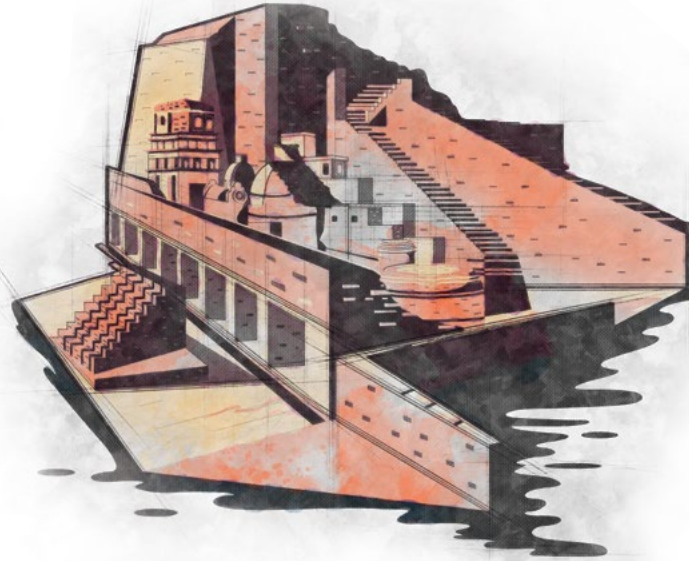
## APPLICATION OF SCIENCE IN ANCIENT INDIA

With a high level of education and training offered at Indian universities, knowledge of astronomy, medicine, mathematics, trigonometry, human anatomy, and other disciplines rose to a crescendo in India centuries before it did in the West. Indeed, relevant developments were known and put into practice in India centuries before their discovery and application in the West – i.e., in Europe and neighboring countries – clearly demonstrating the influence of these universities in the Indian society.

India, for example, invented the numeric system, which introduced the idea of assigning meaning to the position of the number, and the decimal system was developed in the country around 100 AD. It was Aryabhata who invented the number zero, and he was the first to explain the spherical shape, the dimension, the diameter, and the rotation of the Earth in the year 499 AD. Maharshi Sushruta has been called the father of surgery. About 2600 years ago, he and his health scientists performed complex surgeries including caesarean sections, cataracts, prosthetic limbs, kidney stones and even plastic surgery. And, according to the Geological Institute of America, until 1896, India was the only source of diamonds in the world.

While discussing India's elaborate production techniques, J. T. Sunderland wrote<sup>2</sup>:

*«Nearly every kind of manufacture and product known to the civilized world – nearly every kind of creation of man's brain and hand, existing anywhere, and prized either for its utility or beauty – had long been produced in India. India was a far greater industrial and manufacturing nation than any in Europe or any other in Asia. Her textile goods – the fine products of her looms, in cotton, wool, linen and silk – were famous over the civilized world; so were her exquisite jewelry and her precious stones cut in every lovely form; so were her pottery, porcelains, ceramics of*



Ancient University of Nalanda

## The first universities in the world were established in India 17 centuries before European universities.



Maharshi Sushruta, called the father of surgery.

*every kind, quality, color and beautiful shape; so were her fine works in metal: iron, steel, silver and gold. She had great architecture – equal in beauty to any in the world. She had great engineering works. She had great merchants, great businessmen, great bankers and financiers. Not only was she the greatest shipbuilding nation, but she had great commerce and trade by land and sea, which extended to all known civilized countries. Such was the India which the British found when they came».*

## FOREIGN INVASIONS AND COLONIZATION

Unfortunately, the desire to dominate, steal, and destroy has been unceasing in human history. India was historically a constant magnet for incursions by mighty armies of the past, attracted by its wealth, its knowledge-based development, and its expertise in various domains. India suffered about 200 invasions by countries near and far throughout its history, culminating with the British colonization of the region.

India's overall geography has historically featured vast richness, eventually attracting the Portuguese, the English, the French, and the Dutch, all of whom tried to occupy and seize its wealth. But Alexander the Great was the first to do so successfully in 321 BC – later defeated by King Purushottam. The Portuguese arrived in Calicut in 1498 and later settled in Goa. From that base, they dominated other parts of the coast in the peninsula, including the various islands that today constitute Mumbai. That territory was bequeathed as dowry to Princess Catherine, at her marriage to the King of England. Later, in 1526, the Mughals invaded India. Ibrahim-Lodi, ruler of the Sultanate of Delhi, was defeated by Babur in Panipat on April 21, 1526, paving the way for the Mughal era in India.

The Mughals ruled India for over 3 centuries. It was really a highlight in the history of India, positioning the country as the most important cultural, manufacturing, and international

trade center. In 1750, India produced about 25% of the world's industrial output. The manufactured goods and rich harvests gathered during the Mughal Empire were sold throughout the world, with key industries including textiles, shipbuilding, and steel.

