

THE SPECIFICITY OF THE POST-INFORMATION AGE

dr hab. Ass. Prof. Zalewska Danuta
University of Wrocław, Poland

Abstract: *What makes us call a new age a post-information one? New age is created by dominating technologies. These include DNA manipulation, also human. The ability to cut and paste parts of the DNA string has created new, previously unknown possibilities to interfere in the natural processes at the cell structure level.*

The next main factor shaping the social change is holographic technology. Due to the miniaturisation of these devices phone calls will be replaced by devices for holographic transmission and reconstruction. The change in mass communication will be significant. Information in the text form will be replaced by fully sensory, spatial images. These technologies obscure the differences between the real and artificial world and prepare new forms of human life institutionalisation.

The third element creating a new age is micro, mezo and macro robotics. The technology of learning in action and obtaining information independently by robots creates new forms of work and social interactions for man as well as areas of man's responsibility.

In my presentation I will focus on four main trends, certain agents and organisational structures of the post-information society.

KEYWORDS: AGE CHANGE, FEATURES OF THE POST-INFORMATION AGE, SOCIAL FORCES OF CHANGE, NEW TECHNOLOGIES

Introduction

In sociological literature the liquefaction of reality is widely discussed, hence I assume this understanding of reality. Current social reality is liquid not only due to its ontological processuality but also due to the dynamics of change which I understand as both changeability in time and the depth of impact, as well as the variability of the agents of change. Since the information age has exhausted its mechanisms and agents of change, we have to start speaking already about the clearly forming trends of the next age, temporarily called the post-information age. Some try to call it post-human but I consider it a mistake. This does not mean that IT technologies disappear, however, they become only a typical tool used in most activities of the society. The implementation of the IT technology went through the process of assimilation just like mechanical technology. It is still being used and developed but it is not the main factor of social change any more. It was tamed, institutionalised and standardised, it is commonly used but it is no longer a new developmental challenge to which the society has to create a specific answer in its actions. In my article I will talk about four main directions of change which justify my claim about the creation of a new age.

1.

The main feature of the post-information society is non-linearity of time in which the phenomena and processes occur. This feature has serious consequences for the actions of individuals and organisations. The multiplied time means that the phenomena and processes which before, due to historical knowledge had to occur in a linear way, now occur in parallel. In science the Enlightenment method analyses based on the linear cause and effect relationships today are not enough. This is enabled by integrated IT systems of the new generation computers. 5G is only a small step and these new conditions of information flow will soon be inefficient for the holographic and sensory reality. At the same time with the more common than today transfer of information the world's demand for energy will increase. The development of IT technologies will coincide with the refinement and miniaturisation of holographic devices. The merger of holography and sensory communicators will end the era of remote communication between people. Only the technology for communication between things and between man and things will be developed.

Holograms will change social behaviours. That is why we need to ask the question, what does the social bond mean? Who is the partner in social interaction and what are its results? The gathered knowledge about human communication has to be restructured, just like the transmission systems consequently.

The era of limited human rationality in science is upon us. Computer or rather an IT partner already today sets the borders of cognition as well as human and social agency. Translators not only for communication between people of science but also between

machines and people and between the machines have to be created. It will lead to the unification of language.

2.

Nanotechnology will develop and become more common. In the realm of devices robotics will dominate the area of creativity and work, including micro robots, nano robots and mega robots. That is why manufacturers of subassemblies for their production and programming will become even stronger in global economy. Material laboratories will become equally important as the IT and biotechnological ones. Production will depend on recycling. Biological standardisation will become fully applicable in medicine and agriculture, which due to the smaller food demand will be able to change to less intensive methods and biological protection. The balance of ecosystems is already the leading criterion for the functioning of agriculture and food production. This will lead to the improvement in quality of nutrition and thus human health. Mass production of medicinal foods will develop.

3.

