

## 10. INSTITUTION BUILDING IN INDIA

*“India has her renaissance. She is preparing to make her contribution to the world of the future. In the past she produced her great culture, and in the present age she has an equally important contribution to make to the culture of the New World..”*

Rabindranath Tagore, from “An Eastern University” in *Creative Unity*, Vishv Books.

India in some ways is a “parallel universe” to the United States in its higher education. While liberal arts in the United States is under attack for its limited “return on investment” and US policy makers are focused on increasing focus on practical majors in technical fields, Indian and Asian higher education leaders are increasingly interested in liberal arts, for the way in which it can create more creative and broader thinking leaders. The rapid rise of India’s high-



tech sector has also created a new wave of entrepreneurs who are interested in creating entirely new kinds of educational institutions in India.

During April and June of 2013 I had the privilege of visiting founders and leaders of eight new Indian higher education institutions near New Delhi and Bangalore, in collaboration with the Yale University Internationalization Office. These new institutions could embody the future of Indian higher education, which is being built with private funds from international entrepreneurs of the modern Indian economy. Many of these leaders have been educated at a mix of Indian, US, and UK institutions, and their personal experience is a blend of Indian and International higher education mixed with the frenetic pace of modern Indian capitalism, which has gained and maintained a lead position in several IT and industrial sectors in recent years.

The surge of interest in higher education that is coming to India is in response to the unmet need of young Indians for a type of higher education to prepare them for the realities of the modern economy. It is a credit to these leaders that they are stepping up to this need, and providing their own capital or tirelessly working to found institutions despite large amounts of resistance from entrenched bureaucratic regulations and state institutions that are more resistant to change than nearly any nation on earth. The emergence of new institutions within India, many patterned after liberal arts institutions in the United States and funded by private funding sources, is a fascinating new piece of the “expanding universe” of higher education, as new institutions are created that blend Indian sensibilities with American academic culture to create something entirely new in the universe of colleges and universities - the Indian liberal arts institution.

The 2012 McKinsey Global Institute Report, “The World at Work: Jobs, Pay, and Skills for 3.5 Billion People” indicates that the Indian labor force has grown from approximately 260 million in 1980 to 470 million in 2010, half of whom have virtually no schooling, and 58% of them working in agricultural jobs. This same report predicts a growth in the total labor force of 174 million people from 2010-2030, most of whom will need access to higher education from the strained higher education sector within India [178]. India has 34,000 undergraduate colleges and 174 universities serving 20 million students, and India’s higher education will have to expand dramatically and offer new modes of learning for the increasing numbers of young people [179].

Drew Faust, Harvard’s President outlined some of the problems faced by Indian higher education in her speech *Universities in a Changing World*:

*India, despite having the third largest university system in the world, generating an estimated 14% of the global talent pool, faces a serious shortfall of top talent for its developing economy. Your Resource Development Minister, our Harvard Law School graduate, Minister Sibal, has estimated that to meet demand India needs to create 800 universities and 35,000 colleges by 2020. The National Knowledge Commission more recently put the target for new universities at 1,500. [180]*

The entrepreneurs and innovators who made their fortunes in IT and other industries are now applying their talents and fortunes to establishing some of these new colleges and universities, and in many cases are serving as founding Vice Chancellors of these new institutions. With the emergence of these new leaders, India's higher education sector may become just as innovative as other parts of their economy. India’s media, IT, manufacturing and other sectors need these type of institutions to retain their competitive edge, which is all the more urgent with the arrival of over 100,000,000 young people in need of education who are unable to go to College in the next decades.

I visited four of these newly founded New Delhi institutions, and met with their leaders to hear from them about their vision for higher education. The interviews with the founders of Ashoka University, Nalanda University, Shiv Nadar University and Jindal Global University are described below in separate sections. I also describe my visit to a fifth institution, which has been described as the "Rhodes Scholarship of India," known as the Young Indian Fellowship program. In a second trip, I visited leaders from a set of new educational institutions near Bangalore, that

includes the Azim Premji University, Manipal Global Education, the Indian Institute for Human Settlements, and the Head Held High Foundation that claims to create “knowledge workers in 8 months” from illiterate and uneducated rural farmworkers.

## ASHOKA UNIVERSITY

- **Ashoka University, New Delhi, India**

Summary from website: *“Undergraduate education in India has traditionally been of a specialized manner with students being given little room to explore. While this narrow focus has led to the development of high quality experts in several fields, Indian undergraduates are increasingly falling behind their counterparts from around the world in terms of the width of their perspectives and critical thinking skills... In order to shift the paradigm of higher education in India and introduce some of these innovative measures in how our educational programmes are run, a group of eminent entrepreneurs and professionals from different lines of industry have come together to setup Ashoka University” [181].*

The Ashoka University has been founded by a group known as IFRE, which is an independent, not-for-profit entity “with a stated aim and vision to significantly alter the paradigm in Indian higher education.” The group has created the Indian School of Business, and includes a group of high level executives and entrepreneurs from a variety of sectors of the new Indian economy. The IFRE group want to catalyze action and innovation in higher education, with liberal arts as “a centerpiece of higher learning in India” to help “develop a more holistic educational experience for students that will broaden intellectual perspectives.” Within the group of IFRE founders is Ashish Dhawan, who is a Yale alumnus, and CEO of Central Square Foundation.

The Ashoka University has a collaboration with the School of Engineering and Applied Sciences at the University of Pennsylvania, and will include visiting faculty from UPenn, student and faculty exchange programs, and curriculum development and training of Ashoka faculty in concert with UPenn. They also are partnering with Carleton College for the design and delivery of courses. The campus will be on 25 acres in the Rajiv Gandhi Educational City (RGEC) in Rai, near Sonapat, Haryana. This location is about 25 km from New Delhi. The foundation stone has been laid on June 10, 2012, and they hope to open their university in August 2014.

My first visit was with the founders of the new Ashoka University. I met for breakfast with Ashish Dhawan, CEO of the Central Square Foundation, and founder of the Ashoka University, and with Pramath Sinha, founder of the Indian School of Business, and the inaugural Dean of the Ashoka University and the Young Indian Fellowship. Ashish and Pramath experienced a mixed Indian and international education that typifies the new wave of institution builders in India, along with extensive entrepreneurial experience.



**Ashish Dhawan**

BS, Yale University; MBA,  
Harvard University  
Senior MD, ChrysCapital  
Investment Advisors; CEO,  
Central Square Foundation

Mr. Dhawan is the Senior Managing Director of ChrysCapital Investment Advisors, which he co-founded in April 1999. Previously, he invested proprietary capital in the Risk Arbitrage Group at Goldman Sachs. Ashish Dhawan was formerly at GP Investments, a \$1 billion private equity fund in Brazil. Prior to that, he worked at McCown De Leeuw & Co., a \$1.2 billion private equity firm focused on middle-market buyouts; and the Mergers Group at Wasserstein Perella. Mr. Dhawan did an MBA with distinction from

the Harvard Business School and a BS in applied mathematics and economics with Magna Cum Laude honours from Yale University.

We sat in Ashish's living room and had some tea and mango lassi. Ashish and Pramath talked about "building a new Yale for India" in their new Ashoka University. Pramath Sinha came to this project with an engineering background in the US, and also as an entrepreneur from the US. He founded the new Indian School of Business (ISB), which was developed in partnership with the Wharton and Kellogg business schools. The new institution was able to grant "certificates" but not degrees to escape regulatory oversight. Since the Indian government has very elaborate rules and requirements if you grant degrees, the new ISB was able to escape these rules by calling their MBA a Certificate.



**Pramath Raj Sinha**

BTech, IIT Kanpur; PhD,  
University of Pennsylvania  
Founder & MD, 9.9 Media;  
Founding Dean, ISB

Dr. Pramath Raj Sinha is a Senior Advisor of India of Albright Stonebridge Group (also known as Stonebridge International LLC). He is currently Founder and Managing Director of 9.9 Mediaworx Pvt. Ltd., a diverse media business, spanning print, online, research, conferences and events. He was also the MD & CEO of the Ananda Publishers Pvt. Ltd. (also known as ABP Pvt. Ltd. and also ABP Group), one of India's leading and most diversified media conglomerates with leading properties in the newspaper, magazine, and TV

genres. Prior to joining ABP, he was a Partner at McKinsey & Company. He spent 12 years with McKinsey and Company, initially in the North American Practice, but in 1997, he moved to India to help develop the Indian Practice. He led McKinsey India's telecom, IT, and media practices as well as its Organisation Practice, where he focused on issues of transformation and leadership.

