

UNDERSTANDING THE IMPACT OF THE FOURTH INDUSTRIAL REVOLUTION¹

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In the summer retreat season in 2018, I presented the topic of Buddhism and the 4th industrial revolution, sharing the Buddhist views on the technological development, no matter whether we have admitted it or not. There were many positive and negative impacts of this industrial revolution. In this chapter, I have tried to put emphasize upon the impacts of the 4th industrial revolution to help you all to understand clearly what we are coping with the advancement of physical world.

Buddhism visualizes a phenomenon or an event to identify clearly its utilities and drawbacks by analysing the causes, favourable and adverse conditions that generate immediate or long-term consequences.

The Fourth Industrial Revolution and resulted in the breakthroughs in technologies for gene sequencing and editing, nanomaterials and 3D printing, renewable energy and energy storage, big data and automated knowledge work, mobile Internet and the Internet of Things, artificial intelligence and augmented reality are pervaded all aspects of life and all regions of the world. These developments combine to make our environment, and especially our social infrastructures, more amenable to technologies capable of blurring boundaries between nature and machine, the

1. This talk delivered on December 16, 2018 at Buddhist School for Dhamma Propagation, is transcribed from Vietnamese by Giác Minh Duyên and translated into English by Lai Viet Thang.

physical and the artificial, the biological and the digital.²

Early examples of fourth industrial revolution are relatively rare but it tends to focus upon likely four major trajectories which are; birth, aging, sickness, and death that are suffice to motivate the relevance of it to Buddhism. *The Dhammacakkappavattana Sutta* or Discourse on Setting in Motion the Wheel of Truth explains that the first noble truth of Buddhism that birth, aging, sickness, and death are the sources of dukkha.

Hence, by virtue of their promise for ameliorating badness associated with premature birth, sickness, aging, and death, Fourth Industrial Revolution presents itself as a vehicle for freedom from dukkha. Buddhist tradition tends to focus upon transformative practices, rather than technological supplements, as vehicles for fostering the six perfections (*pāramitā*) and achieving the ultimate goals of awakening (*nirvāna*) and various other freedoms (*vimutti*).

Moreover, as a Buddhist monk of practice, I am of the view that the first noble truth surely know, we would remain exposed to dukkha even in the absence of our biological frailties, by virtue of remaining exposed to clinging (*upādāna*) and the sources of clinging—such as craving (*taṇhā*) and the three “poisons” of lust for pleasure (*rāga*), aversion to pain and insecurity (*dosa*), and delusion about cause and effect (*moha*). So, from a Buddhist perspective, it seems that the most we should expect from it is help in cultivating habits and mental states that release us from dukkha. The least we should expect, by contrast, is outright animosity toward such release.³

1. THE PRINCIPLES OF THE INDUSTRIAL REVOLUTIONS

Before entering to the main topic, I tried to review the nature of the industrial revolutions that have been taking place for nearly 250 years.

The first industrial revolution began around 1780 - 1840. It was a boom period of steam engine that led to large-scale production,

2. See file:///C:/Users/1234/Downloads/Fourth_Industrial_Dukkha_A_Buddhist_Case.pdf

3. Ibid.

and smart machines were replacing manual labour.

The steam power had developed during the industrial revolution. I often argue that if Buddhism had spread widely to Europe and America by proactive monks and nuns since the first century BC, the global technology would have been made earlier at least 500 - 1000 years than the present. This is because the doctrine taught by the Buddha emphasizes on the law of cause-effect that can be applied practically in the field of science including space science, physics, biology, etc. Unfortunately, Buddhism has approached to Western intellectuals since the 19th century.

Some people may have thought that I am unrealistic to advocate such argument. They ask why science and technology were less developed in Asian countries where Buddhism used to be the national religion but they have been developed inventively in the USA and Europe? In other words, they believe other religions than Buddhism have contributed to the modern science and technology. This is only true in terms of appearance but wrong in the nature. White ethnics are very intelligent, innovative and creative but the Roman heretical courts often condemned death sentences or put up a cremation of any scientist who declared scientific truths which were contrary to the Bible. One of greatest example was the case of Galileo Galilei, who declared that the earth is round and not flatten, and the universe is endless but not having a cap. He was taken to a cremation pyre, closing the status of a prominent scientist. In addition, many Western scientists had been hindered by the heretical courts. If Western science had not surrounded by this obstacle, it would have been superior than several hundred years.