Individuals and small groups will limit their spatial mobility. The organisation of consumption will take place at the recipient's home or local distribution centres. This will greatly limit the demand for individual and collective transportation of people while the demand for transport of things and services will increase. The 5G technology introduces the Internet of things thus the information about individual or group needs will be taken directly from them into the system, there it will be classified, stored and addressed to producers, without any participation of the consumer and most likely man at all. The meaning of consumer will be reduced significantly since consumption will be based on algorithms, optimised by standards and monitored.

The contact with people in services will be maintained however work therein will be faster, more effective and more customised but also complex and interdisciplinary. This will lead to significant changes in vocational training. Workers will use the ends of highly centralised systems, highly standardised and optimised. The IT knowledge of each employee will be as important as their sector knowledge.

Customised services will develop thus necessitating multi-professionalism. Urban centres will improve their highly specialised service centres. Since numerous procedures will be assigned to robots man will be diagnosed and treated in a faster and more precise way. Robots will take over from people in many procedures. Customised tissue production will develop. In surgeries recreation procedures with the use of own tissue will dominate. Due to the possession of personalised genetic passport many diseases will be treated at prenatal level or right after birth.

School education in current class-lesson form will disappear. Human world will be so complex that a child will have to adapt from the very beginning of its life. Education will become also an

obligatory activity for adults irrespective of their age since common technical surroundings will be constantly revised. Education for all will lead to its centralisation and computerisation. Teacher specialists will be replaced by teacher guides and advisors.

Large agglomerations will be dominated by collective transport based on clean energy. Many cities will choose transport in cableway gondolas even in flat areas. Industrial long-distance transportation will be based on different forms of railway, container ships and air transport. Car transport will function only locally. Collective transport organisation for things and people will be centralised and optimised by IT systems. "Empty runs" will be eliminated and thus reduce the transportation costs but will secondarily reduce human spatial mobility.

Individual transport will have two dominant forms: small size small-range electric cars and individual aviation.

Local security systems will be homogenised which will be possible and necessary with the homogenous technological base. Despite disturbances in integration of these systems into a global mega system, they will continue to cross-link and the meaning of the disposers of new technologies and devices responsible for the location of data bases and software will increase to such an extent that wars will become impossible.

4.

Biological knowledge will be in the centre of many disciplines deciding not only about the human condition in the post-information age but also about the man's social position.

The biological standard will define man's quality and social standing. Thus new social differences will occur based on genetic and biological criteria. One of the tools will still be in vitro fertilisation as well as extracorporeal embryo production.

The optimisation of human life will become new ideology.

Knowledge will make it possible to satisfy basic needs of decreasing human population thus the agent's fight for power will focus on gaining symbolic dominance. The demand for creators of ideology-religion will increase.

Cultural integration will lead to such a symbolic mixture that people will completely lose contact with religions of the earlier periods and will want to have guides and ideologists for new realities and the future.

I do not agree with the concepts of the end of man, the end of history and other forecasts regarding the end of life on Earth. What will the man of the future be like? The discussion is dominated by three scenarios. The first one: merger with the machines called cyborgisation. The second: hybridisation as adaptation to different, new, local conditions on Earth and the third being the result of the species evolution which is taking place faster and faster now. All of them point to a radical change of *Homo sapiens*. The fourth scenario that emerges is based on the optimisation and standardisation of human genome. Which of these is the most likely?

The correct answer is, all to the same extent. The selection of human change scenario will be dictated by immediate needs.

Conclusions

We have reached another barrier of growth, growth of creativity. After the raw material limitations characteristic for the previous industrial age this barrier sets the borders of the information age. The post-information age has to exceed the time and conditions of individual and social activity. This is a challenge that is only emerging. Without new assumptions regarding man we will not be able to set ourselves free from constant returns even though these would only be intellectual ones (time loop?).

What will the main mechanisms of post-information age change into another one be, since it will not be a long one? The main mechanism will be the rebellion of new generation.

The society of super men will not be easy to steer by the global government. That is why my assumption of generation rebellion is highly likely. I suggest assuming the time horizon for the new post-information age at three generations. Collective memory with the image of the present creates an explosive mix stimulating the

behaviour of young generations. Then they start experimenting with new solutions, which contain both the continuity and innovation.