At its height, around the year 1690, the Mughal Empire ruled almost the entire subcontinent of India, controlling four million square kilometers of land and a population of about 160 million. In 1627, Emperor Shah Jahan inherited a splendid empire. And it was only four years later – when his beloved wife, Mumtaz Mahal, died – that he commissioned the Taj Mahal, a tomb for his dear wife. The Taj Mahal is considered the crowning achievement of Mughal architecture.

The year 1600 marked the founding of the famous British East India Company (BEI), with emperor Akbar of the Mughal dynasty on the throne. Throughout its first century of operation, the focus of the company was trade, rather than the building of an empire in India. But following the First Anglo-Mughal War – just as the power of the Mughal Empire was in decline – the company's interests turned from trade to territory. The battles of Plassey and Buxar, where the East India Company (EIC) defeated the Nawabs of Bengal, left the Company in control of the Mughal Bengal, with the right to collect revenue in Bengal and Bihar.

The EIC gradually extended the boundaries of its controlled Indian territories over the following decades, ruling over a lion's share of the Indian subcontinent either directly or indirectly – via the principalities and kingdoms within the Indian geography. Company rule in India effectively began in 1757 and lasted until 1858, when the Government of India Act of 1858 – following the Indian Rebellion of 1857 – opened the doors for the British Crown's seizure of control over the Indian subcontinent and gave rise to the new British Raj.

One might ask how it would be possible to conquer India with the ease with which Vasco da Gama, Afonso de Albuquerque and the East India



Allegorical representation of the East India House, the London headquarters of the East India Company in 18th century.

## Relevant developments were known and put into practice in India centuries before their discovery and application in the West.

Company did.<sup>3</sup> First, a key reason seems to lie in the fact that there was no fundamental unity across the Indian subcontinent. Aside from the powerful Mughal Empire, there were many kingdoms and principalities, and Rulers did not trust those in their vicinities. They were always ready to join forces with others to defeat them. Anyone identifying as an enemy of their enemies was their friend. They saw newcomers not as a danger but as potential help to maintain their status quo. Weapons surely helped, but they were not needed to conquer different kingdoms one at a time.

Second, despite the great wealth accumulated by the ruling elite, the vast majority of the people lived a poor life. They had very few rights, and there was no clear path

to prosperity and growth. The caste system was ingrained in the very fabric of their culture, inhibiting the development of a united and cohesive society. Without any respect for human dignity, the system allowed exploitation of those in some cases by those belonging to another. Any hope of bridging the cracks that separated the few who had everything from those who had nothing was crushed. And there were also latent religious tensions, which conquerors took as opportunities to tip the scales in their favor.

### THE BLEEDING OF INDIA

Angus Maddison<sup>4</sup> claimed that India was the richest country until the 17th century. He reported that India produced 27% of the world's wealth in 1700 – compared to 23% by the whole of Europe. But by 1950 that share had dropped to only 3%. British historian William Dalrymple, for his part, claimed that in 1600 India might have been the richest region, with 22.5% of the world's wealth. However, after the East India Company transferred power to the British Crown in 1858, India was gradually reduced to hunger, poverty and deprivation, and the UK was in turn enriched «with the jewels of the crown»<sup>5</sup>

Lord Macaulay was disputably credited with the following statement before the British Parliament<sup>6</sup>:

«I travelled throughout India, took its pulse and did not see a single beggar or thief. I saw such wealth in the country, such moral values, people of such caliber, that I do not think it is ever possible to conquer this country if we do not break the backbone of this nation, which is its spiritual and cultural heritage; (...) «propose to replace its old education system, its culture, because if the Indians think that everything that is foreign and English is good and better than theirs, they will end up losing their self-esteem, their native culture, and they will become what we want, a truly dominated nation».

By the time India achieved independence in 1947, literacy across the country was estimated at 17%, and life expectancy was 32.5 years! Jeffrey Sachs once claimed that «the greatest illustration of British imperial irresponsibility was its response to repeated famines and epidemics during the second half of the 19th Century and the first half of the 20th Century».<sup>7</sup> According to historians of that period, between 14 and 29 million Indians died of hunger and epidemics, without the colonizers having taken any measures to deal with them.

Even sadder is the starvation to death of 1 - 4 million Indians in West Bengal in 1943, when Churchill was Prime Minister of England. Cereals from India had been sold during the war, and supplies were stored, but Churchill did not authorize their distribution, as they were earmarked for use by English soldiers who may need them. This happened even after his local «commissioners» had brought to his attention that dramatic and unacceptable situation.<sup>8</sup>

After Independence, famines in India were prevented by importing food grain. Faced with a threat of famine in 1969, the country imported 9 MT of food grains to feed the country. Fortunately, India has achieved self-sufficiency since then.