In such situation, if Buddhism had reached to Western culture in the first century, the Buddha's teachings would have created a solid foundation for science and technology to grow rapidly. Just as in Cambodia, local people had not recognised the value of gold in a period of time, so they exchanged gold for salt. No matter how local people are aware of gold, its value is not losing.

The second industrial revolution began around 1870-1914. This was a period of electrical energy which replaced the use of candles

and torch lights. Nguyen Truong To⁴, after returning from France, reported in front of the court of Nguyen Dynasty⁵ that France was using light globes with hundred times brighter than candles of Vietnam. Many people considered him a liar. This industrial revolution promoted the massive productivity and improved rapidly economic efficiency.

The third industrial revolution had occurred from 1945 to 1970 or 1973 according to the views of some scientists. This was the period of electrical inventions, information and technology that aided for automatic process of production.

The starting point of the 4th industrial revolution has different theories. It was believed to start in 2000 by some leading German scientists, but 2010 by others, while few people proposed around 1983 along with the appearance of the Internet. Despite this, the 4th industrial revolution has visualized clearly since 2010 with the biggest development of new technologies. This is a period of technical growth that has led to technological applications in every field including biology, digital or physics by which are much more efficient than the previous industrial revolutions.

The nature of the 4th industrial revolution is a high-tech revolution to generate the era that pleases human's audio-vision. In the past, we had to be in direct contact with real objects and persons, we are now experiencing with illusive visions through smart devices. The most outstanding thing is the Internet of Things (everything connected). This concept was described thousands of years ago in the sutras of the Mahayana and Theravada Buddhism, especially the law of inter-dependence of natural phenomena that everything exists in dependence on something else. From the concept taught by the Buddha 26 centuries ago, scientists have generated a theory of the interactive network of all things that is called briefly as "*all things connected*" in Vietnamese community.

The major development that took place under the banner of the

4. Nguyen Truong To (1830-1871): a celebrity, architect and a reformer of Vietnam in the 19th century.

5. The Nguyen Dynasty overpowered by King Tu Duc, the last sovereign Emperor of Vietnam under which the French colonial forces colonized the country.

4th industrial revolution is artificial intelligence (AI), smart machines and robots or driverless-vehicles and auto-mini airplanes. They have been successfully testing and just waiting for the regulatory approvals to serve publics. In such case, public transports will be replaced by automated vehicles, just like aircrafts that can be operated automatically when they reach the certain altitude. We have seen marvellous innovations such as software, data storage, 3D printing technology, nanotechnology, biological engineering, quantum computers and lots of new inventions. A machine connected directly to people enhances the efficiency of work.

2. THE OPPORTUNITIES AND CHALLENGES

Opportunities

The 4th industrial revolution will contribute to improve the human's life in terms of possessions and worldly pleasures. Those who adapt to specialization of technical knowledge will have the opportunity to be awarded high salaries. Of course, it will lead to exclusion like the pyramid diagram that only few prominent engineers are reserved and the rest will be terminated.

Regarding productivity, the 4th industrial revolution has created new lines of products and services that stimulate the growth of all fields, particularly construction which is the priciest sector among manufactures.

In market, the 4th industrial revolution has enhanced supply chains because it allows to produce massive products with high quality.

In summary, the 4th industrial revolution has created new ways of market, opened up new form of economy and influenced entirely every aspect of humankind.

Challenges

One of the challenges of the 4th industrial revolution is to generate injustice globally and labour market can be heavily disordered. Other problem is to increase social tensions among individuals because a minority of people who are adaptable and updated can keep their jobs, while those who are missing new technologies will

be eliminated.

Standing on business perspectives, this revolution will change the methods of investments, profits, and how businesses recruit employees.

