

Revisiting YMCA in the Era of Knowledge Society and Industry 4.0

Rev. Dr. Abraham Mulamoottil

The Context of the Emergence of YMCA

The Industrial Revolution ushered in a paradigm shift in European society. The new situation brought about growth, wealth and possibility for many. However, the urban, industrialized areas were unable to keep pace with the flow of arriving workers, in particular rural youth. This resulted in inadequate, overcrowded housing and polluted, unsanitary living conditions in which disease was rampant. All the more, the industrial revolution brought about substantial changes in the standard of living of many individuals, especially those from the middle and upper classes. More and more middle and upper class individuals started seeking greater personal freedom, leisure, and means of entertainment. Cities thus become havens for gambling, prostitution, and alcoholism. In this milieu, socially committed George Williams and his friends founded the YMCA, an association rooted in Christian values. The new contextualization of the Christian values through the YMCA transgressed the usual models like Church preaching and mission outreach, creating new place to live and experience youth and Christian values in a changing age. YMCA, became a meeting point and a place providing wholesome recreation, preventing youngsters from falling prey to vices and engaging them positively in a disciplined life that included sportsmanship and creativity. Ever since the inception of the YMCA, its centers worldwide have been models for societal and community activities. Across the world today, YMCA is a habitat for social, cultural, intellectual and religious integration inculcating human values molding its members to be more responsible citizens for their country and the world at large. Adopting “Challenge 21”, YMCA extended its scope to global challenges, such as gender equality, sustainable development, war and peace, fair distribution, and the challenges of globalization, racism, and HIV/AIDS.

Having discussed the context in which YMCA emerged and developed, it appears relevant to revisit its presets against the challenges of contemporary society. The world of manufacturing will experience a paradigm shift effecting the fourth industrial revolution, Industry 4.0. Knowledge will become the primary source of economic production in this modern society. Contribution of manufacturing to India's GDP is targeted at 25% and the country expects to become the "smart factory of the world"¹. On the occasion of the golden jubilee of the Tiruvalla YMCA, this discussion

¹ <http://www.huffingtonpost.in/mehul-lanvers-shah/industry-4-0-could-make-india-a-global-leader-in-manufacturing/>

will analyze the Indian contemporary social, economic and political situation arising from the advent of knowledge society and Industry 4.0 with a contextual response to the recent developments in and around Tiruvalla.

The Emergence of Knowledge Society

UNESCO World Report, “Towards Knowledge Societies”, (UNESCO Publishing, 2005) said that the world is witnessing the emergence of a new post capitalist and post-communist society, namely Knowledge Society². Knowledge has already been identified as the new force of economy and has become the new means of production after capital and labor. “Knowledge is today recognized as the object of huge economic, political and cultural stakes, to the point of justifiably qualifying the societies currently emerging”³. The context of knowledge society as a transformative social system is enabled by globalisation, information and communication technology, the ever expanding world wide web, and new media. Usually in the discussion on knowledge society, people use the terms ‘knowledge’ and ‘information’ interchangeably, and generally understand it in the context of computer sciences/IT/electronics/software. However, human cognition is fundamental to knowledge society as it relies on the fact that only the human brain can process and apply information and data⁴. So, ‘cognitive science’ and the unlimited power of the human brain are fundamental and critical to the development of knowledge society⁵. The phrase ‘Knowledge Economy’ was first used by Peter Drucker in his 1969 book ‘The Age of Discontinuity’⁶ and he explained it in 2001 in *the Economist*, that the economy in this society has three main characteristics – lack of a border, where knowledge travels more effortlessly, upward mobility which is available for everyone,

² Marc Luyckx Ghisi, “**Towards a Transmodern Transformation of our Global Society: European Challenges and Opportunities**”, *Journal of Futures Studies*, (September 2010), 15(1): 39 - 48, p. 40. “This transformation is a paradigm shift, way beyond postmodernity. It is the quick decline of the capitalist western-dominated industrial and patriarchal society and the beginning of a completely new post capitalist, post industrial, post patriarchal transmodern society. We are already halfway in this new logic of the transmodern paradigm. Few people are aware of it, although they feel it in their subconscious”.

