Volume: 2, Issue: 1
Page: 32-42
2020

Journal of Scientific Reports

Society 5.0 - Its Historical Logic and Its Structural Development

Özgür Önday

Abstract

Despite the superior technology that produces astounding name even though many are not referred to the Industrial Revolution 4.0 alongside Japan, this year held in the world's most comprehensive technology at CeBIT in Hannover, Germany was the partner country of the fair. Society (Society 5.0) philosophy that introduces Japanese Prime Minister Shinzo Abe, the philosophy of "Technology is not as a threat by society, should be perceived as a support." justification by faith, he said. Japanese Federation of Economic Organizations Keidanren to prepare the 26-page manifesto of the Society 5.0 philosophy in light of the expected development economics and sociology reform intends to tell a wide audience. Said subject of study devotes to the process section is far from the birth of the first human and process until today's society Hunting Society, Agricultural Society, Industrial Society, Information Society and Smart Society (Society 5.0) as dedicates five. If a subject is at least so far spoken but we all knew that the most critical found inside, irreversibly people at the micro level this digital conversion, and macro levels of society was subject to better prepared. Keidanren, society emphasizes that there should be cooperation in order to continue the path of the Society 5.0. The main aim of the society is to ensure the integration into society of technological developments. So instead of fearing technology and technology is intended to create a society living in a society with its cooperation they bring. The Society 5.0 was first beginning to reveal the causes of Industry 5.0 name, it is located in ensuring the integration of technology with social life. Therefore, this article proposes global solutions in-depth look at the concept of new social movements and Society 5.0 further enhanced the theoretical framework is given in the applicable knowledge and concrete work for the development of new social movements.

JSR
Accepted 03 March 2020
Published 28 March 2020
DOI: 10.5281/zenodo.3731954

Keywords: Digital Transformation, Industry 4.0, Society 5.0, Governmental Industrial Revolution, the Industrial Revolution 1, 2nd Industrial Revolution, the Industrial Revolution 3.

About Author

Özgür Önday, Department. of Management Information Systems, Boğaziçi University, Turkey.

1. Introduction

To explain the concept of Society 5.0 must also examine the Industrial Revolution. Until today; social, cultural and economic changes that cause 4 has experienced the industrial revolution. Industry 1.0: Mechanization - (1780-1870) : In the middle of 1780, the advent of mechanical water and steam generating plants starts behind. Industry 2.0: Mass production - (1870-1970) : British-born inventor began in the 1870s with cheap steel production in the Bessemer invented. It spreads by electrical and chemical means. In 1882 it has continued with the use of electricity in cities with Edison. Industry 3.0: Automation - (1970-2010) : After the Second World War has emerged after the programmable machine with the use of digital technologies in production. Key component of this revolution, the PLC are programmable digital circuits. The third industrial revolution, the revolution of computers and informatics well be considered as the web develops rapidly. Industry 4.0: Smart factories - (2011-?) : Machines and robotic physiological systems, automation systems equipped by machine learning algorithms that have been checked with the acquisition of cyber-physiological systems has emerged smart factories. Industry 1.0, 2.0 and 3.0 in manpower stage has an important place. When the industry began to lose 4.0 bride is seen that the importance of human power.

Naturally, those who think differently, who do not plan the future and not based on the human factor in doing so. Despite the superior technology that produces amazing state name not mentioned much since the Industrial Revolution 4.0 as Japan, held in the German city of Hannover in the year 2017 the world's most comprehensive technology exhibition CeBIT partner country was. Society (Society 5.0) philosophy that introduces Japanese Prime Minister Shinzo Abe, the philosophy of "Technology is not as a threat by society, should be perceived as a help." justification by faith, he said.

Under this article, known as new social movements experienced stages Society 5.0 / development stage to be examined so-called and their structure will be evaluated in the context of reflection on our lives.