In terms of sociology, the 4th industrial revolution has gradually declined the proportion of the middle class. It will generate a big gap between the rich and the poor people, so causing the imbalance in social structure.

Positive effects

When identifying the opportunities and challenges of this industrial revolution, we also need to recognize its positive effects. It has actually altered how people live, work, communicate and execute online-markets. E-commerce sector did not exist before the 3rd industrial revolution. Nowadays, the largest e-commerce giants are Alibaba of China and Amazon of the United States.

The media have changed spectacularly. Social media network such as Facebook and Twitter have replaced the traditional communication media such as newspapers and magazines. For example, the New York Times of the United States had to be bankrupted twice. Social networking sites allow users to share ideas, exchange information quickly, that will bring enjoyment and entertainment.

The important impact of the 4th industrial revolution is to reshaping the governments. For example, Vietnam with 95 million people has 12 million of servants and officers, so Vietnamese government is bulky but inefficient. Vietnam is now restructuring from national committee to district and commune levels.

The 4th industrial revolution had affected positively schooling models to improve the educational quality. In addition, it also affects health care and generates social relations to contribute to the growth of material world, in particular to the audio-visual functions. However, the positive effects of the 4th industrial revolution make people easily attached the pleasures of earth, according to the Buddha. The more entertainments and enjoyment people have, the easier stuck in pragmatic and short-sighted views they will get.

The 4th industrial revolution has brought an outstanding development of biological science, especially genetic modification, which were not mentioned in the previous industrial revolutions. Today, scientists can make mutant genes to generate plants and vegetables that differ completely to those grown from sowing and transplanting in the past.

The development of biotech has contributed to improve human's health and longevity due to the application of stem cells in the treatment of diseases. Following this pattern, I think people may live longer in the future than the present since many kinds of cancers and HIV would be controlled successfully within next five decades.

The development of modern techniques and new technologies helps to improve people's life. Modern people get lots of opportunities, new concepts of power or new identities that will replace the old patterns. It may upset the traditional values, forcing people to adapt and become familiar with new ones.

The 4th industrial revolution would help to reduce traffic accidents if automated vehicles were allowed to serve publics by the governments. In such case, people would have more living spaces and the speed of traveling would be faster than the present.

3. THE IMPACT OF THE 4TH INDUSTRIAL REVOLUTION

Pressure on the government

The government and the leading party must face big pressure from taxpayers, because a modern government relies on AI for governing its population and public administration. Of course, the taxpayers do not want to see a bulky government which takes largely their taxable money. An efficient government is compulsory, so taxable money can be used for genuine purposes.

Changes of running business

The ways of running business and productivity will be turned upside down. Business is the application of economic theories into trading sectors associated with production and consumption. As the economic theories and practical implications have been

influenced by this revolution, people must cease old models to adopt new ones. The quicker a nation is adapting to this, the more developed it will be. When Vietnam advocated bauxite exploitation in the Western Highlands, the intellectuals including scientists had alerted that group interests in this project would be very high, so threatening national security and ruining national economic. Vietnamese government put out of this warning and the project fell into big losses. Vietnamese Coal and Electricity Group have been inefficient because they imported outdated technologies from China. All these kinds of activities make the national budget weak. It is a situation where we do not see the economic disturbance.

VINFAST is Vietnam's pride in the field of car manufacture, although it was just established two years ago. This is because VINFAST purchased German technology. This technology was ranked at 4.0 in term of environmental safety, while Germany and other EU countries has achieved 5.0. If we do not understand the economic disturbance, Vietnamese investors willingly buy waste products of outdated technologies which are costly but low economic efficiency from other nations. In other words, without a wide view of economy, they will cause significantly losses to our nation.

Ownership of personal data

The 4th industrial revolution has disturbed the ownership of inventors. Hackers can earn a lot of money by attacking Facebook's users. Facebook pages of Giac Ngo temple was hacked by anonymous group. I had to pay several tens of millions to recover each page. However, one page containing the Buddhist music and movies has not been recovered yet because someone has offered to get it at higher price than me.