³ UNESCO, “**Towards Knowledge Societies**”, UNESCO World Report (New York: UNESCO Publishing 2005), p. 5. See also, Abraham Mulamootil, **E-Rupee to Reinvent India**, D. C. Press, Kottayam, 2014, pp. 15-16.

⁴ Peter Drucker, *Beyond the Information Revolution* in *The Atlantic* available from <http://www.theatlantic.com/issues/99oct/9910drucker.htm>; (28 August 2002).

⁵ Information economy, Network economy, New economy terms are used interchangeably by many to explain this economy. Here, we are restricting ourselves with the term knowledge economy since the leadership in this economy is not maintained by IT/Telecom/ICT sector, but by all knowledge professionals along with their social positions and social acceptance of their values. Abraham Mulamootil, **E-Rupee to Reinvent India**, D. C. Press, Kottayam, 2014, pp. 18.

⁶ Peter F. Drucker, *The Age of Discontinuity: Guidelines to Our Changing Society* (New York: Harper and Row, 1969)., Peter F. Drucker, *The Next Society*, *The Economist* <http://www.economist.com/node/770819> (November 1, 2001)

and potential for success and failure where anyone can acquire the “means of production,” i.e., the knowledge required for the job, but not everyone can win⁷.

Productivity in a Knowledge Economy depends on the ability to create, process, analyze and apply knowledge-based information efficiently⁸. The uniqueness of Knowledge Economy is that it is global and works in real time on a global scale. In this economy, anyone can hire skilled labour from any part of the world (their working space is not static; outsourcing from any country) and the capital flows freely between countries. Moreover, many firms in this new economy take little physical space to set up their base as a majority of their operations are virtual. Their profits are obtained by constant innovation, flexibility, marketing and trustworthy branding.

The emergent society is not limited to economic and technological breakthroughs, but encompasses social, political, cultural and linguistic dimensions. 21st century is aptly referred to as the century of Knowledge Society/Economy.

Fourth Industrial Revolution (Industry 4.0)

To understand Industry 4.0, we need to first look at the previous three industrial revolutions. The first Industrial Revolution was based on the introduction of mechanical production equipment driven by water and steam power by the end of the 1700s. The second industrial revolution occurred nearly a century later in 1870, when mass production was achieved by division of labour and the use of electrical energy which drove conveyor belts on the factory production line and sped up manufacturing. The third industrial revolution was based on the use of electronics and information technology to further automated production during the early 1970s. 2010 onwards, the fourth industrial revolution (Industry 4.0) emerged, based on the use of Cyber Physical Systems (CPS), promising to harness the power of the Internet by connecting each part of the production chain through the World Wide Web, with minimal human oversight or intervention. It will use sensors to enable personalised, just-in-time, resource efficient production, using optimum capital and labour. Artificial intelligence, machine learning, cloud computing, and networks appear to be the usual presuppositions behind the fourth Industrial revolution which is going to challenge the entire industrial outlook, manufacturing and educational system⁹.

⁷ Paul E. Lingenfelter, *The Knowledge Economy: Challenges and Opportunities for American Higher Education*, in Diana G. Oblinger (ed), *Game Changers: Education and Information Technologies*, 2012 EDUCAUSE, <http://creativecommons.org/licenses/by-nc-nd/3.0/>

⁸ http://en.wikibooks.org/wiki/The_Information_Age/Information_Knowledge_and_the_New_Economy. See also, Manuel Castells, *The Rise of the Network Society. The Information Age: Economy, Society & Culture*, vol. 1 (Oxford:Blackwell, 1996),p. 66.