American historian and philosopher Will Durant<sup>9</sup> – the author of *The Story of Civilization* (an 11-volume set of books covering the history of the West) – travelled the world several times, and when he arrived in India in 1930, overwhelmed by barbarism of the British, he interrupted the writing of his famous book to write *The Case*

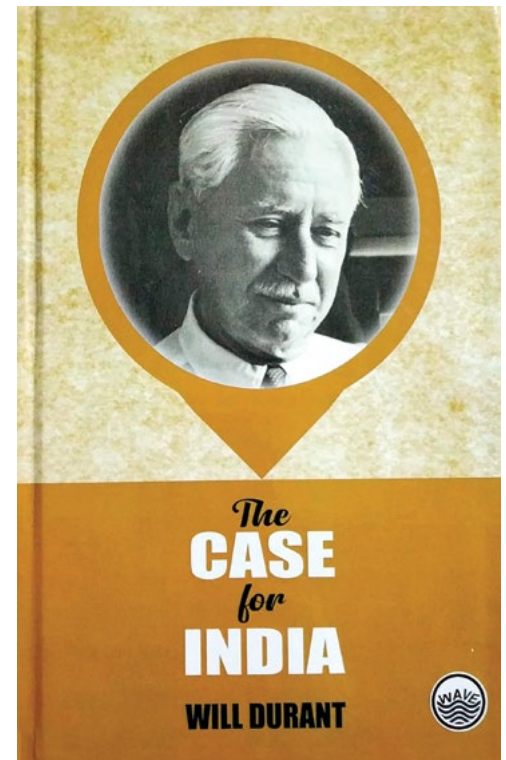
For India, where he denounced with immense regret the rape of India:

«The British conquest of India was the invasion and destruction of a high civilization, by a trading company (the British East India Company), utterly without scruple or principle, careless of art and greedy of gain, over-running with fire and sword a country temporarily disordered and helpless, bribing and murdering, annexing and stealing, and beginning that career of illegal and 'legal' plunder which has now (1930) gone on ruthlessly for one hundred and seventy-three years».

He often referred to the «astonishment and indignation» with what he saw and read about the «conscious and deliberate bleeding of India», which he denounced as the «greatest crime in history». Fortunately for India, there are many serious historians who have denounced such injustice, even when they may not have all the documents to prove it. The colonizer's actions were not far from absolute lordship, and the «compromising» reports could be easily eliminated by them to suppress «the judgment of history».

There are, nonetheless, certain positive aspects of British colonization in India<sup>10</sup>. First, it united the Indian subcontinent, which had previously existed only as an amalgam of reigns, sovereignties, principalities, and small and big kingdoms operating under one political authority and having a common language, a central civil service, and railroads crisscrossing the entire country – originally intended to transport raw materials to the UK and finished products to India. It also left some monumental buildings to mark the greatness of the empire.

Second, Indian citizens have found inspiration in their historical background to find a way to organize themselves on the basis of inalienable values such as human dignity, equality, citizen's rights, and democracy. As Manmohan Singh said<sup>11</sup>: «Our notions of the rule of law, of a constitutional government, of a free press, of a professional civil service, of modern universities and research laboratories have all been fashioned in the crucible where an age-old civilization met the dominant Empire of the day». </>



<sup>1</sup> Cfr. <http://veda.wikidot.com/main:home>.

<sup>2</sup> Jabez T. Sunderland, *India in bondage: Her right to Freedom and a place among the great nations*, New York: Lewis Copeland, 1929, p. 367. Quoted on *An Era of Darkness*, author, Shashi Tharoor, pgs. 3 and 4.

<sup>3</sup> R. Torredemer, letter.

<sup>4</sup> Angus Maddison, English, in *The World Economy: A Millennial Perspective*. (2006; pg. 638).

<sup>5</sup> Cfr. TIME, Aug. 13, 2007, William Dalrymple, in *The Last Mughal*.

<sup>6</sup> Words supposedly delivered in the British Parliament on February 2, 1835 and attributed to Lord Macaulay. He lived about four years in India and was a member of the Supreme Council of India, when William Bentinck was Governor-General.

<sup>7</sup> Jeffrey Sachs, in *The end of Poverty*, Penguin books, 2005, p. 174.

<sup>8</sup> Cfr. Shashi Tharoor, *An Era of Darkness*, p. 188, and p. 158: «Lord Wavel, (...) considered the British government's attitude to India 'negligent, hostile and contemptuous to a degree I had not anticipated.'»

<sup>9</sup> Will Durant, *The Case for India*, New York: Simon & Schuster, 1930, p.7. Quoted on *An Era of Darkness*, author, Shashi Tharoor, pg.2.

<sup>10</sup> R. Torredemer, letter.

<sup>11</sup> Speaking at Oxford University after receiving an honorary degree of Doctor of Civil Law, July 9th. 2005.

Eugenio Viassa Monteiro was the Co-Founder of Portugal's first business school, AESE, in 1980. He served as AESE's General Manager and Vice-President between 1980 and 1997. Now a retired Professor of AESE Business School and Adjunct Professor of the Indian Institute of Management, Rohtak.