Ownership in the digital age is at risk because the current laws fail to manage it efficiently. Vietnam passed a cyber-security law that protects ownership in the digital life. A Vietnamese person who wants to create his/her Facebook account must use legally his/her national identity number or passport number for the registration. Just like purchasing a flight-ticket to avoid the interference of black markets. Thus, this revolution makes a difference in how people consume. One's career can grow rapidly but potentially collapse

within hours. It also has the negative effects on inter-human relations.

For example, the billionaire Hoang Kieu⁶, who had been attacked by fake news through the digital media, causing him to lose billion of dollars and getting out of the list of American's richest billionaires. A young girl who lives in Nghe An⁷ and likes to shake her body suddenly became a famous celebrity when the media reported her performance abusively. So, in the digital life, celebrities can be dropped down, and those who are unpopular can be outstanding. The 4th industrial revolution also put the investors under pressures to satisfy their expectation.

These are the social downsides of the 4th industrial revolution, no matter whether we expect or not. It creates a process of 'impermanence' in two ways: negative and positive side. In the past, a disagreement with the policies, people just got out street for protesting locally, while a community's view now can be passed quickly through the social networks such as Facebook, Twitter, etc. For example, there were many protests against the president of France and his cabinet in December 2018 to protect their rights from the tax-reform although it may be beneficial France. The protests caused violence, burning, destruction, injury or even deaths. The wave of protests was strong enough to make the president paused the implementation of this reform or ceased it. In Vietnam, when the government advocating to establish special economic zones, the protests occurring on 10th June 2018 forced the government ceasing this program.

Social inequality

The 4th industrial revolution likely generates inequality in society. I previously mentioned the inequalities among people who work effectively and those who are inefficient. However, the point I'd like to discuss here is an inequality between people and machines in terms of laws, social issues and morality. Although

6. Hoang Kieu is a Vietnamese- American billionaire with a net worth of \$3.8 billion (2015), \$2.9 billion (2017) and \$1.6 (2018), according to the Forbes.,

7. Nghe An (Nghệ An in Vietnamese) is a province in the North Central Coast region of Vietnam. It is Vietnam's largest province by area bordering Laos and the Gulf of Tonkin.

the 4th industrial revolution helps a minority of people have high incomes, improving their lives but automatically brings injustice for the rest of society. The gap between the rich and the poor people is getting wider than ever before.

In the powerful nations such as the United States, Germany, France and the UK, the GAP between the rich and poor people is not high because the middle class occupies dominantly. I have been in many European cities for preaching and experienced this GAP. When I were at the border between Germany and Czech - Slovakia, I did not see the difference in infrastructure. Houses and the quality of life of people living in the border areas and countryside were not much different from those of central cities. The population and land of Germany almost equalizes to those of Vietnam but German population has been distributed evenly the entire nation, so we don't feel of being crowded.

Social inequalities have their deep roots from the differences in the adaptive ability of people. A few minority people who adapt to innovative technologies will be greater and wealthier than those who fail to adapt this revolution and become slow, frustrated, disturbed in their personal and family lives.

During the 3rd industrial revolution, people just needed to attain skills to adapt to their jobs. The 4th industrial revolution not only requires skills, but also a high level of technological expertise. Otherwise, people will be excluded. For example, the traditional taxi industry in Vietnam, if they do not change the way of operating with new technologies, bankruptcy likely happens due to fierce competition with Grab and Uber, two young taxi companies using modern technologies in their services. This problem happened in Europe 5 years ago but Vietnam seems to not learn any lessons. Traditional taxi industry in France, England and Germany went to bankrupt because of using outdated technology which is still being applied in Vietnam. In the traditional model, when the operator announces the address of a guest, the taxi drivers often rush to the destination, only one driver out of ten picks up the customer due to coming soon, leaving the rest of drivers with waste fuel and time, disappointed. Taxi companies have to spend too much money on vehicle maintenance, bulky staff at the operating offices, while

using the innovative App applied by Grab and Uber, customers just notice their addresses and destinations, they will be served within five minutes. These taxi companies started operating in Vietnam two years ago.