⁹ See, McKinsey & Company, *Industry 4.0 - How to navigate digitization of the manufacturing sector*, McKinsey, Digital 2015, http://www.cloud-inder.ch/fileadmin/Dateien/PDF/Themenkategorien/industrie40/McKinsey_Report_Industry_4.0_s.pdf

A paradigm shift to advanced manufacturing, use of composite materials, quantum engineering, 3D printing and robotics has given Industry 4.0 its footing and disrupts almost all established sectors. Preparing the human resource for an era of Google cars, the Internet of Things (IoT) or Internet of everything, mobile dependent lifestyles, personalized or gene-based health solutions, energy efficient systems and a world proactively seeking sustainability appears to be the core of any business and entrepreneurship in this era¹⁰. Unlike the past three industrial revolutions, these sea changes in technology will demand phenomenal changes in how we invent things in the future and conduct business. In short, while the preceding industrializations were characterized by an over dominance of profit through mass production and over exploitation of the natural resources, Industry 4.0 is geared towards a fully conscious and ecologically sustainable world. It will, for sure, challenge our traditional learning processes and typical thinking on how we educate and are being educated.

Dawn of Knowledge Society/Economy in India

From a restrictive perspective of the developed world, one can see the evolution of society/economy as a transition “from an agricultural economy (pre-Industrial Age, largely the agrarian sector) to industrial economy (with the Industrial Age, largely the manufacturing sector) to post-industrial/mass production economy (mid-1900s, largely the service sector) to knowledge economy (late 1900s – 2000s, largely the technology/human capital sector)”¹¹. The evolution of economies appears to be linear in developed countries. However, in developing countries like India, it is uneven, heterogeneous and in some parts or among some people it may be simultaneous. For instance, in some parts of our country life may still be in the agricultural economy. Until now, as Thomas Friedman witnessed and experienced in his book *The World is Flat*, “India is now able to compete for global knowledge work as never before”¹², yet at the same time India’s economy and its evolutionary journey is a *complex flat reality*¹³.

¹⁰ See, Hermann, Mario Pentek, Tobias* Otto, Boris, [Design Principles for Industrie 4.0 Scenarios: A Literature Review](#), Working Paper No. 01 / 2015, Technische Universität Dortmund, 2015, http://www.snom.mb.tu-dortmund.de/cms/de/forschung/Arbeitsberichte/Design-Principles-for-Industrie-4_0-Scenarios.pdf

¹¹ **Knowledge Economy** http://en.wikipedia.org/wiki/Knowledge_economy

¹² Thomas L. Friedman, *The World Is Flat: The Globalized World in the Twenty-First Century* (England: Penguin Books, 2006), p. 7. “Unlike other nations, the economic, social and political analytical tools sometimes fail to deliver exact picture of India’s development since various economies exist simultaneously here. This economy is also affected by the consciousness of caste, creed, class, tribe and the traditional jobs connected to them. The vision of life, of the other, of the world differs for each group and their interactions seem perplexing. This Indian reality is complex. For eg. “The Infosys campus is reached by a pockmarked road, with sacred cows, horse-drawn carts, and motorised rickshaws all jostling alongside our vans. Once you enter the gate of Infosys, though, you are in a different world. A massive resort-size swimming pool nestles amidst boulders and manicured lawns, adjacent to a huge putting green. There are multiple restaurants and a fabulous health club. Glass-and-

Indian Knowledge Economy and GDP

The Knowledge Economy has emerged in India due to economic liberalization that paved way for more economic growth and openings - e.g. revolution in telecom sector, TV, IT/ITES/ICT and new media like internet, websites, digital interactive platforms and social media. Statistics show that this economic policy has made possible a direct, positive and transformative impact on the steady growth of GDP. For instance, 10% increase in mobile penetration in India delivers on average a 1.2% annual increase in GDP¹⁴ and 10% increase in broadband penetration boosts GDP growth by 1.38 % in developing countries like India¹⁵.