2. New Social Movements

The world's experiencing radical change and transformation of economic, we are witnessing a period of political and social structure that changed rapidly. Especially since the mid-20th century the accelerating industrialization, urbanization, modernization in a similar mannerthe process, shows the effects occur in regions where both can influence beyond the continent with common communication channels. All of these changes and the social role and position of social actors and come back on the agenda and discussed in the conversion. Since the 1960s movement against the system clearly observed with deep and rapid transformation it can be said that the world had a conversion. Students in 1960, the new left and the civil rights movement; 1970s and 1980s, the environment, women, peace and human rights movements; 1990s and 2000s 'global justice movement' appeared one after the other, and have increased as well. The reasons for these changes occur social movements that took place in the social plane, the participants of the features are modifying the target format and movements. So, gains intensity of identity-based approach, the diversity of issues and creates the impression that at first glance classroom-based social movement has emerged types. Increased participation as obvious of the new middle class, the conquered to convert targeting the government, especially the space and identity orientation as the target of the change in the cultural field is outweighed this 'new' together with social movements, the social movements theory that examines these movements innovations have occurred.

Political and economic transformation is therefore not limited to the social changes and transformations in the social field is obvious that also affected. Of the social good or defined, which established a good relationship. Is it a good or the political sphere, and the vision of the future or his future sunup to offer an alternative analysis which questions the basis elements of new social movements. According to the theorists of social movements theory, the diversity of new social movements, depending on the politicization of conflicts and contradictions of the new era demands tangible assets rather than demand-oriented and identity; politicization of the demands of this effort is having only a general world opinion instead of belonging to groups defined by class and by voicing the parts forming an alliance of modernism criticism. In the political sphere demands of the methods used to find the money, it is the use of channels other than the corporate policy. Thus, movements, networks, social media, forums, such as the platforms are connected by skinny ties. The new social movements brought criticism on the theoretical description of mainly 'new' remains vague and the contents of the 'powerless about what is to analyze the movements of completely break inferences from the old. Moreover, the lack of future movement perspective view partly broken, and exhibit the movements make it difficult to resolve as a whole. The new social movements brought criticism on the theoretical description of mainly 'new' remains vague and the contents of the 'powerless about what is to analyze the movements of completely break inferences from the old. Moreover, the lack of future movement perspective view partly broken, and exhibit the movements make it difficult to resolve as a whole. The new social movements brought criticism on the theoretical description of mainly 'new' remains vague and the contents of the 'powerless about what is to analyze the movements of completely break inferences from the old. Moreover, the lack of future movement perspective view partly broken, and exhibit the movements make it difficult to resolve as a whole. Roots emerging from the 1960s' new 'it spans a wide audience and geography based on the motion today for a better understanding of this global movement, taking into account the analysis of social movements theory, the' new 'and' the diversity of the old movement, a historical process of similarities and intersections in it must be addressed. Thus, the opportunity to offer a new future perspectives of both social subject in recent years to define the political sphere as well as in the Society 5.0 can be improved.

3. From Industry 4.0 to Society 5.0

According to the dictionary the word Revolution Turkish Language Institution; "In a certain area; rapid, drastic changes and qualified "means. The industrial revolution, instead of the limited production approach based on human power, refers to the period when the determinant of the production machine. This is the first revolution, called the industrial revolution, changes in the production structure and naming these revolutions within the meaning of the word "certain areas" reduces the heat industry.
To explain the concept of Society 5.0 is needed to address the industrial revolution. Until today; social, cultural and economic changes that cause 4 has experienced the Industrial Revolution. Until reaching four industrial revolution and modern-day century, the basic building blocks of the universe, each up to 1.0 from 4.0 in other words, the industry can be summed up in the following form:

• Industry 1.0: The transition from an agricultural society to an industrial society can be seen taking place in the 18th century Industrial Revolution 1, it is possible to characterize the Industry 1.0. Industry 1.0 is an industrial revolution began in Britain's leadership. This is the basic building block of the universe of water and steam power machines and transport

(especially running locomotives with mist power) are beginning to use (Tunzelmann, 2003). Also, it is observed that the mechanization of production starts at this stage.