Bibliography:

- Althusser L., *W imię Marksa*, Warsaw, Wydawnictwo Krytyki Politycznej, 2009,
- Bell D., *Dwanaście sposobów przewidywania w naukach społecznych*, trans. Krzyżanowski H., Warsaw, PAN, 1966
- Blau P. M., w: *Historia myśli socjologicznej*, Szacki J., Warsaw, PWN, 2006
- Castells M., *Spoleczeństwo sieci*, Warsaw, PWN, 2008
- Comte I., *Metoda pozytywna w szesnastu wykładach*, trans. Wojciechowska W., Warsaw PWN, 1961
- Darhendorf R., *Class and Class Conflict in Industrial Society*, London, Routledge, 1959
- Dahrendorf R., *Essays in the Theory of Society*, Stanford, Stanford, University Press, 1968
- Durkheim E., *O podziale pracy społecznej*, Warsaw, PWN, 1999
- de Tocqueville L., *Dwa rządy i rewolucja*, trans. Kozłowski Wł. M., Warsaw, M. Arcta, 1907
- Dokąd zmierza Europa, *Przyszłość-Świat-Europa-Polska*, No. 2/32, 2015
- Eisenstadt S. N., *Utopia i nowoczesność. Porównawcza analiza cywilizacji*, trans. Ostolski A., Warsaw, Oficyna Naukowa, 2009
- EUROPE 2020 A strategy for smart, sustainable and inclusive growth, EUR-Lex
- Friedman G., *Następne 100 lat. Prognoza na XXI wiek*, Warsaw, AMF+, 2009
- Giddens A., *Sociologia*, Warsaw, PWN, 2007
- Greenspan A., *Era zawirowań. Krok w nowy wiek*, Warsaw, Wydawnictwo Literackie Muza SA, 2008
- Gulczyński M., *Nauki o polityce*, Warsaw, 2007
- Hawking S. (et al.), *Przewidywanie przyszłości*, trans. Kołodziejczyk G. Warsaw, Wydawnictwo Amber, 2003
- Homans G. C., *Reply to Plain*, Sociological Inquiry, 41, 1971
- Janon H., *The Post- Information Society*, Winter 1994, Issues 70/1
- Jaspers K. T., *Filozofia egzystencji*, Warsaw, PIW, 1990
- Kazanecki W., *Metoda scenariuszowa Shaping Actors-Shaping Factors a wybrane trendy rozwoju społeczno- gospodarczego do 2030: polska perspektywa*, in: *Przyszłość-Świat-Europa-Polska*, No. 1/31/2015, p. 49-65
- Keynes J. M., *Ogólna teoria zatrudnienia, procentu i pieniądza*, trans. Kalecki M., Rączkowski S., Warsaw PWN, 2018
- Kissinger H., *Porządek światowy*, Warsaw, Wydawnictwo Czarne, 2017
- Kotarbiński T., *Traktat o dobrej robocie*, Wrocław-Warsaw, Ossolineum, 1955
- Le Chatelier H., *Filozofia systemu Taylora*, Warsaw, Instytut Naukowej Organizacji, 1926
- Lockwood D., *Some Remarks on The Social System*, British Journal of Sociology, No. 7, 1956
- Malinowski B., *Dziela Bronisława Malinowskiego*, 13 tomów, Warsaw, PWN, in: 1980-2004
- Mannheim K., *Ideologia i utopia*, trans. Mazińska J., Lublin, Wydawnictwo Test, 1992
- Marks K., Fryderyk E., *Manifest komunistyczny*, Warsaw, Biblioteka Ludowa, 1907
- Meadows H., Meadows D., D. L., Randers J., Behrens W.W., *The limits to growth: A report for the Club of Rome's*, New York, Published by Universe Book, 1972
- Merton R. K., *Teoria socjologiczna i struktura społeczna*, trans. Morawska E., Wertenstein-Żuławski J., Warszawa, PWN, 1982
- Mintzberg H., *The Rise and Fall of Strategic Planning: Reconceiving The Roles for Planning*, Free Press, 1994
- Nietzsche F., *Also sprach Zarathustra. Ein uch fuer Alle Und Keinne*, Chemnitz, 1889
- Nowak S., (and subsequent editions), *Metodologia badań społecznych*, Warsaw, PWN, 1985
- Parsons T., *The Structure of Social Action*, New York, McGraw-Hill Book Co, 1937