McKinsey & Company reports that India has the potential to double its economic growth from the Internet in the next three years at 1.6% of GDP in 2012 to 2.8-3.3 % by 2015¹⁶. According to TRAI Annual Report 2011-12, the number of telephone subscriptions increased from 846.32 million in 2010 to 951.34 million in 2011, registering a growth of 12.41%. The wireless subscriber base increased by 107.58 million and the wireline subscriber base recorded a decline of 2.56 million. The wireless segment continued to dominate with a total base of 919.17 million connections. The overall tele-density in the country increased to 78.66 from 70.89. The rural tele-density increased to 39.22 from 33.79. The urban tele-density increased to 169.55 from 157.32¹⁷. This reflects directly on the economic growth in all sectors, which in turn affects the GDP.

Manufacturing in India and Industry 4.0.

With the advent of ICT (Information and Communication Technologies) and the wide framework of Internet and telecom networks penetrating each part of India (digital India), the time is ripe to build an authentic Knowledge Society and to introduce Industry 4.0 in India. International Yearbook of Industrial Statistics 2016- published by UNIDO observed, “With its ranking going up by three places, India has now been ranked sixth among the world’s 10 largest manufacturing countries”. Mehul Lanvers, Managing Director, Hannover Milano Fairs India reports “India's advantage

steel buildings seem to sprout up like weeds each week...That’s globalization, said Nilekani. Above the screen there were eight clocks that pretty well summed up the Infosys workday: 24/7/365. The clocks were labeled US West, US East, GMT, India, Singapore, Hong Kong, Japan, Australia”. *Ibid.*, p. 6.

¹³ Abraham Mulamoottil, **E-Rupee to Reinvent India**, D. C. Press, Kottayam, 2014.p. 17.

¹⁴ “**India : The Impact of Mobile Phones**”, Policy Paper Series, Number 9, Vodafone Group Plc, 2009, p.14

¹⁵ **The Impact of Internet in India** <http://www.mxmindia.com/2012/01/the-impact-of-internet-in-india/#sthash.qNaJUvj8.dpuf>. (2011)

¹⁶ “**Online and Upcoming: The Internet’s Impact on India**”, McKinsey & Company, Inc, 2012, p.9

¹⁷ **TRAI Annual Report 2011-2012**

<http://www.trai.gov.in/WriteReadData/Miscellaneous/Document/201301150318386780062Annual%20Report%20English%202012.pdf> (16 November 2012)

is its ample supply of skilled technical labour, although infrastructure issues, bureaucratic hurdles and unreliable supplies of resources like power and water could have a dampening effect. Already Havells, Godrej, Bosch and other large manufacturers have shifted units to India”¹⁸. All the more, at Hannover Messe 2015, where Industry 4.0 formed an integral part of the technology focus, India participated as a partner country. Indian Industries are now keen on developing India's very own smart factory with the first one in progress at the Indian Institute of Science's (IISc) Centre for Product Design and Manufacturing (CPDM) with seed funding from The Boeing Company¹⁹.

Recent Indian Initiatives to Empower Youth

In continuation with the liberalization policy initiated in 90's, the country is setting the stage for long term growth, through the initiation of the 'Make in India' campaign by the Honourable Prime Minister Narendra Modi, empowering youth towards 'Skill India', 'Start Up' and Stand up; and aiming for an inclusive 'Digital India' that will bringing about a shift in the industrial, scientific, technological and entrepreneurial mindset of the country. The primary aim of this campaign appears to be harnessing foreign direct investment into Indian manufacturing, thereby increasing the sector's contribution to Indian GDP from 16 to 25 per cent.

In this context, it is opportune to say that Kerala dared to dream of great advances in IT 25 years ago, when it introduced Technopark in its capital city of Thiruvananthapuram. Today this park one of Asia's largest Information Technology parks, enabling a business environment for over 300 companies together employing 46,000 highly paid personnel. The state is now poised to take advantage of the emerging fourth industrial, scientific and technological revolution, coupled with the IoT, Internet of Services (IoS) and Smart Factory concept. In its pioneering role, the state should steer a knowledge society/economy that subscribes to a sustainable, transparent, equitable, inclusive and responsible global community. In this context, it appears essential for Kerala to look for a new social and political education process that critically appraises it's set ideological bend, acquired sympathetically from political ideology and affinity, religious affiliations and social prejudices. The youth and the educated, in general, have lost faith in the established political parties, in religions and in their leaders, which ought to provide a new analytical tool to evaluate society to develop a meaningful and reasonable existence. Besides, paradoxically the political killings, the ideological riots and the formation of suicidal squads in the