• Industry 2.0: Began to be used in electricity production, which occurred in the Century Industrial 2.0 and serial production was introduced to the system. this step with the marching band from mass production to be shot in the head has been used in Germany and the United States as the first Henry Ford's auto plant in 1903, it possesses. (Information Movement, 2018).

• Industry 3.0: 3.0 with computer-controlled machine in the Century of experienced industry seems to start working. In other words, software production processes begin to be concerned with is connected to the aided manufacturing automation.

• Industry 4.0: Industry 4.0 in the 21st Century began the stage with widespread use of the Internet. Industry 1.0, 2.0 and 3.0 in manpower stage has an important place. When the industry began to lose 4.0 bride is seen that the importance of human power. Internet of Things, smart machines, big data, cloud technologies, data mining, artificial intelligence, dark factories, cyber systems, has begun to place our everyday lives with the concept Industry 4.0, such as autonomous robots.

BC 10,000 years, the animals were hunted whether human hunting consuming maintained their life, lived more sonar hunter-gatherer period, and the sonar from this period, life educating animal shapes are sedentary changing through reap the harvest team. In this case, as one of the first and most important revolution in the history of mankind has led to the start of the agricultural revolution. Built for life in the society to make their production more fertile, various methods of developing and BC 3000 - Between 2000 examining the human environment, especially in Mesopotamia began to build mathematical calculations. B.C. When the year 1000 is reached, the emergence of the philosophy of science in the Greek civilization and the spread has been triggered by the development of many new insights and ideas, especially the discovery of the increasing interest in astronomy and nature of cases has increased inventions and inventions to the fore. From the 7th century AD with the rise and spread of Islam, the Islamic Andalucia era of science, culture and the arts, they have made every effort to accelerate the start of a new era and the changes occurring in the social and economic life. Applied scientific studies have undertaken the roles of great importance in the science and technique of walking. Chinese made 11th century with the invention of the magnetic compass and gunpowder, burning the invention of weapons, is the result of their effort to accelerate laid the foundations of modern science and technology; 15th Century emerged in Italy in the Renaissance and Reformation, led to become one of the most important turning point in the history of science of this period (Ural, 1998, p.211). In conjunction with the invention of printing and spread of literacy increased share, according to scientific effort is showing itself in every field ancient times, has differentiated the whole world, ideology, ideas and thoughts are destroyed. One other words, illuminating the entire world scientific life has created fundamental changes. The second half of the 18th century, these changes are maintained and flourish, increasing the importance of the agricultural and industrial revolutions (Schwabe, 2017, p.15). Industrial Revolution, initially led to radical changes in Western society, including the UK, but these changes have not appeared suddenly, and still continues to influence today (Tanilli, 2004, p.118). Considering the history of mankind shows that the agricultural revolution, the industrial revolution to the transition experienced in quite a long process. But the 18th century 's, which began with the invention of the steam engine is the first Industrial Revolution in the mid-post with the developments have been much faster, is still ongoing.

First Industrial Revolution emerged firstly with a mist machine invented by Thomas Newcomen's steam engine was developed in 1712 and around 1760 began to be used in weaving looms at the end of the same century. This allows the construction of large mechanical revolution railways and the contribution of mist production machinery (Schwab, 2017, p.16). Both tiny factories to take place both in the workshop and become comfortable with the use of serial production of the machine, especially the First Industrial Revolution of the country where the effective use of state emerged in the UK. The second industrial revolution of the 19th of the electricity used in the production of electrical power at the end of the century and has emerged under the guidance of the assembly line. Second Industrial Revolution begin in electrical systems has become more active in the Ford Motor factory established. These systems help line and the production costs and that is caused to decrease with increasing production volume and price. Fordism-flexible Ford production in this period called the period and to provide the organization with high fertility decisions intended to produce cheaper cars. Henry Ford's "Auto black, customer can dye to color car they wanted." It is the basis for the understanding of the current economic superiority of this finds its expression in the western word (Weckbordt, 2015). Second Industry Revolution; electricity, science-based chemicals has resulted in the spread of the telegraph and telephone technology to the discovery of the spread. This industrial revolution, unlike the first example has emerged of the importance of scientific knowledge (Castells, 2013). Dissemination of scientific knowledge-based communication technology to the next industrial revolution has triggered the emergence of a Third Industrial Revolution.