Pramath took a year off from McKinsey to be the Founding Dean of the Indian School of Business (ISB), an initiative led by McKinsey and a group of leading Indian business leaders, in partnership with Kellogg and Wharton, to establish a world-class business school in India. He has been associated with the project right from its inception and continues to be actively involved in the School as a Member of its Executive Board. Pramath is on the Board of Directors of BILT, India's largest paper products company; DLF-Pramerica, an insurance JV between India's leading real estate company and Prudential of USA; and Kaleidoscope Entertainment Pvt. Ltd., a prominent film and TV production business. He serves as a Director of Welham Girls' School Society and International Foundation for Research & Education. He is at present the dean of the Young India Fellowship Programme.

Pramath received M.S.E. and Ph.D. degrees in Mechanical Engineering and Applied Mechanics from the University of Pennsylvania and a B.Tech. in metallurgical engineering from the Indian Institute of Technology, Kanpur.

They explained that recently the Indian private higher education scene has had a number of somewhat sketchy entries, and is heavily weighted into the Technical, Business, Architecture and Computer science fields. One "unsolved problem" for India is how to introduce liberal arts, according to Ashish. Ashoka University is designed to help solve this problem, and its campus will open in August 2014. They are working on hiring their first faculty, and hope to offer a high

quality "Yale-like" education for a fraction of cost of going abroad right in India. Recognizing the challenges of starting a new institution from scratch, they will begin in a form "more like Carleton than Yale in the first years" but will hope to grow to 5000 students in the five years after opening. Three obstacles exist for this enterprise - they have to make the case for liberal arts, justify the high cost of the education, and also justify the longer timeframe - 4 years of college in Ashoka University is a year longer than many of the British Inspired courses in India from other institutions.

As a way to begin, the Ashoka founders (a group of about a dozen accomplished businessmen from India educated in the US) have instituted a new "Young India Fellowship" (YIF) program in which 100 leaders from around India recently graduated from a wide range of institutions in a number of fields are placed in classes together for a year-long series of 6 week courses in liberal arts, communication, and leadership. The YIF is a "transformational" experience and these students find themselves placed into consulting firms or become entrepreneurs themselves after the experience. The corps of leaders will be a powerful force in India for years to come, and the hope is that this program will gain in stature and reputation to become the "Rhodes Scholarship of India." Already they select only the top 4% of the applicants, making it more selective than Yale! The other exciting part of the YIF program is that it dovetails nicely with the new Ashoka University, and once this university is founded, they plan to continue the YIF and expand it to perhaps 200 or 300 as a master's program based at Ashoka University.

The new Ashoka University is still waiting for full regulatory approval, but is hoped to begin mid-next year in 2014, and the campus is under construction. The new Vice Chancellor (VC) is going to hire more faculty along with the two that they have landed, who are from George Washington University and American University in the USA. They plan to have 20 faculty in the first year, and begin with 200-500 students; the larger number would include both 200-300 undergrads and the 200 students in the expanded Young India Fellowship. The undergraduates will take a two years foundations course, and having limited choices in the beginning years - amounting to 2 courses per semester of electives. Their 20 faculty will offer writing courses, and other core material, and will be joined by some visiting faculty and other faculty resident in Delhi. In addition to the resident faculty, a larger academic council will guide the new institution and will include "virtual department chairs" who may be resident in other institutions.





*Ashoka University campus (above) as planned, with a central landscaped avenue separating academic and residential buildings. Ashoka University (below) as of April 2013. The entrance to the campus will be through these two buildings, which correspond to the lower left of the planned diagram.*

A bit later I visited their campus and saw the construction site where the new university will be built; right now one building is rising in skeletal form, and others soon will join this building to form a campus that will include a beautiful entrance gate that leads to an atrium in which a large tree is framed by a square skylight, and this will open up to a longer mall-like central courtyard, which will be flanked on either side by academic buildings and residences - the faculty living on the left side from the entrance, and dorms for students on the right side. It was hard to imagine the future gleaming, landscaped campus within the dusty and hot construction site, but no doubt this campus will arise in the coming months, as they hope to have the first building ready in just 4 months! The campus will include space for 5000 students, and hopes to become the “Yale of India” as it will offer a liberal arts “multidisciplinary” 4-year program for its students.

## NALANDA UNIVERSITY

- **Nalanda University**, Rajgir Bihar, India

Summary from website: *“Nalanda University was established in November 2010. The University came into being by a special Act of the Indian Parliament – a testimony to the important status that Nalanda University occupies in the Indian intellectual landscape. Nalanda is a stand alone international university unlike any other established in the country. Located in the town of Rajgir, in the northern Indian state of Bihar, Nalanda University is mandated to be “an international institution for the pursuit of intellectual, philosophical, historical and spiritual studies”. This new university contains within it a memory of the ancient Nalanda University and is premised on the shared desire of member States of the East Asia Summit countries to re-discover and re-strengthen “educational co-operation by tapping the East Asia Regions centres of excellence in education...[and] to improve regional understanding and the appreciation of one another’s heritage and history”(The Nalanda University Act)”[182].*

The new Nalanda University is attempting to revive the legacy of the ancient Nalanda University, which was the first great university in the world, over 600 years old when the University of Bologna was founded in 1088, and hosting nearly 2000 scholars and 10,000 students from across the world – China, Greece, and Persia – in the period from 400-1200 AD. Its history is described in an essay by its Chancellor, Amartya Sen. The new university will “recreate the universalism of Nalanda as a center of knowledge.” The founders of this university include Amartya Sen, Nobel laureate from Harvard, George Yeo, ex foreign minister from Singapore, Prof. Wang Gungwu from NUS, and many more distinguished intellectuals from a wide range of countries and disciplines. The university is being built in a collaboration between the nations of the East Asian Summit, with active participation from India, China, Japan, Korea, Singapore and Thailand. Sen describes the objectives of the new Nalanda University, which include reviving the Nalanda tradition as “an excellent example of pan-Asian cooperation” and helping Asian countries “live with each other in peace, and cooperate in areas where joint action is possible” [183]. The site for the university is 455 acres of land at the site of the ancient university in Bihar. The planning and site surveys for the construction of the university is underway, and the initial bids are being taken for the preparation for the site and design of the campus.

At the India Habitat Center in New Delhi, I met with two remarkable leaders of the new Nalanda University, Gopa Sabharwal and Anjana Sharma, who make a remarkable duo. Both were bursting with excitement about the new university they are establishing, and they were working very hard to clear all the necessary governmental approvals to revive Nalanda University after its destruction by invaders over 800 years ago.

Gopa and Anjana explained how the project was initiated by the Nalanda Mentor Group which is also the first Governing Board of the new Nalanda University. The Board is headed by Nobel Laureate Amartya Sen, who is Chancellor of the University. The board also includes high profile leaders from Singapore, Thailand, Japan, China, the UK, USA, and India. The Governing Board helps solidify the international nature of this new Nalanda University. The establishment of the new Nalanda University was approved during the East Asia Summit meeting in 2007 as one way to promote peace in the region. Several partners have also joined including Yale University, whose forestry school is committed to helping offer graduate work in collaboration with Nalanda.



*Dr. Gopa Sabharwal, the inaugural Vice Chancellor of Nalanda University (left), and Amartya Sen, Nobel laureate, and chair of Nalanda's Governing board, that includes ex-foreign ministers, professors, and leaders from India, Singapore, China, Thailand, UK, and the US.*

Gopa and Anjana explained that other institutions in India have focused on IT, technology, which is a strength of India's higher education system now. Their new Nalanda University is hoping to create an institution dedicated to the Liberal Arts and Social Sciences, with a world-class graduate program worthy of the name Nalanda University. The core of the University is research and it will award MA, MPhil, and PhD degrees.

Many outside India may not be aware of Nalanda's exalted history. The original Nalanda University grew into the pre-eminent research university of its time between 400 AD until 1198 AD, and hosted 2000 faculty and 10,000 students. Nalanda was the largest and most advanced university in the world, with an astronomical observatory that "touched the skies" according to the Chinese traveler Xuan Zang. In that time anyone entering the campus had to answer questions from a gatekeeper who literally watched the gate and did not let anyone in who was unsuccessful in those questions. I was already interested - a selective, astronomically active university that is 1600 years old!

Gopa and Anjana described how the new Nalanda University aspires to reclaim both the research prestige and international nature of ancient Nalanda. Early Chinese scholars preserved the few records of the university that survived the burning of its library, and The People's Republic of



China is funding the construction of a Chinese style room in the library which will house ancient Chinese manuscripts and other research materials of great value to exploring inter-Asian interactions. I learned that the burning of the Nalanda University library during its sack by invaders in 1198 was one of the great tragedies of antiquity, on par with the loss of Alexandria's library. The Nalanda library was said to be 9 stories high, and burned for 6 months after the fire started.