¹⁸ <http://www.huffingtonpost.in/mehul-lanvers-shah/industry-4-0-could-make-india-a-global-leader-in-manufacturing/>

¹⁹ (Chethan Kumar | TNN | Jul 29, 2016, <http://timesofindia.indiatimes.com/city/bengaluru/Industry-4-0-IISc-building-Indias-1st-smart-factory-in-Bengaluru/articleshow/53441112.cms>)

name of fundamentalist idealism are on the rise in this technologically advanced trans-modern knowledge society. In short, the contemporary social, political, economic situation and the onslaught of the unrestrained advancement of technology challenges the local YMCA like never before, soliciting a new incumbent agenda for action.

The Contextualization of Tiruvalla YMCA

We have explained elaborately the context of the origin of YMCA during the Industrial Revolution. The political 'cold war' is almost non-existent but new challenges have emerged like ethnic violence, racial war, religious fundamentalism and terrorism. Globally, knowledge society/economy appears to provide a new ecosystem for world development in this milieu. Society would like to share evermore a world order which is equitable, inclusive, transparent, sustainable, ecological and responsible. This would be the challenge for YMCA as it looks to reframe its activities in Tiruvalla for the times ahead. For the past fifty years, the Tiruvalla YMCA, its allied institutes and activities has produced brilliant leaders and has had an intelligible impact on society. However it is opportune to think big and differently for the future of YMCA and Tiruvalla. It seems convenient to group our ideas to avoid conceptual confusion.

Tiruvalla and its Knowledge Base

Tiruvalla is blessed with an abundance of experienced and knowledgeable individuals who are its residents. A good section of the population is well educated and well travelled. The potential to bring together this wealth of experience towards the betterment of the city seems vital. Encouraging a better contribution from this section of the local society would lead to considerable and much needed progress taking shape in various arenas like in the public service domain of Tiruvalla. Being a highly respectable organization, the YMCA is well poised to tap into this potential and encourage its leaders and patrons to render service for the progress of Tiruvalla.

To exemplify further, a majority of the elected members of the Tiruvalla Municipality appear to have bare minimal education and a short sighted vision. This is not meant as a criticism but rather a pointer that involvement in the political and social process does not appear to be an attraction for many, especially the educated and the youth. Political parties and their associated youth movements appear to attract only the 'ill educated' and the less educated. Moreover, often their associates appear to have the appearance of a militia. In this context, the Tiruvalla YMCA has to establish:

A formal **Institute of Public Policy**. This Institute should be framed like a training ground for individuals to be better involved in the society as responsible

citizens. The institute should inculcate in the individual a life style, which promotes an equitable, transparent, responsible, accountable society and appreciates civic values and duties.

Save Elementary Education Programme (SEEP): There are many government and aided schools in and around Tiruvalla that are on the verge of closure because of mismanagement, lack of accountability or many other reasons. The YMCA can become a coordinating agency to make these schools Centers of Excellence (CoE) adopting a Private-Public-Partnership (PPP) plan for involving the public and NRI resources.

Clean and Green Tiruvalla (CGC Second Phase): The Municipality along with the author of this article and MACFAST could revive the clean and green city project. The first phase of this decentralized model which evolved the slogan 'Not in my Backyard' (NIMB Syndrome) to 'In My Backyard' (IMB Habit) received the State Award for best municipality. However, a thorough appraisal and rework is needed for the second phase of this project. YMCA can take up this project including 'Greening', Clean Air, Water Management, Sound Control, and E-waste Management.

In association with the 'Make in India', 'Skill India' and 'Start Up' programs of the Central and State Governments, Tiruvalla YMCA can establish a **Centre for Innovation and Development of Affordable Technologies (CIDAT)**. Here, YMCA can avail the resources from the 'Skill Development Corporation of India', the MUDRA Bank and many agencies that are prepared to associate.