The programmable machine developed in 1968 with the use of scientific knowledge more actively, has led to the start of the Third Industrial Revolution. During this period, the start of production was switched to production of Fordism to Post-Fordism with the production has become easier with the use of computers and the fact decreased need for human labor. In addition, the increasing spread of the Internet has affected production and transportation facilities in a positive way in earnest. With all these developments, the world has started to become more integrated and globalized production. Three Industrial Revolution, when considered together;
-shortening the time between,
-Ambient every new industrial revolution resulting in the reduction in the need for labor, especially in the manufacturing sector compared to the previous one, stands out two important features, including our mixture. Accordingly, the capital of human labor can be substituted; It has increased the importance and the power of capital. In other words, with labor intensive technology revealed the location of the industrial revolution, leaving the capital intensive technology.

Labor-Intensive Technologies (Labor-intensive technology); labor used in the production of a commodity or a cut / equity ratio is higher than that technology used in the production of other goods or any other part of. Capital Intensive Technology; (Capital-intensive Technology) simultaneously; goods are produced or used in cutting the capital / labor ratio, other than that used in the production of a commodity or another cutting technology is described as being higher. However, the ongoing "Is it labor intensive technology? Capital Intensive Technology Is it? " The end of the debate was carried out by combining today's technology with today labor and industry 4.0. Industry 4.0 the biggest innovations in the industry to the economy; the brain in the art and non-human, non-human higher in the art which yield / efficiency is the removal of the software way. The result of this has been

reflected in the increase in production and the economy have resulted in new business pitches. However, factory workers and interpersonal communication generally remained in the shadow of the complexity of the changes in the production is the expression language will further increase (Blum, 2016). All of these developments on the agenda for the first time in the 2011 Hannover trade fair "Industry 4.0" that has led to the emergence of a fourth industrial revolution. This emerging revolution in the 2000s, focuses on the basics of digitization. Digitalization although the production process fully not used in mobile networks and the rapid expansion of the Internet, the use of machines with artificial intelligence and their more developed and integration fourth industrial revolution led to the start (Schwabe, 2017, p.16). More experienced, it is an open end industrial revolution has been promoting the use of computers in the production significantly, the use of high technology has brought to the forefront. Fourth Industrial Revolution, revolution is developing much faster than in other industries. In addition, by combining various technologies in the economy and in society seriously leads to paradigm changes. This countries, companies and sectors are transforming the whole society, including in a holistic way (Schwabe, 2017, p.11).

This transformation of how the world will face serious questions about the future of humanity brings. Especially in what would be the size and speed of this change it is emerging as an important question of the institutions that responded to what extent this rate. Also, to what extent will the need for labor in the new area of business that might arise with the Fourth Industrial Revolution become an important subject of discussion and brings many problems. This can be achieved, depending on the jurisdiction question; This transformation of the whole society of economic, social, cultural and political that we will continue to be affected even affected. In other words, what matters is that the industry is still at Industry 4.0 actually "Whether a revolution or an evolutionary process, perhaps the only manufacturer of robots have a fixed idea of marketing economy-politician" and so on. There are many different opinions (Weckbrodt, 2015). Industry also called the Fourth Industrial Revolution 4.0 also provides intelligent factories. Uncovering the interaction of virtual and physical production system. Thus, the products can more easily be made specific to the customer which would also create an increase in consumer benefits. This revolution, causing the increase in productivity and make better quality products is also changing customer demands and requests. Also, understanding the importance of the companies entering into cooperation has triggered the emergence of a new partnership (Schwabe, 2017, p. 62).