Among the ancient records the Chinese preserved are many Buddhist texts from the 12th century, some of which were rediscovered by Alexander Cunningham, the British scholar. Cunningham was motivated by the need to translate inscriptions on some of Ashoka-era monuments, which had multiple undeciphered scripts. Further texts were found to help translate these inscriptions, especially those in the language of Brahmi. The re-founding of Nalanda University will enable further study of these ancient languages, and the many Buddhist texts preserved by countries from which seekers of knowledge came over many centuries to the old Nalanda University. To further internationalize this new university, the Singapore Buddhist lodge is committed to design, build and deliver the Nalanda library in recognition of the importance of the site to Buddhist tradition and as testament to the ancient links that existed between these countries and India.

The new Nalanda University will help build a new curriculum and a new type of faculty governance within India, and hopes to escape some of the bureaucratic difficulties within some of the state institutions. One key ingredient in Nalanda's future success should be its special status through the Ministry of External Affairs. Because of the substantial international partnerships, the University is overseen by part of India's international relations bureau instead of the education ministry. This status enables them to be able to hire faculty from any country, and to have more latitude in setting University faculty salaries outside of the usual federal salary structure within India.

A typical big state University in India has disconnected administrators, long-held and seldom modified courses, no salary incentives for faculty performance, limited or no reviews of faculty, with little or no input from students in evaluating faculty and courses. This new Nalanda University is anticipating having visiting scholars, tax-free salaries, short and long courses, salary incentives for performance, and research grants for faculty to create a vibrant new culture. Only a few institutes in India (IIT and IIM) have such incentives and this will be coupled to a new curriculum that will liberate faculty from "the tyranny of the received syllabus."

Some unique aspects of the location will figure into the studies and research at Nalanda. The site is adjacent to the Rajgir Hills, where environmental studies can help study watershed management, and the ways in which forests and agriculture can be balanced. The large 450 acre campus in Bihar will enable space to develop and grow, and its location near the ancient university will enable archaeology research to further study the history of the historic namesake. The curriculum will be geared toward serving the surrounding community, and to serve Bihar with "practice-based education." The re-greening of the hills, the upgrades of water supplies, mapping of mountain areas, including discoveries of new caves in hills connected to ancient

monasteries will give the new University a feel of discovery with the surrounding area almost a part of the campus. A cooperative arrangement with the University of Illinois at Urbana Champaign will have new programs in Agriculture, and Yale University's School of Forestry and Environment will partner with Nalanda to develop innovative programs in forestry and environmental science.

The Nalanda University is also now the host institution for the Common Archival Resource Center for the Mekong Ganga region and will make all resources at the University available online as part of its commitment to share and expand the knowledge economy of the twenty first century. It is also collaborating with the Khudabaksh Library in Patna, the largest private repository of Oriental-Islamic scholarship in the Asian region on bring out facsimile editions of significant medieval manuscripts and making them available in a digitized format online. Gopa and Anjana also hope this new international university will serve as a meeting place for high level officials who can use Nalanda something like an Asian "Camp David" to discuss difficult diplomatic and international issues.

Nalanda University will start in the Fall of 2014 with the first two Schools of Historical Studies and Ecology and Environment. In the next few years it will establish all the seven Schools which are in the list of Schools for the new University. The plan is to have a student intake of 100 students per school per year. These 1400 students should be close to a critical mass for serious scholarship, but also small enough to create an intimate intellectual community, with high-end research as well within the MPhil and PhD programs.

It is also worth noting that the early Nalanda University campus had many dormitories, and perhaps offered the first "residential learning community" on earth, and the new Nalanda hopes to include this sort of living learning community as part of its institutional character.



*The ruins of the Ancient Nalanda University, which is 12 kilometers from the site of the new Nalanda University campus.*

## SHIV NADAR UNIVERSITY

- **Shiv Nadar University, Noida, India**

Summary from website: “Shiv Nadar University is an international, multi-disciplinary research-led university. The University’s mission is to develop and educate the leaders of tomorrow; to support research, scholarly, and creative endeavors that contribute to the creation of new knowledge; and to create research and teaching programs that tackle the most pressing problems of India and the global community. Located on a 286-acre campus in India’s National Capital Region, the University offers undergraduate, post-graduate, and doctoral programs in a range of disciplines in engineering, humanities and social sciences, natural sciences, communication, business, and education. SNU is a private philanthropic institution established by the Shiv Nadar Foundation in 2011 through an act of the State of Uttar Pradesh” [184].

Shiv Nadar University (SNU) was founded by Shiv Nadar, an industrialist from the IT sector who founded the company HCL and created the Shiv Nadar Foundation. Shiv Nadar University arose from Shiv Nadar’s interests in helping “bridge the socio-economic divide to create a more equitable, meritocracy based society.” His educational foundation has built educational institutions in India since 1994, and they began their Shiv Nadar University in 2011, with Nikhil Sinha as its founding Vice Chancellor. In India, the title “Vice Chancellor” is reserved for what we in the US would call the “President” of the university. The Chancellor of an Indian University is generally the founding patron in the case of a new private university, or the governor of the state or high profile government official if it is a public university. The Chancellor in India is comparable to the US Chair of the Board of Trustees or Regents. For SNU, the role of Chancellor has been filled by TSR Subramanian, a distinguished civil servant, former cabinet secretary, and veteran of several key positions in the Ministry of Commerce and Agriculture and in the Government of Uttar Pradesh. The combination of industrial entrepreneur, US and Indian trained academic and high government official has helped the new Shiv Nadar University acquire regulatory clearances, build modern facilities and hire quality faculty in record time.

I met with the founding Vice Chancellor of the Shiv Nadar University, Nikhil Sinha, at the Oberoi Hotel, perhaps the most expensive and luxurious place within New Delhi. Our meeting at the Oberoi came only after I had mistakenly gone to the HCL corporate headquarters to meet with Nikhil, when I should have been at the SNU campus, which was another hour away near a small village in the state of Uttar Pradesh, the neighboring state north of New Delhi.

#### **The Founder and Chairman, HCL and Shiv Nadar Foundation**



**Shiv Nadar**

Acknowledged as a visionary by the IT industry, Shiv Nadar has been the pioneer and the frontrunner of the IT sector in India. His commitment to professional excellence and global quality is a benchmark for Indian corporates. As the Founder of HCL, Shiv has played a pivotal role in the rise of India as a formidable power in IT and ITES. After the success of HCL, he has been deeply involved with the philanthropic activities of the Shiv Nadar Foundation ([www.shivnadarfoundation.org](http://www.shivnadarfoundation.org)), which he set up in 1994 with a desire to give back to the society and support the cause of education in India. The Foundation empowers individuals to bridge the socio-economic divide to create a more equitable, meritocracy based society. It aims to achieve this primarily through outstanding educational institutions. These institutions will not only provide quality education to the youth of India but will also usher in a new age of synthesis - where knowledge is constantly created rather than just disseminated.

#### **The Founding Vice Chancellor, Shiv Nadar University**



**Nikhil Sinha**

Nikhil Sinha, is the founding Vice Chancellor of the Shiv Nadar University, a position he has held since the launch of SNU in April, 2011. Sinha is a leading international expert on the information and communication technology industries and in a professional career that spans three decades he has held leadership positions and developed extensive experience as an academician, corporate executive and consultant. Sinha serves on several corporate and non-profit board.



Sinha has an M.A. and Ph.D. in Communication from the Annenberg School for Communication at the University of Pennsylvania and a B.A. (Hons.) in English Literature from St. Stephen's College, Delhi. He has published numerous articles and papers in scholarly journals and conferences and has been awarded a number of research, publishing and academic grants and awards.

#### **The Chancellor, Shiv Nadar University**



**TSR Subramanian**

TSR Subramanian has had a very distinguished career in the Indian Civil Services. As Cabinet Secretary, he has held the highest civil service position in the Government of India. He has also been the Chief Secretary of Uttar Pradesh, the largest state of India. In his career, spanning 37 years, with the Government of India, he has held several key positions in the Ministry of Commerce and Agriculture and in the Government of Uttar Pradesh.

Subramanian has been closely connected with the economic and social sectors, rural and agricultural sectors, and industrial and commercial development at federal and state levels. Significant attempts at administrative reforms were initiated by him during his tenure as Cabinet Secretary that include the first draft of the Right to Information Act; steps for bringing in transparency in Government activities; a Citizens Charter for all public service organizations and reforms in the telecom sector and a thrust towards improvement of the infrastructure.

Subramanian has a Master's degree from Calcutta University, and has studied at the Imperial College of Science and Technology, London. He also holds a Master's degree in Public Administration from Harvard University.