Tiruvalla enjoys one of the biggest NRI remittances in India. But, till date, neither government nor private nor any Banks utilize this resource for local economic developments. YMCA with the help of the nearby local governments and the municipalities, the Cooperative Banks, other Banks and other agencies could set up a **Tiruvalla Business Centre**. The proposed center can be envisioned as a resources and coordination facility run by the YMCA for both local and NRI investors and entrepreneurs.

The youth of today seem well informed or ill informed of the advantages of new media and the dangers of consumerism, internet, mobiles and social media. However, can be trained to make optimal use of the new media. Tiruvalla YMCA can set up a **New Media Club**, which could provide sufficient information on efficient use of the new media. This club could be a repository of useful e-materials like health information, food contamination, consumer protection issues, lifestyle disease and its prevention, use and misuse of drug, road awareness, and personal security with particular emphasis on women and child security, etc. through web sites and other

social media channels. The veracity and authenticity of information is vital in this era of knowledge/information age and YMCA New Media Club would become a true source to provide right information with ethics and values. A digital database of the citizens can be made to mobilize the resources and people of Tiruvalla, particularly the marginalized like the retired, the elders and the destitute. Moreover, such a database could make community policing effective and it could become a community connect project (People Care) ensuring safety of the society.

Tiruvalla is famous for its religious and cultural integration and toleration. However, religious fundamentalism and superstitions are reemerging in several quarters and it is getting more in circulation through new media. Falsehood is transmitted widely without proof or reason and people are asked to believe and maybe easily fooled. The recent Islamic State recruitment issue and the young people's commitment to such false propagation is a case in point. This type of false religious and cultural information propagation is getting greater currency now more than ever. It is the duty of the YMCA to conduct seminars, workshops, street plays and flash mobs to conscientize society. Here, the YMCA can establish a **Rendezvous**, a meeting (place) of socially and spiritually committed and enlightened individuals who promote reasonable religious and cultural values. The Rendezvous could organize yoga-meditation, dialogues and symposiums on ideologies. It should frequently evaluate social, cultural and religious precepts critically and historically without prejudice. The Rendezvous is envisioned as a meeting place to reorganize or regroup our dividing society making it a vibrant community.

Finally, Tiruvalla YMCA can propose a mega project to the Government of Kerala. The Pamba Valley Green Techno City Project is intended as a hub and model of development needed for the upcoming Knowledge Society and the fourth Industrial Revolution (Industry 4.0) in Tiruvalla. This would be a smart city covering 50-100 acres. The a Government-owned property, former Pamba River Factory, Pulikizhu, Tiruvalla that is currently not in use, can be developed for this PPP project to ultimately advance the Central Travancore region. The Pamba Valley Green Techno city is also conceptualized in accordance with guidelines given for Private Integrated IT & Hi-Tech Parks on the basis of Kerala's IT Policy 2012 (G. O. (Ms.) No. 10/2013/ITD dated 03.04.2013), to make the State a highly preferred IT/ITES destination in India. This techno city will have an integrated IT/Hi-Tech/Biotech/Nanotech Park and an educational hub with a new philosophy encompassing five components - **Educate, Innovate, Work, Live and Leisure**. These five components are usually not connected in working professionals' lifestyles, especially in the field of IT/ITES, and other engineering professions. 90% of these young professionals are far removed from their desire of staying and enjoying time

with their families due to jobs in other cities. They have to stay away from their parents and loved ones, and there is a direct correlation to failing social structures, especially in married lives, caring for the elderly, life security, and the loss of community identities. This new city will address all these needs and can be replicated in other neighborhoods as well as it is obvious that we cannot create mega cities in Kerala. Thus, Pamba Valley Green Techno city will be modeled as a self - sustaining and self-actualizing project for people, communities and the State.

Author: Rev. Dr. Abraham Mulamoottil was a one of the Board members and Vice-Presidents of YMCA Tiruvalla.