Similarly, the traditional models of business will be excluded if they fail to adapt to new technologies. It seems that some businessmen are of inferior opportunities for growth. According to the assessment of German scientists, at least 600 million people living in the developed countries do not have the opportunity to interact with the 4th industrial revolution. This situation is much worse in poor countries. An estimated of 4 billion in a total 7.3 billion people might not be able to keep up with the 4th industrial revolution. Among these people, Asia and Africa account for approximately 3 billion people. Vietnam is ranked as one of the top-ten countries having high ratio of the Internet users with 67% of people using smartphones and the Internet.

Unfortunately, most the users take advantage of the Internet for playing games, online gambling, betting, watching the news, or entertainment instead of studying and running business. If people change their Internet habits, towards the virtuous activities such as online-purchasing like Amazon or Alibaba, Vietnamese economy will grow intensively. The unhelpful entertainment breaks our minds because they cause nerve damage, according to the Eastern medicine. A person who often watches movies or plays games for four hours per day will get emotional disturbance, while who do 7-8 hours will have a mental or paranoid disorder.

I am working as a spiritual consultant from 5:00 pm to 7:00 pm every day at Giac Ngo temple. The young adults who came to seek my advices are mostly depressed, heart-breaking, mental disorders, emotional disorders, multi-personality disorder due to improper using the Internet. It is worth for all of us to think about.

An estimated of 2.4 billion people worldwide don't have access to clean water and about 1.2 billion people still lack electricity for daily usage. The 4th industrial revolution cannot solve these problems, although it motivates people to use the renewable energy solutions such as wind and solar power. Vietnam is one of the most

hydroelectric countries but associated technologies are the most outdated. Currently, Binh Thuan and Bac Lieu provinces are testing the efficiency of wind power. The sea and massive mountains of Vietnam have not exploited effectively due to the benefits of individuals, groups or short-sighted vision of the leaders.

The inequality between people and machines can be seen through the pattern of how investors make decisions to maximise their productivity or service. No matter how much they like people A or a group B, smart machines and AI rather than A or B are being selected by the investors for profitable purpose because of higher efficiency in productivity of AI than that of humans. Many tasks and occupations have been replaced by a series of robots, leading to job losses worldwide. Japan is the most developed nation in robotics, followed by the United States and Israel.

The United States can produce different kinds of robots such as assemble robots, reception robots, etc. Japan succeeded in manufacturing robots to recite the Dharma. Japan is also the first nation to produce robots for all services in hotels, such as taking a guest from the reception desk to an assigned room, unlocking and inviting the guest into the room, taking the guest's suitcase, or greeting the guest. Regarding emotional robots, the United States is on the top when their robots can express their feeling exactly as humans.

Millions of workers would be at risk of being replaced by robots. This is the biggest humanitarian drawback. The robot will be gradually incorporated the capable of solving problems generated by humans, while if those who are the prominent psychologists or pure monks considering the Buddhist doctrine and practical experiences to deal with complicated issues like the problems of marriage, legal actions will achieve virtuous consequences, regardless of occupations for all subjects and ages.

The moral problems

In recent decades, several prestigious universities have incorporated a new course called 'Life Sciences' that teaches students the values of life skills, how people interact with each other and solve problems by nature.

As mentioned before, the 4th industrial revolution has promoted the development of biotechnology, allowing the biologists to modify the variety of genes. This creates marvellous changes that had not thought in the previous revolutions. Hypothetically, if the Lord Buddha were alive, the biologists could mimic his genes to generate many the Buddhas.

Generally, genes play an important role in forming lifestyle and behaviour along with living and educational environments. If genetic modifications were allowed by the laws, it would generate the clones of humans. Another issue of how cloning would alter is a very complicated story. Around 15 years ago, an American movie producer released a film describing a virtuous person was cloned.

Unfortunately, it generated a non-virtuous person as influenced greatly by his habitats. Currently, an American robot named Sophia was granted her citizenship. As people who are closely related to their parents and grandparents, families and communities have a sense of shame, fame or fear to pursue them becoming better. By contrast, those who are cloned do not process such characters and traditional values, so the crimes in society would increase.

