

EXPANDING SOCIAL CAPITAL IN THE DIGITAL AGE: PARADOXES

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Abstract. The article studies the process of expanding social capital in the digital age. Special attention is given to three main determiners. Firstly, in the context of digitalization expanding social capital is connected with the implementation of intelligent systems. Secondly, the phenomenon of “network cooperation” provides innovative opportunities to develop social capital. Thirdly, using Big Data might become a rich resource. However, when studying these factors, we have to confront a number of paradoxes. The article reveals and classifies paradoxes with regard to the process of social capital development in the digital age. The authors claim that the first paradox is related to two opposing processes: massive implementation of intelligent systems, on the one hand, and “desolation” on the labour market, on the other. The second paradox is connected with the fact that many specialists who possess professional knowledge and valuable personal experience tend to be old-fashioned in their judgements and lack computer skills. On the other hand, excellent digital skills, which younger people are quick to acquire, enable them to “borrow” fragmentary and superficial knowledge rather than develop a profound expertise. The third paradox is related to a “computer metaphor”, which is based on the analogy between human brain and intelligent systems, whereby human consciousness is viewed as an integral model of the world and one’s own self, that follows the principle of maximum probability for a given scenario. The fourth paradox arises from the fact that together with ample opportunity for interactive communication the Internet increases loneliness.

The article discusses the phenomenon of “network cooperation” as a factor of social capital development. The authors differentiate between various kinds of “network cooperation”. “Crowdsourcing” involves voluntary cooperation of Internet users, who often remain anonymous. “Noosourcing” is a kind of network cooperation based on professional communities. The authors claim that the lack of physical “face-to-face” contact within the new “network sociality” does not prevent the development of social capital.

It is argued that Big Data technology can contribute to the expansion of social capital in a rapidly changing digital environment. Big Data helps collect and structure diverse information, revealing the results of human activity and bringing “invisible forms” of social capital to light. The article raises the question of Big Data “social maturity” and demonstrates that the value of Big Data is not limited to collecting quantitative characteristics. Its value is also related to processing information, which contributes to adaptive, managerial and functional effectiveness. Thus, there arises a need for a new type of subjectness – “data scientist”, who would create a subject-oriented information platform on the basis of Big Data analysis and value system.

The authors come to the following conclusions. The new digital world has given rise to “network sociality”. Social networks serve as the basis for social capital. Developing digital skills becomes the main priority of education, since information is viewed as the main strategic resource. Techno-socialization becomes the “meeting place” for an individual and the modern civilization. The younger generation tends to acquire innovative digital technologies faster than traditional cultural heritage. Due to the massive use of online technologies, the Internet is becoming the main resource for social capital development. Furthermore, when evaluating the Big Data it is worth mentioning that their “maturity” should be related to anthropological perspective rather than post-human future. Quantitative analysis cannot be sufficient since it is the reflexive consideration of the Big Data that may ensure the transition to a new stage of modern development. Finally, when analysing the functional aspect of social capital it is important to consider the gap between the digital world and hybrid physical reality which integrates various life practices.

Keywords: digital era; social capital; “network cooperation”; “data scientist”

Introduction

Digital environment is a new environmental niche that alters life styles, behavior patterns and mindsets. The tendencies of the digital age are universal and thus, affect the process of social capital expansion. The Internet offers wide opportunities for activity allocation and the development of social capital. It is common knowledge that digital environment has given rise to a new type of sociality, namely “network sociality”. It is social networks that are a collective subject of the digital age as well as the basis for social capital. At the same time, “network sociality” is a system of various connections at different levels of interaction from formal partnership to interest groupings, from individual to global.

Connections may be strong and weak, long- or short-term. They may differ by the degree of cohesion, commitment, geographical factors. All the above-mentioned has an impact on the expansion of social capital. However, social ties is not the only characteristic of social capital. Its value is also measured by the trust level and proper goal-setting.

In the digital age the development of social capital is largely determined by the three innovative factors: implementation of intelligent systems, the phenomenon of network cooperation and using Big Data. Philosophical reflection on these factors faces a number of paradoxes, that go hand in hand with modern development.

Methodology

The study relies on interdisciplinary approach that takes account of socio-humanitarian disciplines, psychology, sociology, philosophy. Synergistic methodology that involves Big Data usage is also relevant for our research.

The authors turn to the cognitive approach which shifts the focus of attention to “the hard problem of content” with regard to information interactions. The principles of specificity and realism form methodological basis of the research. The approach aims to take into account a whole range of external circumstances as well as internal orientations, that define a modern man’s goal setting. Reflexive analysis together with logical-conceptual approach are used to formulate the paradoxes with regard to the development of social capital in the digital age.