Industry 4.0 or 4. Industrial Revolution, many modern automation system is a collective term that includes data exchange and production technologies. This internet revolution of the object is a set of Internet services and value, consisting of cyber-physical systems. At the same time, this structure plays a major role in the development of smart factory system. This revolution is the collection of each data in a production environment, and will appear to allow more efficient business models for the well to be monitored and analyzed.
Thus;
• First Industrial Revolution (1.0) has developed the mechanical production system using the power of water and steam.
•Second Industry Revolution (2.0) with the aid of electric power serial production has started.
• The Third Industrial Revolution (3.0) and the digital revolution, the use of electronics and IT (Information Technology) was further automated with the development of production (Bauernhansl and Hompel, 2014, pp. 5-7).

Accordingly te present fore fourth Industrial Revolution shown in the table below summarizes the history of the development flow (Rayeling, 2017).

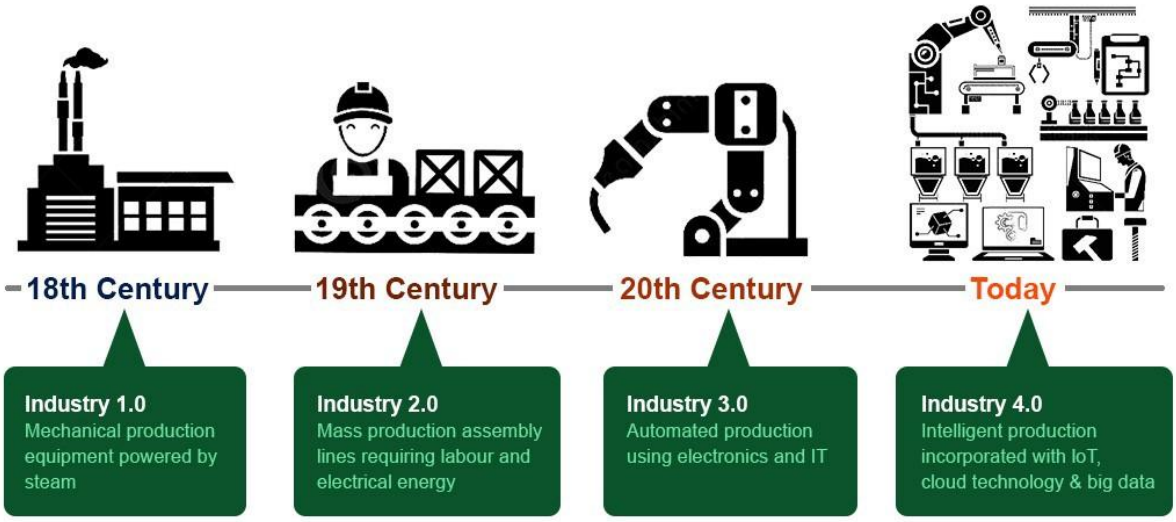

Table 1: Industry 4.0 Historical Development

Since the object of digitalization and into our lives everyday concepts such as the Internet was the fourth industrial revolution was started by Industry 4.0 alias. Industry 4.0 in the 21st century under the leadership of Germany, in order to ensure long-term competitive advantage has emerged. Therefore, it is possible to characterize Germany as the inventor of this universe. Germany announced by the Ministry of Education and Research and the Future "Project" is one of 10 projects called "Industrie 4.0" (Industry 4.0); 2011 Hannover is a concept that emerged in the fair. The attempt to express this concept; it is a new industrial revolution. The starting point is used for naming of digitalization referring to computer software and hardware, called version numbering. Third Industrial Revolution began in the new production concept with computers and robots to take place in the movement, a revolution that there was no criticism of Industry 4.0; much more widespread and mobile Internet, small and efficient sensors, advanced computers, artificial intelligence, machine learning, the internet of objects, cyber-physical systems, autonomous vehicles, and developments such as advanced robotics is characterized (Schwab, 2016: 16). Internet in the amount of information being produced all over the world with the start to take place at every stage of our lives has been a huge increase. In this context, the amount of information generated leads up to a doubling every two months. Reinsel et al (2017) studies, when the amount of data produced in 2016 and that it 163 zettsbyte to go to foresee. Information to produce such a rapid and intense sharing has affected the developments in the art.