The 4th Industrial Revolution has generated the concept of *Designed Baby* made by technologies. The genetic modification on humans would cause a complex problem that makes the judiciary, executive and legislature in troubles. Perhaps, it would take at least two decades to reach a conclusion whether this modification is allowed to applied or not.

As long as AI thrives, robotism will occupy dominantly social life. Using the biotechnology, robots can produce highly dangerous weapons that are beyond human's creativity. Without a proper management, the emotional robots potentially possess such weapons, threatening to all human beings. In such case, the risks of society, laws and civilisation affect intensively people's morality.

If more than 200 countries on earth were allowed freely using of the emotional robots and they were granted citizenships and possessed guns like people living in the United States, what would happen? Of course, this circumstance may take several decades to become reality but its deteriorated morality can be a hypothesis

and human beings need to paid attention.

In terms of the digital life, network-security is now a big issue for nations that are poor in technology and becoming the victims of hackers raised by some political groups. Cyber-attacks are increasing and have become a global concern as they maybe destroy election's outcome, economic and national security. But it is very difficult to prosecute these to the International court. China, Russia and North Korea are warned by the United States the most serious hacker threats in the world, influencing negatively the political systems, national security and economic conditions of many nations.

Cyber security and international governance should maintain international peace and stability in the cyber context. Users should have moral responsibility for their actions. Unfortunately, Vietnam's cybersecurity law is just emphasizing on the issue of controlling and managing dissidents while the national cyber security strategy is to ensure the security of networks and devices, anti-hacker system of developed countries that consider Vietnam as a rival. Therefore, Vietnam needs to focus on network security from that perspective.

Bad culture and faith loss

The modern media are generating social differentiation widely from global to individual. Everyone now can have his/her own social pages which act as the media channels like newspapers or TV. Those who are being followed by a several tens of thousands or more can function similarly TV channels. It seems to be more effective than TV channels in communicating. The digital pages always have two groups: the supporters and the opponents for each issue, so provoking hate words. Also, spreading fake news and information can be completely out of control. While the traditional media are being controlled tightly by the laws, the digital media escape from such supervision.

For example, in the case of the North Korean leader's brother who was assassinated at the Malaysian airport, a Vietnamese woman involved in this assassination, influencing Vietnamese profile and economic growth. Just few days ago, the North Korean representative who came to Vietnam to learn experiences of building a model of economy and market officially apologized this issue.

The social media can magnify a small thing into a big problem, a statement made by the leaders of powerful countries to a wobble effect on monetary policy, economic policy and stock market. The United Airlines lost nearly \$ 6 billion USD after their staff behaved badly with a doctor who is Vietnamese-American but apologized the victim dishonestly. In addition, fake news may cause severe losses and instability of social and family.

In 2017, the Buddhism's opponents that are mostly located in the United States posted a fake photo on the Internet. The photo showed monks and nuns who studied at the Vietnam Buddhist University in Hanoi, stading on the stage received the certificate of "safe contraception for monks and nuns". As a result, the forum was overwhelmed by negative comments, making social restless. People cursed against monks and nuns due to fake news.

I contacted the university boards and committees to have access the original photo which I strongly believed that it was be edited. The original photo was the same to the edited one, except the title of the scene. The original title is: "*Military Week for monks and nuns of Vietnam Buddhist University in Hanoi*". Of course, the quality of the original photo was higher than that of the edited one. I then posted the original photo to the forums but anonymous posters were silently ignoring, neither correcting nor apologizing. Their purposes were to attack Buddhism by fake news, declining people's faith in Buddhism. So, fake news on the social media are extremely serious.

The digital war should be a big problem if we don't respond properly. Having faith lost may take few decades for a person to get out of restless by a false information. Social networks may have made people faithless in others, confused and fearful in life that may direct them to be pragmatic. They lose faith in the truths, spiritual values, moral values, so they no longer believe in the law of cause-effect. The impact of misperceptions makes people more socially dangerous while using the digital media.