Nikhil is a member of a members-only section inside the Oberoi. We sat down and he got me a nice glass of wine (which I needed after a long and frustrating day of driving in New Delhi traffic!). Nikhil described his new University and how it grew from the efforts of the Shiv Nadar Foundation which was established by Shiv Nadar, the founder of HCL. HCL is one of those huge Indian IT companies like Infosys that most people in the US have never heard of, but which has over 90,000 employees! As described on the HCL web site:

*HCL is a leading global technology and IT enterprise with annual revenues of US \$6.3 billion... The 35 year old enterprise, founded in 1976, is one of India's original IT garage start ups.. The HCL team comprises 93,000 professionals of diverse nationalities across 31 countries included 505 points of presence in India. [185]*



The HCL corporate Headquarters is in Noida, a rapidly expanding industrial sector south and east of New Delhi located in the neighboring state of Uttar Pradesh but part of the National Capital Region. The Shiv Nadar Foundation purchased a huge tract of land (286 acres) which was aggregated by the state of Uttar Pradesh in an area next to a small village named Chithera, in a part of Uttar Pradesh referred to as “Greater Noida.” This location enables the university to be founded in relatively open space, enabling large fields and extensive land for housing, academic buildings and the usual campus landscaping that is so typical of US institutions. It also probably enables Shiv Nadar University to more easily develop without as many impacts on neighbors.



*Shiv Nadar's HCL corporate headquarters, in dusty Noida, and industrial sector south of New Delhi.*

The creation of the Shiv Nadar University is a convergence of philanthropy, vision, and backroom politics. The bill to authorize the university was proposed, then languished in the State legislature for several years, nearly getting voted down, and then suddenly passed in April 2011, to the surprise of Shiv Nadar and his partner, Nikhil Sinha. Once the bill passed they were given a green light to build their university, but only under the condition that they open their university during the fall of 2011 - in only four months! Shiv Nadar promptly hired Nikhil on the spot to be the first employee of the University, and its founding Vice Chancellor. Shiv Nadar and Nikhil Sinha wanted to create a new type of university for India - “a comprehensive, multi-disciplinary

university, like Carnegie-Mellon, Duke and other private universities in the US.” This new university was hoped to include the full range of schools to cover all types of study, and a set of requirements to educate its students broadly across a wide range of subjects.

Faced with the historic opportunity to begin this university, but with a world record deadline, Nikhil locked himself in a room and wrote a complete document that described the university, its mission, governance, and basic "constitution." Nikhil's background as an academic in the US for about 10 years at the University of Texas enabled him to develop the framework for the university, and his work in a variety of corporate management jobs in the high paced world of both US and Indian commerce gave him the ability to pull it off in a matter of days. Not only did Nikhil write all the governing documents, but he was also charged with hiring faculty, building a campus, and getting staff and lab equipment installed, all in about 4 months to open the school! Miraculously, Nikhil was able to complete the ground floor of the first academic building, hire some core faculty (which included importing an entire math faculty from the Mathematical Sciences Foundation in New Delhi!), and from this core group appointed a set of Deans who then rounded up a founding group of faculty, and also somehow recruited a first class of about 270 students - all in time for fall 2011!

Now that the building, faculty and students were all on board, they also needed a curriculum to teach, so Nikhil again locked himself in the room and wrote the entire basic curriculum document and distribution requirements in two days, early in that summer of 2011. This document was reviewed and refined in a series of workshops during the summer of 2011, and was the basis of the SNU Curriculum, which has a well-defined General Education and Experiential Learning set of requirements, as well as in-depth study in a major, more like an American university than the traditional British-style programme of study in most Indian Universities. The University opened as this document was being worked on, and by October 2011, the degree requirements and curriculum document were finished (a few months after opening!).

When the University opened, it mostly offered basic math, science, writing and engineering courses, and these were developed by the new faculty, and in collaboration with the engineering faculty at the SSN College of Engineering in Tamil Nadu, which is the 2nd ranked institution in this state for undergraduate engineering, and 20th ranked institution in India [186]. Further parts of the curriculum, including some of the graduate programmes, are being developed in partnerships with several international universities including Carnegie-Mellon, Duke, University of Pennsylvania and Babson College.



*Shiv Nadar University's main academic building, which will soon be joined by a second equally large structure and adjacent dormitories and playing fields.*

The Shiv Nadar University is now in its third year, and consists of one completed academic building, which houses all the programs, and will later be converted into the school of engineering. This first building consists of 270,000 square feet, and includes offices, labs, and all the many facilities needed to house the full range of courses in the University. In the short time SNU has been open, it has grown to include approximately 900 students and 110 professors. A second academic building - which will house the School of Natural Sciences and a third building which is designed as a research lab building - should be ready by June 2014. At full strength SNU will have 8000 students and 800 faculty with 40% of them in graduate programs.

Shiv Nadar University was founded in 2011, and offers a core curriculum of 24 credits from a wide range of subjects, a set of at least 60 credits for a major, and then a set of university wide electives. The university is located on a 286-acre campus in India's National Capitol Region, and offers "undergraduate, post-graduate, and doctoral programs in a range of disciplines in engineering, humanities and social sciences, natural sciences, communication, business, and education" [187].

When fully developed, the Shiv Nadar University will consist of eight schools: Engineering, Natural Science, Humanities and Social Science, Management, Education, Communication, Design and Performing Arts, and Law. Nikhil's core curriculum document for SNU describes majors for its undergraduates that consist of a total of 120-180 credits, depending on the choice of major. The core curriculum is a set of choices that students can choose that are distributed across 8 areas that include:

- Indian History and Society

- World History and Society
- Culture and Communication
- Physical and Biological Systems
- Cognition and Intelligence
- Technology and Society
- Environment and Ecology
- Empirical Reasoning and Analysis

The core curriculum is designed to be for non-majors, and are a set of what we would call half-courses developed by departments that are intended to let both professors and students "have fun with your disciplines!" Students take at least 3 credits in each of the 8 areas, and departments design the courses, and get these courses certified to satisfy one of the areas. All undergraduates at SNU must complete the requirements of the core curriculum regardless of their major.

Students are also required to take at least 24 units of University-wide electives, 18 units of a system known as VELs courses (Values, Ethics, Leadership and Service), 18 units of "Global and International Studies" courses, and 18 units of a grouping known as REAL (Research, Experiential and Applied Learning). The REAL courses constitute an experiential learning curriculum, and offers courses which are designated as one of "Research Projects," "Design Projects," "Practicum," "Cooperative Education," "Service Learning," "Internships," or "Cultural Immersion.[187]" In all of the classes, Nikhil explained, some amount of VELs and REAL are mixed in intentionally to avoid having a narrow focus and to bring in values and application to the learning; so for example an economics course might have discussions of normative values in markets.

I asked Nikhil about tenure. He said there are some problems with this, and especially in India where the American style tenure review is not common. For tenure to succeed, "a professional ethos has to be developed," according to Nikhil. Many of the private universities in India have an "at will employee" nature, where faculty can be terminated with short notice; often 3 months or less. Many of the public universities have something like employment for life, which is also problematic, as the civil servant mentality of the faculty is often not conducive to excellence.

Nikhil favors an approach somewhere in the middle of these extremes, where after some time (3 years or so) one gets "modified tenure" and this would consist of regular reviews (perhaps every 5-6 years) where the assumption would be that one would receive renewal but not guaranteed renewal. Within this process, teaching, research and service would be considered co-equal. This is especially important at a new place, where service requirements are immense, and would include community outreach, course design, English teaching and other service to the local community. All of the scholarly activity with direct impact on the community would receive greater recognition in Nikhil's institution than at a traditional academic institution, which favors academic research without considering social impact. This is not to say that his SNU faculty would not publish - there would be a need for this. But it would be balanced by a form of scholarship that considers the needs of the country, and which is done with a social conscience - a form of scholarship that produces "socially relevant research."

One of the very nice partnerships that was developed by Nikhil for SNU is a 2+2 partnership with Carnegie Mellon University, developed with Pradeep Khosla, who was Dean at the CMU Engineering School, and is now Chancellor of UCSD. In this program, students will take their first and third years at SNU, and then their second and fourth years at CMU. At the end, students would then be awarded a two degrees (one each from both Shiv Nadar University *and* Carnegie Mellon University) with full ABET accreditation. This provides a very valuable degree recognized world-wide, and lends a lot of prestige to SNU right from the start. I asked Nikhil what CMU gets from providing this sort of degree, and he said that CMU is very excited to have access to the top Indian students, who traditionally are snatched up by IIT, and now will be attending SNU. The program is scheduled for launch in 2014.

One other interesting innovation for SNU is that it offers merit based, need blind admissions, using high school grades but also a special aptitude test, like the SAT but custom-made for SNU by Pearson Education. The admissions office also includes essays and interviews of all of the candidates as part of the process. The faculty are involved in this interviewing process, making them fully part of admissions, instead of having it outsourced to a separate department. Nikhil reports that Shiv Nadar University receives 1500-2000 applicants for 550 spots, giving them good selectivity even in the early days. The University has one of the best scholarship programs in India with over 90% of all students at the University on some type of scholarship. It also provides tuition waivers and generous stipends to masters and doctoral students. They are seeing good interest in SNU from both the local New Delhi region and from South India, which bodes well for Shiv Nadar rising as a truly national university.

## O.P. JINDAL GLOBAL UNIVERSITY

- **Jindal Global University**, New Delhi, India.