Allowing the introduction of information technologies in the industrial sector began to stay in the background and manpower increased by 4.0 Industrial machine control. Robots come to the fore in the context of the production process is one of the highlights of Industry 4.0 (Pereira and Romero, 2017). Exchange information with each other to enter into the business of artificial intelligence technology has emerged intelligent machines that can be found. In short, the industry began to be digitalized. The world's first digital factory is one of the activities carried out by Siemens Amberg plant in Germany is almost unmanned. Siemens Amberg plant was established in 1989. 75% of the jobs at the factory is carried out by machines and computers; only 25% of parts are made based on manpower (Sarı, 2016).

Every animate and inanimate object will pass into communication by connecting to the Internet, intelligent communication between machines production brought about a concept we are discussing at the moment with the economic and social transformations. In today's economic system, it needs to constantly change and development to maintain its continuity. Quickly the ongoing difficulties in the use of resources and population growth and changing world, brings together the innovations and changes. The world is growing and competition is increasing. Besides the vital quality and efficiency in production. In this case, technological progress, brings together industry approaches like robotic or 4.0. Nine advances in technology underlying the industry 4.0 (augmented reality, big data and analytics, autonomous robots, simulation, horizontal and vertical system integration, additive manufacturing, cyber security, cloud, industrial objects, the Internet) although it is used in manufacturing many current industry 4.0 with production will undergo conversion. Isolated, optimized cells optimized come together in an integrated manner as well, with a production flow automated to increase in productivity and suppliers with manufacturer-customer will replace the traditional production relations among and between the machine-human (Russman et al., 2015: 2-3). Industry 4.0 while yet entered our lives; Society 5.0, 5. Japan in 2016, is a concept introduced in the Science and Technology Basic Plan. Then, in 2017, arranged in Hannover, Germany CeBIT IT Fair in Japan's Prime Minister Shinzo Abe has been raised by the concept of Society 5.0. Industrial Society's philosophy which is also referred to as, instead of being considered as a threat by the technology society has been stated as being perceived as an auxiliary (Develi, 2017). The main aim of the society is to ensure the integration into society of technological developments. So instead of a fearful society tech and aims to create a society in cooperation with its living they bring society's first name as the beginning of the failure to uncover Industry 5.0, Japanese Federation of Economic Organizations (Keidanren) study, which is also produced by Article 26 of the manifesto Society 5.0. said study hunter societies, agricultural society, industrial society, information society and developments in smart society, including all five parts are covered. Accordingly, in the final stage of the process, the society as a result of the 5.0 arises the concept of smart society. Industry 4.0 "information society" phrase is often used, while in the society 5.0 "super-smart society" began to be used for expression. The hunter-gatherer society, agricultural society, industrial society, information society and after the physical space and society that has emerged 5.0 integrates a strong cyber space (Salgues, 2018). The rapid developments in information technology makes it possible to combine the physical space-cyber space with real-world information. It was born from the merger of cyber-physical systems (CPS) is expected to cause large changes in society structure. Rising through the Japan Society 5.0 vision of individuals in terms of both economic development is aimed to resolve the social difficulties of constructing a human-centered society has reached the high quality of life. This social structure; region, age, gender, language and so on. Which is used in much of the Society 5.0 objects, such as refrigerators can keep a list of available materials in our homes and they can give orders to the market with the help of the internet is diminished. Or people with operating the contacts get in the car to go home by calculating the vehicle will go back home few minutes to be adapted to house the people's expectations accordingly (adjusting the temperature of the house, heating the food in the microwave, cooking coffee, etc.) can provide. Society 5.0 of robots with human society is a case where a high level of cooperation. Robots especially people who are making the undertaking jobs that require physical strength rather than control and monitoring tasks. Given that the digitalization of processes and value chains and robots stand out as a result of the workforce is the main factor in the falling people the only task management function; In the near future it could be