Destruction of human rights and privacy

Western countries are the leading nations where data protection and privacy is highly respected. People do not want to be bothered, so even a neighbour knocks on their door, if they refuse to welcome him while he continues knocking and has words, he may get in trouble. Just call 911 in the US, the police officers will come quickly and arrest the annoying person.

Human rights and privacy are extremely prioritized, according to the laws of the US and European countries. There is a concept of ‘noise pollution’ in the US. We only knew three major types of pollution are soil pollution, water and air pollution but the noise pollution has been added to the list. This type of pollution was taught by the Buddha in the Majjhima Nikaya that noise is a thorn to meditation. In a noisy environment, the meditation practitioners are difficult to meditate as it either distracts or pollutes their views and hearing, which will lose the mindfulness. In other words, Buddhism and science were “correlated quite closely”.

Western people are not generally talkative, while Asian people, especially Chinese, are noisy, no matter where they are. Like Chinese, Vietnamese and Thai share a similar habit of noise everywhere just by chatting and gossiping something that are mostly worthless. Human’s privacy is easily vulnerable to get hurt when Facebook and other social networks with intelligent algorithms can identify a user’s gender, no matter whether he/she provided or not. His/her social career, marital status or the assessing contents can be leaking. These data then can be sold to the analytical companies for advertising or political purposes.

Facebook, for example, had to appear before the Congressional in the US and European Parliament about selling nearly 100 million data of Facebook users to the Group of Political Analysis, overturning the 2016 US presidential election, and helping Donald Trump become the 45th president of the US. There are hundreds of selling the user’s data to business corporations but this action is merely to serve for advertising, so the law is not care yet.

Smartphones allow the analysts to know where the users are, even if we attempt to select somewhere else. A few Apps on

smartphones have only access to the historic locations of the users if permitted. Generally, most producers of smartphones can be able to know exactly our historic locations and associated times.

Similar to the Apps, a spyware installed on the smartphones can collect all data of what we have access and use or what we consume. For example, the Huawei's CFO was recently arrested in Canada because Huawei was considered as a Chinese spy for collecting the digital life. So, several governments calls to boycott the Huawei's products.

The analysts enable know the history of customer's purchases, type of products, the payment methods and consumerism. Using such data, they then advise the manufacturers to introduce new line of products in the market to meet the customer's expectations. Therefore, selling these data to the analysts is an easy way to make money in this era.

Exposing personal information of customers also affect the happiness and your families when a piece of one's personal information such as using black websites or disloyalty can disturb their partners and the ability of concentration on their career or duties. Psychological warfare and cyberwar affect every aspect of life that makes human's privacy no longer secured.

The fact that people like talking about themselves, sharing their personal lives indicates the instability of emotional and family life. In the UK, 6 million surveillance cameras installed nationwide, they are used to monitor citizens' movements. China even has more surveillance cameras than the US does. And China is a world leader in facial recognition technology . A criminal who is captured by the security cameras in city A, if integrated into the national system, the policeman can locate exactly the location of the criminal within 6 minutes.

China is still stealing intellectual property. Its spies are everywhere. Anything that belongs to new technology invested in Europe and developed countries can be imitated in China and its quality is almost equivalent but much cheaper. This leads to the loss of incomes of many corporations and commit intellectual property theft.

In summary, the topic presented today helps you get some clues on the disadvantages and negative effects of the digital revolution. As a spiritual master, I wish all of you to update knowledge in this field.

In October 2018, Pope Francis of Roman Catholic Church was broadcasting to guide all his priests how to use Facebook and other social networks to encourage them to keep undated a part of the digital life. Of course, everything has duality, when we abuse it, our emotional and mental stability will be damaged by black-websites, making us difficult to control properly our six senses for entering into levels between the Guru master and Saints.

Weighing the harm and benefits of the 4th industrial revolution, the users need to control themselves to use its positive aspects. The destruction may be millions of times more than benefits but we cannot refuse to use it. The lesson is that we must understand its nature to take advantage of benefits without influencing by negative aspects of this industrial revolution.