Summary from website: “JGU is a non-profit global university established by the Haryana Private Universities (Second Amendment) Act, 2009. JGU is established in memory of Mr. O.P. Jindal as a philanthropic initiative of Mr. Naveen Jindal, the Founding Chancellor. The University Grants Commission has accorded its recognition to O.P. Jindal Global University. The vision of JGU is to promote global courses, global programmes, global curriculum, global research, global collaborations, and global interaction through a global faculty. JGU is situated on a 80-acre state-of-the art residential campus in the National Capital Region of Delhi. JGU is one of the few universities in Asia that maintains a 1:15 faculty-student ratio and appoints faculty members from different parts of the world with outstanding academic qualifications and experience. JGU has established four schools: Jindal Global Law School, Jindal Global Business School, Jindal School of International Affairs, and Jindal School of Government and Public Policy”[188].

The Jindal Global University was founded from private philanthropy by the Jindal Group, and is governed by a council headed by Naveen Jindal, son of the steel magnate O.P. Jindal, and



himself a successful leader in the steel and power industries. Mr. Jindal is also the chancellor of the university. The Jindal Global university has a strong focus on fostering international collaborations with the international community, making it a “Global” University. Collaborations have been negotiated with Yale University – co-sponsoring a Yale-Jindal conference on globalization and law, entitled ‘Globalisation in India and the USA: Law, Governance and Business,’ and hosting some Yale professors and teaching fellows as visitors. International collaborations have been negotiated with many other institutions including the University of Michigan, Indiana University, Harvard University, and several other institutions in the US, Japan, China, and Australia. These collaborations range from internship opportunities for students to joint degree programs [189]. A central part of their mission is to be intensely connected

My trip to O.P. Jindal Global University began with another comedy of errors - three separate taxis converged on my hotel to get me! The first was about 30 minutes early, but I figured my driver had shown up just a bit earlier than I expected. When I went outside to check, it was a completely different guy, in a somewhat fancier car, complete with an Indian flag on the dashboard. Soon two other cars had arrived. After some conversation, I was able to learn with help from the hotel staff, that the first car was sent by the Vice Chancellor of Jindal Global University, and so I jumped in and we left in a cloud of dust! The driver was a cross between Luke Skywalker and Mario Andretti, and weaved around auto-rickshaws, cars, people, bikes, and trucks hurtling at near light speed across town.

Apparently my stop was the first of several, culminating with a pickup of the Vice Chancellor at his house. We got to the Raj’s house and he came out smiling - a very youthful guy, with two guests in tow. One of the guests was an American law professor now at U Hong Kong, who was involved in founding the JGU. The other guy was a college buddy of the Raj, and we all fit into the now crowded car. Raj acknowledged that his driver was one of the fastest around, and told a story of an army official involved in training combat pilots who said that they should use Raj’s driver in the Indian military as he is so fast and aggressive!

We weaved through the streets of Delhi, and made several more stops, and then zoomed out to the somewhat remote campus of the JGU. While we drove, Raj launched into a narration of his journey through higher education that included undergraduate work at University of Delhi, a Rhodes Scholarship at Oxford, a Law Degree at Harvard, and then time working at University of Tokyo, NYU and Hong Kong City College.

Raj peppered his story with some great jokes and anecdotes, and we had a fun time as we zoomed across New Delhi hearing his account of the entrenched mediocrity of Indian universities, which in his opinion “is so deep and set that people are unable to notice it or change it at this point.” Raj described his amazement when was at Oxford and Harvard - he was dazzled by the engagement of the professors, the level of excellence in research, and the large number of high profile visitors. He knew that he wanted to make something like this possible for India but did not know how.

Raj also went into his interesting story of how he met H.R. Bhadrwaj, one of the most senior Indian government officials, who at the time was a Cabinet Minister for Law, that if he could only just find someone to donate \$100 million he could build such a place - a Harvard, Yale, or Stanford for India - but only if he could get relief from the Indian Government's usual way of strangling anything that looks successful. The Minister said he would get back to him, and actually did! A few months later, the Minister found him a billionaire steel baron named Naveen Jindal, and Raj began a long series of meeting with Jindal in which he described his concept, and slowly built up a level of interest and trust with Jindal that enabled him to donate a large part of his steel fortune to establish the O.P. Jindal University, named in honor of his father. The details of this story filled the rest of our drive, which is a good hour outside of town, in a dusty village named Sonapat.



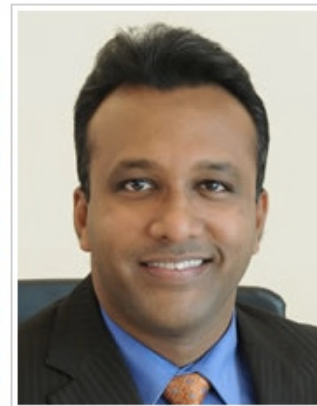
*The entrance to the O.P. Jindal Global University, with academic buildings visible.*

As we arrived the university loomed in the distance. Somehow in only two years they have build a huge campus with modern shiny buildings, and a huge Indian flag flying over all of it, with extensive green irrigated fields for sports of all kinds. It looked like a new US campus with the spacious grounds, and shiny modern buildings, which apparently were partially pre-fabricated in Europe and put together with the help of a French architect. Four cranes also loomed over the many buildings still being added to the campus!

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#### Vice Chancellor, O.P. Jindal Global University

Professor C. Raj Kumar is the Founding Vice Chancellor of O.P. Jindal Global University and the Founding Dean of Jindal Global Law School. Professor Kumar spearheaded the initiative to establish the O.P. Jindal Global University and four of its inter-disciplinary schools: Jindal Global Law School; Jindal Global Business School; Jindal School of International Affairs and the Jindal School of Government and Public Policy in the National Capital Region of Delhi (Sonapat, Haryana). Professor Kumar is also a Member of the National Legal Knowledge Council (NLKC). He was a faculty member at the School of Law of City University of Hong Kong, where he taught for many years. He was a Rhodes Scholar at the University of Oxford, UK, where he obtained his Bachelor of Civil Law (B.C.L.) degree; a Landon Gammon Fellow at the Harvard Law School, USA, where he obtained his Master of Laws (LL.M.) degree and a James Souverine Gallo Memorial Scholar at the Harvard University. He was awarded the Doctor of Legal Science (S.J.D.) by the University of Hong Kong. He also obtained a Bachelor of Laws (LL.B.) degree from the University of Delhi, India; and a Bachelor of Commerce (B.Com.) degree from the Loyola College of the University of Madras, India.



*The founding Vice Chancellor of O.P. Jindal Global University, Raj Kumar.*

Once we arrived Raj gave me a whirlwind tour of campus, and sent the American in to the council room where breakfast was served to him. We walked around the campus and Raj gave me more stories about his construction project, how they designed the campus and convinced officials to let him construct the buildings. He showed me advanced classrooms, conference rooms, faculty offices, seminar rooms and lecture halls. All were outfitted with nice looking furniture, microphones at each point and little red buttons at each seat that would enable a video camera to automatically zoom in on the student as they asked questions. This apparently is set up for remote and linked classrooms as they are a global university. It was very impressive, and I enjoyed talking with Raj as he is young, energetic, very funny, and very, very smart. I almost had to run to keep up with him as we walked through his campus, and all the while he was telling stories, shouting out greetings to staff members, students, and cleaning crew, and pointing out details of the architecture, the grounds, the facilities with obvious pride and joy.



*JGU campus being built as we watched (left), and Raj Kumar pointing out the many excellent facilities on his whirlwind tour of campus (right).*

Once we were back to the board room, Raj introduced me to a number of people. A distinguished group had assembled which included a few of his JGU professors, a retired general, and a high official from the state government who were all somewhat mysteriously sitting in place in the board room waiting for breakfast with us. We talked for a while and I had a good time meeting a young political science professor next to me. Raj offered a brief overview of JGU, and explained how it is a graduate program that has four schools that include the Jindal Global Law School, Jindal Global Business School, Jindal School of International Affairs, and Jindal School of Government and Public Policy. Raj explained that the timing of my visit to JGU was perfect as they just now are contemplating a new school for JGU that will be an undergraduate liberal arts college!

JGU has been exploring liberal arts, and have had some very positive interactions with Rollins College in Florida, who hosted a JGU delegation. Rollins and JGU have set up a 2+2 degree program where JGU students can attend two years in both institutions and receive a joint degree from Rollins and JGU. The University of Indiana and JGU also have signed an agreement to offer a joint law degree from both institutions. The JGU has also attracted a number of very high profile visitors, including Yale's Richard Levin, and is cultivating a network of affiliated professors and advisors from around the world.

