

### 3. Embracing the Fourth Industrial Revolution

The World's countries came together at World Economic Forum Summit in Switzerland this year and recognised the start of a new industrial revolution — The Fourth one in the row. It was a timely recognition as we today live in an era, where even rocket sciences is taught in schools. Transition from the first to second industrial revolution, took almost 150 years, from second to third, almost 70 years and now from third to fourth, it is just 25-30 years. Yes, we are in a time a rapid changes. And humankind has become smart enough to embrace it all, both the pros and cons of a revolution, to this advanced age. Let us explore how the fourth industrial revolution is going to be welcomed.

## A Brief history of Industrial Revolution

The first industrial revolution happened in Europe, specifically England, 250 years ago. That was when Europe had just come out of the dark ages. In the quest for living the old, they found something new. New inventions and discoveries were made, which paved way for massive production of goods. With goods markets in the colonial countries, the revolutions grew and expanded to encompass whole of Europe.

The second industrial revolution came along with the world wars. Some would call it as a necessity emerged out of wars. Mass production of defense goods, assembly line production, large numbers of workers in labour forces, the invention of computer, world wide web, Internet, nuclear weapons were all contributions of this second industrial revolution.

The third industrial revolution began

a few decades ago, with the cold war, the space race between the so called super powers of the times. This period saw the emergence of technologies which sent man to moon and the space beyond. Mankind embraced it, with all the changes it brought along. By that time, man had realised, the silent voices of the fragile earth that resulted from all his industrial revolution ventures. Thus, this period was also marked by Montreal Protocol, CBD, Kyoto Protocol, etc, and the great globalisation.

Today, as the fourth industrial revolution is dawned, we speak of internet of things, artificial intelligence, digital India, embryo editing technologies, Genetically Modified organisms, augmented reality, 3-D printing of body parts, etc and the associated issues of privacy, cyber security, gadget addiction, super bugs, etc. The world has been staged for a new revolution.

## Individual in the 4th Industrial Revolution:

In today's world each individual is connected to everyone else through the virtual world. If one wants to shop, Google shows us what is the most preferred products, even before we think about a purchase, our needs are identified and conveyed to us by our gadgets. Google knows our most preferred restaurant, Google cars drive ~~us~~ us wherever we want to go, and our smart watches tells us everything from when to sleep to what to eat.

The Internet of things has taken our individual to another level, where everything ranging from his tea kettle to be operated via his smart phones to deliver him tea on reaching back home, from offices.

For an individual knowledge and information are at the tip of a finger, or a gesture or ~~is~~ just a glance at his device.

## The Social dimension :

This revolution has changed the way, the society behaves, and interacts. Since everyone is virtually connected, it all looks like an illusion. Social media is where all emotions are expressed, be it love, hate, anger, fear, revenge, everything. Society seems to be more comfortable to be interacting online than in the reality. Facebook, Twitter, WhatsApp, and a score of online shopping websites, have become indispensable parts of social lives. Even religion is preached through social media. And the terrorists do their recruitments via this. All discussions and debates are conducted online and even marriages happen over skype. Families and relatives find it more comfortable to be in contact online than in reality. In summary, we find society functioning online in a virtual world, than in reality in this two era.

## Economics, Globalisation and Revolution

The biggest fillip from this revolution is to get the world connected into a global village.

It has given a push to the consumerist culture and has made life easy for people.

Countries like India are to be benefitted as we have found a niche in information technology, the cornerstone of the industrial revolution. This could be a reason why India

skipped the second stage (manufacturing) of development and took a giant leap to servicing sector. We find larger employment opportunities in white collar jobs as a result of this revolution.

## The governance and administration

Indian government is all out to ~~best~~ make best use of this ongoing revolution to bring people under good governance and better administrative practices. E-governance and digital India are the talk of the day. Financial inclusion, DBT, Mobile banking, Cashless economy are part of government's initiatives in this regard. Also a number of applications and govt. portals have been started to reach people, and address their concerns.

## The Big question of environment

All industrial revolutions have been to harness nature and make best use of it. This is the first revolution where factors like climate change, global warming, conservation of biodiversity, etc. has been accounted as a part of the process. The

'Green factors' of all Trade and Services are emphasised. Efforts have been to minimise the impact on environment and hopes are for better technologies to emerge for utilising resources with minimum harm to the environment, so that future generations are not put under pressure (Concept of Sustainability).

Is India ready?

At one level, India is also on the track of embracing this revolution, when it comes to individual and societal aspirations.

But, there is much inequality existing in our society, where all the fruits of all industrial revolutions are enjoyed by a minuscule of population. With a population of more than 40% under poverty line (as per WB),

India has a long way to go, to bring the

fruits of industrial revolution to the majority of its people. But, the concerted efforts of all stakeholders including ordinary people, govt authorities, NGOs, etc seek to bring in a lot of good changes. The fourth industrial revolution could be utilised in a way so as to bring out our people from the dearth of poverty. If done successfully, developing countries like India would be the ~~be~~ biggest benefactors of this ongoing industrial revolution.

### The Flip-side of the Revolution:

All the three revolutions have had their cons. The fourth industrial revolution brings with it, its own challenges too. Privacy is the biggest concern of the day. As our private spaces are invaded, we become

susceptible to all kinds of abuses of ethical hacking has emerged and 'ethics' of this act is often forgotten. Cyber security and digital addiction are the talk of the day. Critics also say that online and virtual existence are destroying, natural talents of young children, their creativity and ability to interact with people.

People tend to be more aggressive than to resort to negotiations and interpersonal talks. Family get together and emotional support from parents have become distant dreams for many children. Also, governments and

At each stage in history, man has managed to attain all he wants through various ways and has constantly strived to make his life on earth more comfortable. So, all technologies are meant to be for the benefit of mankind. The right use of it can usher in a new stride in our civilizational journey, if not the gloom is here to stay.

Space for review

Intro  
I, II, III  
IV?

~~Impact on society~~  
Personal Society  
Economic family  
Political Provision  
Light

Is h...  
Economic