anticipated levels encountered serious employment problem. Frey and Osborne (2017) studies, the current occupations of the people began to be built by robots also occur on the hands of the state as a low-medium-high risk were divided into three groups. As a result of the study it was judged to be at high risk category 47% of the total employment in the United States. In other words, 47% of the current occupation will probably begin in the near future be done by machines. transport within 702 occupational groups studied. Instead of by the World Economic Forum will be a reduction in the amount of full-time workers in the labor force until 2022 and will increase the physical office staff are referred to remote employees we (World Economic Forum, 2018). Undoubtedly, Society 5.0 and 4.0 and entered our lives with artificial intelligence concept is affecting much of the globe. Artificial intelligence has made many definitions. Among them stands out Google's engineering director Ray Kurzweil definitions made by: "Artificial intelligence when performed by people to perform functions that require intelligence is the art of creating machines". Artificial intelligence in 1943, first as Warren McCulloch and Walter Pitts is seen that the work done by the emerge. Artificial intelligence is a term first used in 1956 by John McCarthy. After receiving his doctorate title in 1951 John McCarthy embarked on the task at Dartmouth College. Dartmouth College is the birthplace of artificial intelligence official. Today we see that the artificial intelligence used in many fields. As examples; Apple operating system integrated into Siri, developed by Hanson Robotics, Sofia, is a software of Microsoft and works with voice commands Cortana, given Alphago developed by Deepmind Google's artificial intelligence company. All of these developments in Turkey we will look at the effect is caused by Turkey's possible to say that they're a little bit behind. The survey by the private sector organizations including TUBITAK thousand who have received the support of R & D was carried out in June 2016. The survey includes questions on their smart-digital production systems and technological development. When the survey results were analyzed; 19% of businesses that do not have any information about this topic, it is general knowledge that 59% were found to be 22% if the comprehensive information. awareness of issues relating to the three sectors that most electronics, software and emerges as material. related technologies in three to five years, half of the businesses surveyed were found to be on target to integrate into their structures. As a result, According to the survey data it has emerged between Turkey maturity level of the between Industry 2.0 and Industry 3.0 (TUBITAK, 2016). Such a result can be understood in terms of Turkey should be 4.0 times the industry for the transition to a remarkable road in question.

4. Society 5.0 and Its Structural Development

Rising through the Japan Society 5.0 vision of individuals in terms of both economic development is aimed to resolve the social difficulties of constructing a human-centered society has reached the high quality of life. Of course, where it would be the target obstacle is final. To briefly summarize Society 5.0 goals and barriers;

Society 5.0 Goals

- To produce a solution to the aging population,
- Virtual and real world to give effect to the agreement,
- Using taking into account the social benefits of the internet of things,
- Support of the actions and behavior that does not harm nature.

Society 5.0 Obstacles

- Several legal loopholes,
- Social prejudices,
- Technological deficiencies,
- Lack of staff qualification

Society 5.0 is determined by the boundaries of the thoughts of five critical areas. These areas are: preventive health services, mobility, supply chain, smart cities and infrastructure, the new financial services. Society 5.0, as well as Sustainable Development Goals of the United Nations in September 2015, Sustainable Development Goals (SDG), in the 2030 Sustainable Development adopted Agenda. Both economic development, as well as the hope to bring solutions to social problems, towards a sustainable world; It is a difficult process to achieve a comprehensive system of all countries work together. Society 5.0, although Japan's growth strategy, targets are not limited to Japan because it is the same with the strategy of SDG. an aging population, the decline in the birth rate, an aging population and infrastructure such as the reduction of the difficulties faced by Japan, the difficulties will eventually encounter many other countries. Japan is one of the first countries to face these challenges.