- Penc J., *Strategiczny system zarządzania*, Warsaw, Agencja Wydawnicza Placet, 2001
- Pierce Ch. S., *Wybór pism semiotycznych*, trans. Mirek R, Nowak A., Warsaw, Polskie Towarzystwo Semiotyczne, 1997
- Piketty T., *Kapitał w XXI wieku*, trans. Bilik A., Warsaw, Polskie Wydawnictwo Krytyki Politycznej, 2015
- Popkiewicz M., *Świat na rozdrożu*, Katowice, Ed. Sonia Draga Sp. z o.o., 2012
- UN Report, World Population Prospects 2080
- Ruzic F., *Mobinets: Post Information Society Reality with Wireless/Mobile e Technologies*, in: Communication of the IBIMA, Volume 3, 2008, p. 169-180
- Rygula R., *Neurobiologia optymizmu*, in: Wszechświat v. 115, No. 1-3, 2015, p. 30-36
- Simmel G., *Socjologia*, Warsaw, PWN, 2006
- Spencer H., *Zasady socjologii*, cz. I-VI, trans. Potocki J.K., Warsaw, Wydawnictwo Głosu, 1989-1891
- Smith A., *Badania nad naturą i przyczynami bogactwa narodów*, trans. Wolff S., Einfeld O., Sadowski Z, Prejbisz A., Jasińska B., Warsaw, PWN, 1954
- Szmyd J., *Od homo sapiens do post-homo. Człowiek na drodze przyspieszonej przemiany tożsamości- człowieczeństwa. Indeks pytań*, in: Transformacje, 1-2 (84-85), 2015, p. 2-20
- References:
- Todd E. and Courbage Y., *Spotkanie cywilizacji*, Kraków, Wydawnictwo Uniwersytetu Jagiellońskiego, 2009
- Turner J.H., *Struktura teorii socjologicznej*, trans. Szatka J., Warsaw, PWN, 1985
- Tyszka A., *Interesy i ideały kultury*, Warsaw, PWN, 1987
- Von Bertalanffy L., *Ogólna teoria Systemów*, Warsaw, PWN, 1984
- Weber K., *Etyka protestancka i duch kapitalizmu*, trans. Lachowska D., Warsaw, WUW, 2011
- Zacher L., *Transformacje świata i ludzi*, in: Transformacje, 1-2, 2013, p. 2-44
- Zalewska D., ed. *Granice poznania przyszłości*, Wrocław, U.Wr., WSPS, 2009
- Zalewska D., *Funkcja prognostyczna nauki*, in: Granice poznania przyszłości, ed. Danuta Zalewska, Wrocław U.Wr., WSPS, 2009
- Zalewska D., *Zbuntowana generacja*, Wrocław, Instytut Socjologii, U.Wr., 2014
- Zalewska D., *Udział sił społecznych w kształtowaniu przyszłości. Od aktorów tradycyjnych do post informatycznych*, in: ed. Zacher L., *Potencjały i relacje sił w cyfrowym społeczeństwie wiedzy*, Warsaw, Poltex, 2018, p. 157-179
- Zieleniewski J., *Organizacja i Zarządzanie*, Warsaw, PWN, 1975

ⁱ See: Szmyd J., *Od homo sapiens do post-homo. Człowiek na drodze przyspieszonej przemiany tożsamości-człowieczeństwa. Indeks pytań*, Transformacje, 1-2 (84-85) 2015, p. 2-20