The assembled group had already received introductory materials about me, including our newly released Yale-NUS Curriculum document, entitled "Yale-NUS College - A new Community of Learning." The group said they liked the Yale-NUS Curriculum document quite a bit, and Raj invited me to tell my story to the group, which I did, including my journey from Stanford, Chicago, STScI, to Pomona, and then my work at Yale recently. I think they enjoyed my story and were particularly interested in the ACE fellowship. I also mentioned our conference on the "Future of Liberal Arts in India" which we are hosting in Bangalore in January 2014 at the RRI, and they seemed interested in that.

Raj proudly mentioned that JGU had just hosted a very big conference a few weeks ago that included the President of India, Shri Pranab Mukherjee, and other academic from around the world. The JGU web site includes a full video of the President of India arriving and being welcomed, along with some of the other visitors. The breakfast in the board room was lively and very social, and included delicious fresh idlis and nice fresh coffee. Raj was a lively host, and shared several stories, including many of the complications and mishaps from the early days of the construction of his campus.

Raj Kumar appears to be not only delightful host but a visionary leader, and I was very happy to have been out to his campus. I felt honored to have a chance to meet another of these amazing Indian leaders, who are going to be making history in the next decade, and totally transform Indian higher education.



## THE YOUNG INDIA FELLOWSHIP

- **Young India Fellowship**

Summary from website: *“India has a large number of gifted and deserving students who are unable to avail of a high-quality learning experience from reputed institutions in India or abroad due to financial or other constraints. YIF will reach out to such students. Leading undergraduate programmes in India seem to focus too early on professional and specialized courses that tend to stifle the abilities of talented young minds to explore different perspectives and avenues. YIF is designed to rekindle the desire to learn and explore. The perceived value of a broad-based liberal arts education at the undergraduate level has declined over the years. This has compromised a well-rounded learning experience at the higher education level in India. YIF wants to bring liberal arts to the centre-stage of a more holistic learning experience. New ideas and possibilities get created at the boundaries of various disciplines. YIF aims to showcase the power of a multi-disciplinary learning environment created by some of the best and most inspirational teachers from India and the world” [190].*

The Young India Fellowship (YIF) was founded by the IFRE, who also founded Ashoka University. The program brings together 100 students for an immersion in liberal arts courses, with emphasis on team-building, communication, and leadership, and includes a year-long experiential project of the student’s own design. The program is located at the Sri Aurobindo Center for Arts & Communication (SACAC) campus, Sri Aurobindo Society in New Delhi. Soon the program will move into the new Ashoka University campus at the Rajiv Gandhi Education City, Sonapat. The current facility at SACAC is in South New Delhi. Visiting faculty give courses on topics that span the range of liberal arts topics such as “Sociological Reasoning” (taught by Andre Beteille), “History of Science and Technology,” “Group Dynamics,” “Sociology of the Environment,” “Art Appreciation,” “Governing the Metropolis,” and “Visual Communication and Storytelling” [191].

The Young India Fellowship (YIF) is not actually a university or college, but a year-long immersion in liberal arts for recent graduates of India’s colleges and universities. The value of the YIF was immediately apparent to me when I first heard it described as the “Rhodes Fellowship of India.” At a breakfast meeting, Pramath Sinha (who is both the founder of Ashoka University and Dean of the YIF) described how the YIF received over 3000 applicants for the 100 places, and that the selected students are some of the most accomplished and brilliant students in all of India - several having started their own NGOs, published books, designed satellites, and achieved perfect marks in the most demanding programs in the country. According to Pramath, these young leaders are "the most inspiring people in the world to teach."

The YIF program lasts for one year with eight different six week terms that include short courses in a wide range of liberal arts topics from a group of about twenty faculty. The students all take 26 total courses, with a load of three at a time. The curriculum includes courses in history, economics, philosophy, sociology, anthropology, ethics, law and art. Each YIF student is



sponsored by an outside donor, who provides a full scholarship. The students also participate in an eight-month long experiential learning project, where a group of three students join in a “capstone” exercise where they solve a real world problem for a company or organization. Along the way the students are mentored by the staff to help determine their career choice, and they experience guest lectures from a wide range of intellectuals, politicians, and entrepreneurs. Last year the group had 93 guest lectures, including visits by people such as Madeline Albright! My visit would give me a chance to learn a lot about the program, as Pramath invited me to give them a talk about astronomy. Since the students are engaging in liberal arts, the emphasis on archaeoastronomy and multi-cultural cosmology was of most interest to Pramath. He said the students would enjoy the talk, and I was looking forward to the chance.

My driver dropped me off at the Sri Aurobindo Society Campus, which is a leafy park-like setting in the South of New Delhi, which has at its center a small shrine to its namesake, a famous turn of the century “Indian nationalist, freedom fighter, philosopher, yogi, Maharishi, guru and poet” [192]. Aurobindo began working on passive resistance and non-violent opposition to the British, but unlike Gandhi, also linked with more violent resistance forces in India to prepare for a possible revolution if the non-violent means failed. Aurobindo also wrote extensively about yoga, philosophy and new paths to enlightenment, and his Society campus seemed to have an appropriately ethereal nature, with extensive landscaping, small fountains, and an oddly shaped building known as “the Treehouse” which looked out over the trees in the grounds and gave great views of the many birds making their homes there.

I was greeted at the Aurobindo Campus by Anu Prasad, who directs the YIF program on site, and by three of her students. The students were friendly and kind, and helped me with my bag as I came into the large auditorium. I had a full two hour block to give them a crash course in cultural astronomy! The session was perhaps one of the most enjoyable classes I have taught in years. The students were a delight, were quick to contribute, and were insightful and thoughtful with their questions and comments. I asked them to share their own most profound experiences of the sky with the group, and to reflect on why these experiences are so moving. I shared with them constellations from cultures around the world, and we discussed their own private conceptions of the universe, its composition and structure, and how that coincides with the modern “Big Bang” cosmology. We discussed models of the universe from ancient cultures, the discovery of the Big Bang, the meaning of the “edge” of the universe, multiverses, the Hubble Deep Field, and many, many topics. It was a true joy teaching these students, who had an earnest curiosity matched with high-level academic training and without discernible cynicism, even after reaching the advanced ages of 22 and 23!



*The Young India Fellowship class, an elite group of 100 of India's best recent graduates - definitely a force for good in the future of India. (from the YIF brochure).*

After the class, I chatted more with the students, and had a nice lunch with Anu and her YIF staff. As I left the campus I was very grateful to Pramath and Anu for inviting me to meet with these wonderful students, and had no doubt that the students of the YIF, combined with the thousands of students in these other new institutions, will be a powerful force for good in the future of India.

## AZIM PREMJI UNIVERSITY

- **Azim Premji University**

Summary from website: "Azim Premji University is the first private, autonomous university in Karnataka and among the few in India dedicated to Education and Development.

We are sponsored by the Azim Premji Foundation and our roots lie in the learning and experience of over a decade of work in elementary education by the Foundation. Azim Premji University is one of Foundation's key responses to the constraints and challenges confronting the education and development sectors in India like the lack of grounded knowledge and theory and a shortage of capable and reflective individuals. The University is actively engaged in the development of talent and the creation of knowledge which can catalyze sustainable improvements in education and related development areas. The University has a strong social

*cause and is among the only ones in the country dedicated to Education and Development and a vision to facilitate a Just, Equitable, Humane and Sustainable society” [193].*

In June 2013 I had a chance to visit leaders of the new institutions near Bangalore, the city that has been the center of the much of the Indian high-tech revolution, and is the home town of the Infosys corporation, one of India’s largest corporations and a pioneer in the IT industry. The new Azim Premji University has been built with the backing of the Azim Premji Foundation, and has a mission to expand access to higher education across India in a way that is equitable while promoting a broad-based development in the country.

Azim Premji, the founder of the University, was educated with a B.S. in Electrical Engineering from Stanford University, and began his business career in 1967 at the young age of 22, when he took over the Wipro Limited corporation. Wipro is now a multibillion dollar technology company with 2013 revenues of \$6.9 billion and over 145,000 employees serving clients in 57 countries [194]. The company began in 1945 as “Western India Vegetable Products” and began to shift into IT in 1981, when the company designed software and “indigenous personal computers” in the early 1980s. As such, the rise of Wipro in India is in many ways a “parallel universe” version of Microsoft, and like Microsoft, the founder and CEO is now active in educational philanthropy.

Azim Premji is one of the world’s wealthiest men, listed as 41st richest in the world, with a personal fortune of \$17.2 billion. He founded Azim Premji foundation in 2001, with the goal to contribute to high quality and universal education in India. The foundation funds “pilot” programs in public schools in India that hopefully can be adopted and scaled up to have a major impact on the 1.4 million schools in India. In 2010, \$2 billion was pledged to improve Indian schools and Azim Premji also has joined Bill Gates “Giving Pledge” program to give most of his wealth to charitable causes along with Warren Buffet and Richard Branson [195].



