



Available online at <http://jess.esrae.ru/>

# “Journal of Economics and Social Sciences”

## On the issue of historiography of the study of the phenomenon of smart technologies that affect the transformation of society in modern conditions

Tomsk Polytechnic University

Maria Netesova <sup>a</sup>

<sup>a</sup> Research Center for Management and Technologies in Higher Education , Tomsk Polytechnic University

---

### Abstract

This paper is the first trying of the author to reveal the existed scientific approaches considering smart – technologies as a key factor of the modern society development. This paper is based on findings of foreign authors, concerning the development of smart – technologies as a strong tool for modern society transformations in the context of rapid development, application, widespread distribution and indisputable influence of smart technologies on the life of society in the economic, political, social, cultural and educational fields. Some definitions of the term “smart society” and different approaches to the society as a whole are presented. The works of Chilean, British, American and Japanese authors are scrutinized as examples.

*Keywords:* Smart – technologies, smart – society, Society 5.0, transformations;

---

### 1. Introduction

Smart technologies are ubiquitous in our lives: your car, your watch, your activity monitor, your TV, your mobile phone, your hearing aid, your modern light bulb, your door lock and, of course, a laptop, which may now be opened in front of you.

Usual things that are usual for us disappear from our vision - bulky TV and computer monitors, huge headphones now seem ridiculous as opposed to miniature, barely noticeable devices in the ears; driving in a car without a touch screen, automatically adjusting the seats, heating, and other wonderful in all senses functions, are becoming out of date. Many things disappear from our sight, but, obviously, they do not disappear.

Smart technologies have become so successful that they often become commonplace, so we don't even notice them. In fact, this is not surprising, because smart technologies are designed to serve our daily needs, requirements, desires and habits. Smart technologies form a modern way of life, transforming society, directly influencing what we did yesterday, do today and will do tomorrow. Smart technologies allow something to happen that we could not even dream about 2 or 3 years ago. Now the opportunity to be constantly in touch with our relatives and people close to us is perceived by us as the norm. Doctors can monitor patients remotely, it became real and, moreover, day to day to receive hundreds of services with one touch of the screen, with one click or even with one voice command. But, do all of these technologies make our society smart, do

we become more flexible in our thinking and attitude? Are smart technologies really creating a smart society, a dream society, a society of the future? The answer to this question is not possible without studying the philosophical side of the question.

The use of smart technologies leads to social transformations, to the formation of a new type of person in particular and society as a whole. In this case, philosophy and science work closely together to solve social problems. Ethical and philosophical issues should be taken into account at the moment when science designs and creates technologies for a smart society: without philosophical analysis it is not possible to predict the results of applying our own technologies and creativity.

## **2. Methods and research materials**

Method of socio - philosophical analysis of literary sources was selected. The research materials were scientific publications of Japanese, British, American and other foreign researchers, available in Russian and foreign electronic databases, as well as works of Chilean philosophical literature and commentaries to them.

## **3. Purpose**

Despite the relative “youth” of the research topic, in modern philosophical science there are different approaches to the definitions of 'smart - technologies', 'smart - society', but also different definitions regarding a new type of society, which is positioned as 'smart - society', 'super smart society' and 'Society 5.0'. These definitions occupy the minds of both domestic and foreign authors. The presented study is an attempt to scrutinize some of the emerging trends regarding the impact of smart technologies on the transformation of modern society and the importance of these technologies for a person in particular. The research topic is presented in foreign works in much more detail than in the works of domestic scientists. This work does not pretend to be a complete analysis of the works devoted to the research topic, but offers an overview of some foreign, very interesting, according to the author, approaches and views to the study. The works of domestic researchers are beyond of the scope of this paper.

## **4. Discussion**

According to Charles Leadbeater (British writer, politician, adviser to Tony Blair, British public opinion leader): ‘Smart society’ is a society that generates and uses knowledge to be more successful. [7].

In 2017, the article “The“ Smart Society ”of the Future Doesn’t Look Like Science Fiction” was published - “The smart society of the future does not seem science fiction” [1]. Authors are Bhaskar Chakravorti and Ravi Shankar Chaturvedi.

Bhaskar Chakravorti is a Dean of the Department of Global Business at Fletcher School, Tufts University, USA, Massachusetts, Founder and Executive Director of the Fletcher Business Institute in a global context. He is the author of The Slow Pace of Rapid Change. Ravi Shankar Chaturvedi is a Junior Director of Research and a doctoral student on innovation and change at the Fletcher Institute of Business in a global context at Tufts University. They define smart society as a society in which digital technologies are thoughtfully implemented by government and the aim of these technologies is to complete three main goals: the well-being of citizens, the economy strength and effectiveness of institutions.

Authors of foreign works devoted to the development of society and philosophical analysis of the transformation of societies often use the term “Society 5.0” [2]. They note that, in fact, Society 5.0 or a super smart society seeks to use rapidly developing technologies for production within the enterprise and to integrate them more deeply into the everyday life of ordinary people. The introduction of smart technologies leads to increased efficiency, effectiveness and increased

financial performance of enterprises. This is a kind of commercial emphasis in the application of smart technologies, but the task of a super smart society is to establish equilibrium by introducing technologies related to social robotics, the Internet of things, surrounding intelligence, complementing both virtual reality and advanced human-computer interfaces to improve a person's life for the better society as a whole. In particular, Carlos Miguel and Sandro Serpa argue that deepening the potential of individual-technological relations will lead to an improvement in the quality of life of all people through a super-intelligent society. They propose to use this idea as a guide for social development, and this can have a profound effect on societies at all levels, such as conditions of quality of life and sustainability [2].