Figure 1: United Nations 17 Sustainable Development Goals

5. Results

Both economic development as well as to create a society where human-centered provision of solving societal challenges and goals Society 5.0 is fully active and relaxed so that people can enjoy a high quality of life. Region, age, gender, language and so on. Regardless of providing necessary goods and services, people are asked to join a society created in detail to the various needs. The key to the realization, to produce high-quality data and the real world of cyber space and to create new value and solutions to solve the challenges here. Japan's national vision that brought about this new and striving for a people-centered society and also solve various social problems. In addition, previous industrial revolution which has always stayed behind in Turkey, which is still very new 4 Industrial Revolution can minimize the possibility of being left behind to follow a very strict way from the beginning. You should be focused on education and R & D work for, university-industry cooperation should be established, incentives should be provided and should be closely followed developments in the world and should be adapted to rapid change.

6. References

Blum, C. (2016). "Industrie 4.0: 7 Vorteile, Werden von denen WR profitieren" www.management-circle.de/blog/indüstrie-4-0/ (ET: 05/03/2020).

Castells, M. (2013). The Information Age: Economy, Society and Culture, Volume 3, No. 1, with the rise of the network society, (trans.) Ebru Kılıç, Istanbul Bilgi University Publications.

Develi, H. 2017. "Industrial Society from 4.0 to 5.0", World Journal, November 2, 2017. https://www.dunya.com/kose-yazisi/endustri-40dan-toplum-50a/389146 (Access Date: 05. 03. 2020).

Frey, CB, M Osborne. 2017. "The Future of Employment: How Are Jobs susceptible to the Computerisatio?", Technological Forecasting & Social Change, 114.

Fukuyama, M. (2018), Society 5.0: Aiming for a New Human-Centered Society, Japan Spotlight Journal, July 2018, 220th Special Article, https: // goo. gl / yhjy4l, (Accessed: 03/05/2020)

Pereira, AC and F. Romero. 2017. "A Review of the Meanings and the Implications of the Industry 4.0 Concept", Prooed Manufacturing, 13.

Reinsel, D., and J. J. Gantz Rydning. 2017. "Data Age 2025: The Evolution of Data to Life-Critical" IDC White Paper, https://www.seagate.com/files/www-content/our-story/trends/files/seagate-wpdataage2025-march-2017.pdf, (Accessed: 05. 03. 2020).

Russman, M., Lorenz, M., Gerbert, P., Waldner, M., Justus, J. Engel, P., et Harnisch, M. (2015). Industry 4.0: The future of productivity and growth in manufacturing industries. Boston Consulting Group, 9 (1), 54-89.

Salgues, B. (2018). Society 5.0: Industry of the Future, Technologies, Methods and Tools, John Wiley & Sons.

Sarı, H. 2016. "Unmanned Factory 30 Year in Turkey", World Journal February 24, 2016. https://www.dunya.com/ekonomi/insansiz-fabrikalar-30-yilda-turkiyede-haberi-308675(Access Date: 05. 03. 2020).

Schwab, K. (2016). Fourth Industrial Revolution, (trans.) Zülfi Dicleli, Istanbul Optimist Sagittarius.

Schwab, K. (2017). The fourth industrial revolution. (P. Talay, D., Z. Dicleli, Trans.) Istanbul: Optimist book.

Tanilli, S. (2004). History of Civilization, Istanbul: Adam Sagittarius.

The World Economic Forum. 2018. The Future of Jobs Report, ISBN 978-1-944835-18-7.

TUBITAK. 2016. The New Industrial Revolution, Intelligent Manufacturing Systems, Technology Roadmap, TUBITAK Science, Technology and Innovation Policy Office.

Ural, Sti. (1998). History of Science, Istanbul: Kırkamb Release.

Weckbrodt, H. (2015). "Industrie 4.0 Nicht Vergeig the Mittelstand Darfur", http://oiger.de/2015/04/15/mittelstand-darf-industrie-4-0-nicht-vergeigen/82440 (ETR: 05/03/2020).

Cite this article:

Özgür Önday (2020). Society 5.0 - Its Historical Logic and Its Structural Development. ***Journal of Scientific Reports,*** 2(1), 32-42. doi: https://doi.org/10.5281/zenodo.3731954

Retrieved from http://ijsab.com/wp-content/uploads/1008.pdf

Published by