During a trip to Bangalore in June 2013, I met with the CEO of the Azim Premji Foundation, Dileep Ranjekar, and one of the senior professors at the new Azim Premji University, Venu Narayan. Dileep and Venu outlined some of the issues facing India and its education system - they pointed out that only about 18% of Indian student graduate to the 10th standard, and of those only about 12% go on to higher education. The divide between the rural and urban rates of education and literacy is also growing, with approximately only about 65% of Indians having basic literacy, less than the 74% official literacy rates. Further problems that need addressing,

according to Venu and Dileep, are the lack of pre-schools in India (where 70% of kids entering school lack early childhood education), and the limited quality of some of the public schools. Dileep pointed out that 35% of the children in 5th standard lack 2nd standard literacy, and so the schools are often not able to implement the limited levels of education they are offering with all of the children.

Dileep and Venu were aware of some of the colleges and universities being founded within India, and yet the Azim Premji University is dedicated towards developing a more “inclusive” student population, that can be trained to address the enormous challenges facing Indian education more broadly.

Azim Premji University programs are designed to create talent, knowledge, and also social change, and are focused in several interdisciplinary programs. Azim Premji University offers Master of Arts in Education or Development, and also provides a research center for education and development, with a continuing education center for teachers. Several interesting initiatives at Azim Premji provide interdisciplinary explorations of socially relevant themes. The current initiatives include the themes of “Law, Governance and Development,” “Mind and Society,” “People and Ideas,” and “The Philosophy of Education.” Each initiative brings with it a nexus of teaching and research, sponsored by the Azim Premji Foundation [193].

In the near future, Azim Premji plans to expand the master’s degree programs, and to build an undergraduate program. They are also developing a pre-service education program for their university that can have a large impact on public policy.

A large permanent residential university campus for Azim Premji University is being planned to be built on the outskirts of Bangalore that will “reflect the spirit of openness, collaboration and communication required to foster and exemplary learning environment.”







*Drawings of the proposed new Azim Premji University campus, planned to be constructed in the outskirts of Bangalore [196].*

## INDIAN INSTITUTE FOR HUMAN SETTLEMENTS

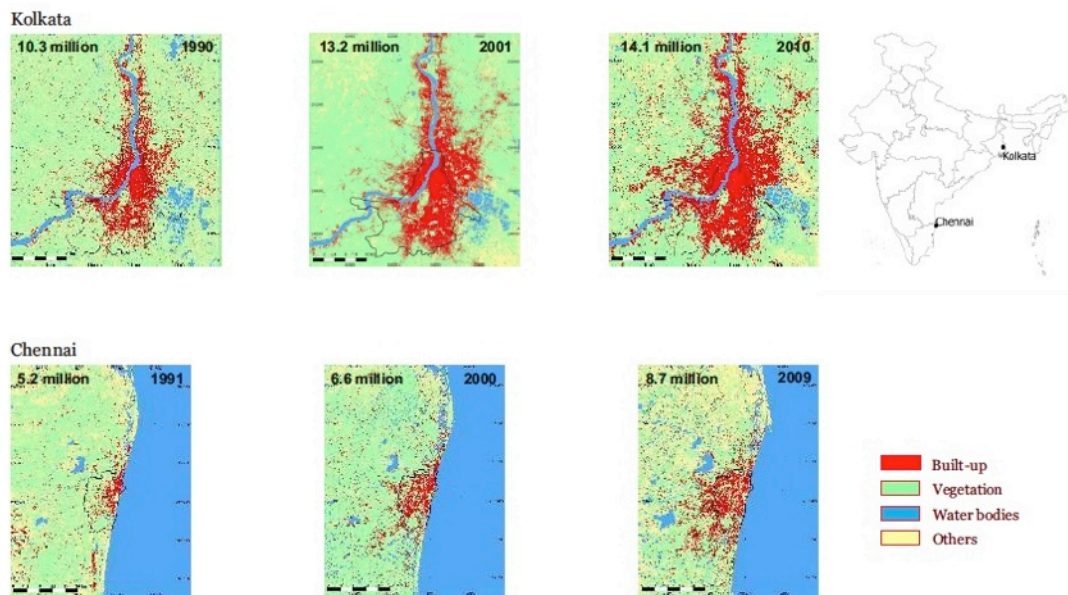
### •Indian Institute for Human Settlements

Summary from website: *“The Indian Institute for Human Settlements (IIHS) is a national education institution committed to the equitable, sustainable and efficient transformation of Indian settlements. IIHS aims to establish an independently funded and managed National University for Research and Innovation focused on the challenges and opportunities of India’s urban transition. The proposed IIHS University will host an integrated programme of quality campus-based education and research, training and lifelong learning for working professionals, distance and blended learning, as well as a whole array of practice and advisory services. The university will have a strong interdisciplinary orientation bringing together theory and praxis that is grounded in the South Asian context and also engages with and draws from knowledge across the globe” [197].*

Within Bangalore is a growing sense that the headlong growth of much of urban India needs to be managed in some way, perhaps by training some of the genius of India’s tech sector and innovation from Indian small towns and cities to develop a more sophisticated analysis of India’s urban and environmental challenges, and then to seek solutions. The Indian Institute of Human Settlements (IIHS) aims to both study India’s rapid growth and do something about it by training experts in “Urban Practice” through a master’s degree program. IIHS hopes to “address challenges of urbanization through an integrated program of education, research, consulting and advisory services” [198]. IIHS also plans to expand into a full-fledged university, perhaps with multiple campuses, to provide both undergraduate programs and PhD degrees. The IIHS University would have Schools related to environment and urban problems within India, and include schools of environment and sustainability, human development, economic development, governance and policy, and settlements and infrastructure.

The impressive Urban India 2011 report by the IIHS gives an example of IIHS and its high-impact form of research that blends economics, geospatial technology, and environmental science with the latest demographic databases. This report “pulls together available evidence from national surveys, the Census of India, remote sensing data on urban spatial dynamics, published and grey literature.”





*Example figure from the Urban India 2011 report, showing geospatial, demographic and ecological data for the cities of Kolkata and Chennai. [199]*

The picture presented is startling, as an array of satellite images and plots portray growth and environmental stresses within India's 53 cities with more than 1 million people. The Urban India report projects the future for India's top 100 cities, which "account for 16% of the population, produce 43% of India's total output and occupy 0.26% of the land." Satellite photos from IIHS portray the expansion of urban regions and subsequent loss of land cover in the past decades, and the analysis of census data documents the migrations within India, both between urban areas and from rural to urban areas. Trends in employment, transportation, access to water in rural districts and cities, and income distributions by caste are also included in the report [200].

I met with Aromar Revi, the director of IIHS, and his team in their Bangalore headquarters building. The IIHS headquarters building is a retrofitted Microsoft Research office, and has a modern and high-tech feel. Aromar's background includes an education from IIT-Delhi and graduate degrees from the Law and Management schools of the University of Delhi. He works across India and in the US on a number of commissions, including some from the United Nations, and as one of the Coordinating Lead Authors for the IPCC 5th Assessment report. Aromar explained the bold vision of the IIHS to educate 50,000 - 100,000 "changemakers and entrepreneurs" who can then work within India's 500 largest cities and manage the complexities within them. According to Aromar, "the most complex systems that have been built by human beings are cities. We have lived and worked in them for 5000 years, but we don't know how to manage them at the scale necessary in a largely urban world." Managing Indian cities to be

sustainable requires people who are able to work in several of India's over 20 official languages, and who can bring together theory and practice. The IIHS strategy is on two levels - to train practitioners from companies, government, and civil society organizations through short courses, and to develop a "cloud of practitioners" who can help guide projects that both educate students and help solve local problems via their practice. IIHS also hopes to train graduates who are able to answer not only technical questions (the "what, how and when") but find the deeper causes of problems by asking "why" systems are in their current state.



Email id : [arevi at iihs dot co dot in](mailto:arevi@iihs.co.in)

Aromar Revi is the Director of the Indian Institute for Human Settlements (IIHS) – India's first prospective National University for Research and Innovation to address challenges of urbanisation through an integrated programme of education, research, consulting and advisory services.

**Education:** He is an alumnus of IIT-Delhi and the Law and Management schools of the University of Delhi. He is also a Fellow of the India-China Institute at the New School University, New York.

Aromar hopes that the new IIHS university will "auto-capitalize" by performing useful work for governments and companies, and thereby find a new and sustainable form of revenue generation that is independent of a single large endowment or large federal funding, that may "compromise the integrity of research and practice." With these newly trained practitioners, IIHS hopes to help solve problems like providing more reliable water supplies, managing the social and political complexities of land usage to increase agricultural productivity, and predicting and mitigating the profound effects that global warming will have on India in the coming decades. In some ways, India provides a vision of the future that may arise for many more nations in the world as their populations and cities grow. The IIHS provides a laboratory for studying and helping solve India's problems, which can then be used to help other countries such as Brazil, Mexico and China which have similar issues of sustainability and urbanization. According to Aromar, "India has a monopoly on some of the most complex problems that the world may face in the 21st century" and the IIHS is working to develop the necessary theory, perspectives, and practices to help address these problems in a way that can possibly be adopted for other countries in the coming decades.