Several works on the development of a smart society or Society 5.0 belong to Matthew E. Gladden [4]. His research is devoted to analyzing the impact of technological posthumanization on the ability of modern society to structure organizations, social interaction and the architecture of the spaces in which we live. Such areas include not only the physical spaces of buildings and workplaces, but also the cognitive, informational, and experimental spaces — both 'real' and virtual. Article 'Who Will Be the Members of Society 5.0? Towards an Anthropology of Technologically Posthumanized Future Societies' focuses on the transformation of Japanese society and the efforts of Japanese science and government to create Society 5.0 [5].

Matthew E. Gladden notes that, as conceived by the Japanese government and scholars, the daily lives of citizens will be improved through closer collaboration with artificially intelligent systems. However, an obvious paradox lies at the heart of efforts to create a more 'human-centered' society in which people live together with an expanding array of increasingly autonomous social robots. This study seeks to trace the alleged human orientation of Society 5.0. Distinguishing between 'technological' and 'non-technological' processes of post humanization and the application of a phenomenological anthropological model, this study demonstrates how various types of people and non-human members should participate in Society 5.0. This study describes six categories of potential people and not people, but members of Society 5.0 and shows that all six have analogues in earlier societies, which suggests that social scientific analysis of past societies can shed unexpected light on the nature of Society 5.0.

Medina-Borja in 2017 suggested that the technologies of Society 5.0 will not only provide the minimum services necessary for the survival of people, but will work to make life more meaningful and enjoyable; human-technology interaction will be used to 'ensure a sustainable, vibrant, liveable, people-centered world' [6].

Japanese scientists believe that in the new society, society 5.0, people will be imaginative to identify the various needs and problems scattered throughout society, and scenarios for their solutions, as well as creative abilities to implement such solutions using digital technologies and data. Society 5.0 will be an imaginary society where digital transformation is combined with the creativity of different people, which leads to "solving problems" and "creating values" that will lead the population of the entire planet to sustainable development. This is a concept that can contribute to the achievement of the United Nations sustainable development goals. Research by Japanese scientists focuses on technology as a tool that should be used effectively to improve society, to make it perfect [3].

## **5. Conclusion**

The modern world is a world of smart technologies, the future direction of which is expected to affect the lives of many millions of people around the world, which is currently facing a big wave of changes. The digital transformation trend cannot be stopped and radically changes many aspects of society, including government, industry structure, employment and people's personal lives. There are countless directions in which society will develop thanks to technological development. While technologies can lead to improvements such as improved living standards and convenience, they can also have negative effects, such as effects on employment, growing inequality and an unequal distribution of wealth and information. It depends on us which

direction we want to go. We should think about what kind of society we want to create, and not try to foresee what it will be.

At present, there is no unambiguous approach to the role of technologies in the modern world, but, in the works considered in this study, modern advanced technologies, smart technologies, in the first place, should provide humanity with a more comfortable existence. There is also no single answer to the question: what kind of social transformations is the application of all these intricate technologies leading to, but the fact that society is changing, closely interacting with the technological achievements of science, is already an undeniable fact.

In addition to the traditional problems of social and technological interaction when using smart technologies, purely philosophical questions arise about the nature of man, society, axiological and praxeological questions, since the aspect of replacing a person and his social functions makes us once again address these problems. Actually, in the framework of the designated subject field, foreign scientists are actively researching.

## References

1. Bhaskar, Chakravorti, Ravi, Shankar Chaturvedi. (2019). The “Smart Society” of the Future Doesn’t Look Like Science Fiction. [Available at: <https://hbr.org/2017/10/the-smart-society-of-the-future-doesnt-look-like-science-fiction>] [Viewed on 01.12.2019]
2. Ferreira, Carlos Miguel, and Sandro Serpa. (2018). Society 5.0 and Social Development: Contributions to a Discussion. *Management and Organizational Studies*. 5. pp. 26–31.
3. Hiroaki, Nakanishi. (2019). Modern society has reached its limits. Society 5.0 will liberate us. World Economic Forum Annual Meeting. [Available at: <https://www.weforum.org/agenda/2019/01/modern-society-has-reached-its-limits-society-5-0-will-liberate-us/>] [Viewed on 05.12.2019]
4. Matthew, E. Gladden. (2017). Cyborgization and Virtual Worlds: Portals to Altered Reality. Published 2017 by Mnemoclave. 36 pages. [Available at: <http://www.matthewgladden.net/cyborgization-and-virtual-worlds/>] [Viewed on 08.12.2019]
5. Matthew, E. Gladden. (2019). Who Will Be the Members of Society 5.0? Towards an Anthropology of Technologically Posthumanized Future Societies. *Social Sciences*, MDPI, Open Access Journal, vol. 8(5), pages 1-39, May. [Available at: <https://ideas.repec.org/a/gam/jscscx/v8y2019i5p148-d230091.html>] [Viewed on 06.12.2019]
6. Medina-Borja, Alexandra. (2017). Smart Human-Centered Service Systems of the Future. *In Future Services & Societal Systems in Society 5.0*. pp. 235–39.
7. Michael, Haupt. (2019). What is a Smart Society? Toward the transcendent model society of 2030. Project 2030. [Available at: <https://medium.com/project-2030/what-is-a-smart-society-92e4a256e852>] [Viewed on 05.12.2019]