## MANIPAL GLOBAL EDUCATION

- **Manipal Global Education**

Summary from website: "Headquartered in Bangalore, India, Manipal Global also owns and operates university campuses in Malaysia, Antigua, Dubai and Nepal. It currently services and supports over 300,000 students, many of them through its award-winning technology platform, EduNxt™. Manipal Global believes industry relevance is the key to career-focused education in India. This belief has led to innovative partnerships, like the one with the City & Guilds, UK, to

*launch IndiaSkills, and the establishment of the Manipal Academy of Banking in collaboration with leading Indian banks like ICICI Bank, Bank of Baroda, Punjab National Bank, Andhra Bank, Axis Bank and Kotak Mahindra Bank, among others...Manipal Global creates a future for every life it touches. A future that inspires achievements, enables ambitions, and transforms lives, worldwide”[201].*

Within India is a global education empire fully equal in geographic reach to the more famous British or US universities for overseas campuses, such as NYU or Nottingham University. The Manipal Global Education group includes campuses within Malaysia, Dubai, Nepal, India, and the Caribbean. The group was founded by the Pai family, who began with a small university in Manipal in 1953. Dr. Ramdas Pai developed both university campuses and philanthropy with the Manipal foundation, and now the Manipal group is the largest education service provider in India [202]. The campuses include three medical schools in three countries, American University of Antigua, a medical school founded in 2004, the Manipal College of Medical Sciences in Nepal, and Melaka Manipal Medical College in Malaysia. Added to this mix are banking and technical schools in Malaysia, Dubai and India, including the Manipal International University in Malaysia, an engineering and technical school, the GlobalNxt University in Malaysia, an online university that offers a variety of master’s degrees, a banking workforce training center known as ICICI Manipal Academy, the Manipal Academy of Banking, and the Manipal University in Dubai, which features a 250,000 square foot campus in the Dubai Academic City.



*Manipal University and its 250,000 square foot campus, in Dubai Academic City, UAE*

During my visit to Bangalore I met with Anand Sudarshan, the former CEO of Manipal Global Education services, who now is working on a new education ventures after helping expand Manipal to include the American University of Antigua, and multiple online education companies. Anand was eager to see Indian higher education develop more capacity and competence in developing entrepreneurship. He sees India approaching a version 2.0 of higher education, with version 1.0 being the rise of the IIT and IIS systems in the country. The new regime of higher education has to bridge the divide between professional education (engineering, medicine and law) with the broad based academic fields of humanities, social sciences and natural sciences. Anand sees the “biggest lacunae in Indian Education” as the lack of training in seeing the “big picture” and bringing “humanism, imagination and the finer aspects of life” to professional education. He also sees IT and technology as a key to providing greater access and

quality to higher education. In a recent interview with CIO.in Anand notes that “Only 11 percent of students in India get higher education compared to 60 percent in developed nations. Distance education can provide an important alternative.” To this end, the Manipal group has expanded its online learning initiatives with a company known as EduNxt, that includes “mentoring, virtual classrooms, simulation, interactive content, recorded presentations, shared browsing, and access to over one million online books and journals” [203]. The convergence of the IT sector and higher education is quite apparent in the Manipal group, and Anand sees a lot of similarities between the high-tech sector and higher education, as both involve “engagement with young people and bright minds” and both are capable of “ushering in change.”

## HEAD HELD HIGH FOUNDATION

- **Head Held High Foundation**

Summary from website: “*Head Held High seeks to create a paradigm shift – perceiving villagers as people with dignity, each of them capable and contributing members of society; not mere charity cases.. We empower the rural youth through an intense six-month training program, using the breakthrough training based on Sprint Based Conversational Methodology that we’ve developed...In the year 2007, a group of people from remote villages in India – who couldn’t read or write in any language, set out to accomplish the impossible. From being absolutely illiterate, they acquired the ability to converse in English, to work on computers and essentially, to work like any other ‘employee’ in a high-tech industry, where they could be considered ‘Knowledge Workers’ – in under 8 months*”[204].

Perhaps at opposite extremes to Manipal Global in philosophical approach is a foundation known as the Head Held High Foundation. Instead of creating a global online campus, developing online degrees and medical doctors, Head Held High is building village education centers in which illiterate agricultural workers can be trained in eight months to become full participants in India’s new economy - and landing jobs in computer and other high-tech industries. The HHH approach is local and intensive, and involves a “boot camp” like approach that develops confidence and skills among the participants.

The co-founder and chairman of the Head Held High foundation is Madan Padaki, who helped found the organization “to create leaders from the villages in India through Head Held High that will bring about sustainable and permanent shift in the social landscape in India.[205]” Like many of the new leaders of startup education ventures, Madan got his start in Indian high tech companies. Madan began his career at Wipro and later moved to Infosys. After getting an MBA, he worked for some time in Japan, and then started a company called MeritTrac, which is today India’s largest skills assessment company. In 2008, he co-founded Head Held High foundation. I met with Madan in Bangalore, where he described the basic elements of the HHH education



system. HHH teaches English very efficiently by training participants in an essential 600 English words for functional literacy, that will make the trainee employable. In addition to literacy training, HHH works hard to build confidence in the participants and basic tools for working. Madan explained how the Indian education system is very competitive, and how some are simply left behind. For those who either did not get an education, or who dropped out, there are few, if any options for more advanced training.



*Publicity photo from Head Held High Foundation website, showing some of their students working to become “knowledge workers” using their sprint project-based curriculum [206].*

HHH has solved this problem by building residential education centers in rural areas. These centers include wired dorms and classrooms and are led by five trainers, who have college degrees and in some cases masters degrees. The training center includes 30 students who form what in the US would be called a “living learning community.” The students start with very basic tasks, like a simple google search on a computer, and build up to more advanced projects that use math and English language. The groups are organized into teams of eight students, to facilitate peer learning, and the training is organized into 4-5 projects known as “sprints” which last for a few weeks each. By the seventh of these “sprints” the participants are ready for more advanced projects and many are employed immediately after the projects are complete [206].

The program has so far reached 700 students, with an average age of 22, and 20% of them are women. Some of the women have particular family and marriage-based challenges that have interfered with their education, and HHH is able to help them become financially independent through their training. The entire program is quite affordable, and has a participant cost of only \$400 for five months of residential education, which many of the participants are able to pay back with the earnings from their jobs in just a few years.



## THE HISTORIC MOMENT FOR INDIAN HIGHER EDUCATION

The level of activity and historic proportions of India's higher education reformation is astounding, as is the energy and vision of the new generation of leaders within Indian higher education. It is amazing to contemplate the vast numbers of Indian students who are seeking quality higher education, but are unable to get it, either from the limited capacity of the high-quality institutions such as IIT, or from the lack of alternative schools or funding to attend foreign institutions. Clearly the needs of modern India require a complete retooling of the higher education system. These changes are difficult for the government of India, which has to simultaneously cope with decaying infrastructure, environmental problems, an economic growth rate much lower than China's, and a political paralysis even worse than the US federal gridlock.

Lacking the complete retooling and vast expansion of capacity to meet the needs of 100,000,000 Indians who will need higher education in the next 5 years, what will happen? The answer is partly to be found in the new institutions described above, that are built to respond to the needs of society, and that can help educate new types of leaders who as graduates can hopefully think creatively with vision and energy to solve the daunting problems. Finding the answer to this question is crucial to India, for if India hopes to continue its economic growth, and further expand its middle class beyond the 300 million that are now claimed, a new type of graduate is needed. India needs leaders who can understand both the high technology world, and the complex ethical questions that underly economic expansion, to provide a form of society that like Shiv Nadar's vision can "bridge the socio-economic divide to create a more equitable, meritocracy based society."

Universities produce more than just graduates, as these institutions demonstrate. They embody aspirations and values. By achieving success, these new institution will inspire and uplift the hundreds of students who attend their courses. Perhaps more importantly, as these new institutions become part of the India's intellectual life, they will help trigger a reconsideration of higher education both within India, and from abroad, that can have profound effects throughout higher education, and throughout Indian society.

As Rabinrinath Tagore so eloquently stated in his essay entitled *An Eastern University*:

*For our universities we must claim, not labelled packages of truth and authorized agents to distribute them, but truth in its living association with her lovers and seekers and discoverers. Also we must know that the concentration of the mind-forces scattered throughout the country is the most important mission of a University, which, like the nucleus of a living cell, should be the center of the intellectual life of the people. [207]*

These new Indian universities have the potential to be part of the center of intellectual life within India, and can help give voice to the "mind-forces" of modern India. Such universities will help India further its economic growth and help solve the many problems facing India and our modern civilization.