Intelligent Systems and Social Capital Devaluation. We think that a comparative analysis of innovative digital trends and the ways of expanding social capital can give us a new vision of the issue. Since the massive use of intelligent systems is an essential factor of digitalization, the expansion of social capital largely relies on this resource. Intelligent systems and computer memory provide a number of benefits. For instance, multiple factor situational analysis and decision-making speed go far beyond human capacity. Intelligent system can predict and analyse the expected feedback on external action or calculate the most likely solution and a possible outcome. Intelligent system can do the job of an expert and an analyst. Moreover, it is not limited by such factors as personal trust and family ties, corruption and the principle of reciprocity.

In this context, active implementation of intelligent systems leads to devaluation of social capital in its traditional meaning defined by personal connections and trust. Scholars notice “desolation” on the labor market: some professions tend to disappear, specialists performing routine functions are not in demand any more (Shestakova I., 2018). Intelligent systems are much better at routine functions and monotonous jobs compared to the so-called “human factor” that is a source of mistakes.

Thus, the first paradox of social capital expansion in the digital age is connected with inevitable shift to intelligent systems, on the one hand, and disappearing professions, on the other. Retrospective analysis shows that all scientific and technological revolutions were accompanied by displacement of workforce. However, from socio-economic perspective, this tendency cannot be considered a norm. Supporters of institutional sustainability are trying to maintain a balance between intelligent systems and the number of jobs. Nevertheless, social capital expansion by means of intelligent systems leads to a number of existential problems and raises certain questions: “What can we delegate to intelligent systems? Are they devaluating the job of a doctor, a teacher and other creative jobs? Can intelligent systems replace the psychological need for human communication?”

Digital Skills vs Personal Knowledge. The second paradox is based on the fact that digital skills are essential for success both at present and in a future perspective. Digital skills have become an integral feature of a specialist in the 21 century; it is digital skills that enable a person to fit into the dynamic, fast-paced modern world. Digital skills appear to be an effective tool for developing social capital. However, the paradox of modern education practices consists in the fact that students' digital skills exceed the old school teachers' ones (Kirik V., Leshkevich T., 2018: 94). Younger generation of digital natives outperform the previous generation in terms of digital competence. Some scholars claim that contemporary man can not keep pace with new technologies, he does not have enough special skills to fit in with human-machine communication patterns (Alekseeva I., Nikitina E., 2016). The paradox here is that in spite of the fact that professional knowledge holders possess a deep personal knowledge, they are at the same time old-fashioned and incompetent in terms of on-line technologies. Meanwhile, digital competence, which younger people are quick to develop, enable them to “borrow” fragmentary and superficial knowledge rather than develop a profound expertise. The main motivation is to leave a “digital footprint”, to win new followers and “likes”. According to P.J. Rey, Internet users create their content for the sake of self-fulfillment. They retain access to the created content and thus, can use it to generate both cultural and social capital (Rey P.J., 2012).

However, fast-paced development of information technologies is carried out in a blindfolded manner, taking no account of possible consequences. The development of intelligent systems can hardly be prohibited, although they obviously cause mental deformations. In this regard we need to consider the difference between analogue thinking and clip thinking. The former is related to reflective, thoughtful reading and digesting information, the latter is characterized by fluent viewing and unsystematic perception. In his “The

Meaning of the 21st Century”, J. Martin distinguishes between “people of the book” and “people of the screen” (Martin J., 2014). “People of the book” are analogue knowledge holders, who can reflect on the meaning and conceptual relationships of what is read. “People of the screen” strive to get a prompt response to their query. They are surfing the Internet with no clear goal. They are not capable of focusing their attention on extensive texts, reflecting on the ideas and synthesizing information. Scholars claim that their mental activity is limited to the consumption of cliched chunks of information (Korchazhkiva O., 2018: 284). This form of digital civilization can hardly be considered suitable for homo sapiens. Nevertheless, if we try to find any positive effects of net surfing, we might mention randomly found curious facts and expanding cognitive context.

“Computer Metaphor” and Human Consciousness. The third paradox is related to “computer metaphor” that is based on the analogy between brain function and intelligent systems (Searle, J.R., 1990). Inner cognitive scheme of signal processing has the same parameters of information input, storing and deleting. However, modern cognitive science claims that meaning is rooted in sensory experience. Hence, the needs of the body can not be eliminated from the mind functioning analysis. But that can hardly be preset or programmed, which places limits on “computer metaphor”.

Russian scholars offer the following explanations of the analogy between consciousness structure and intelligent systems. According to V. Finn, the structure of consciousness follows the pattern: knowledge + mind + a person's subjective world (Finn, V., 2009: 317). The structure of intelligent system is limited to: (knowledge base + data base) + Problem Solver + Interface. Thus, in the structure of consciousness knowledge corresponds to knowledge base + data base in an intelligent system; mind corresponds to Problem Solver; a person's subjective world corresponds to Interface. This scheme, however, is not enough to reduce consciousness to intelligent systems. Therefore, according to some scholars, intelligent system is a new step in anthro-technological evolution and should not aim at complete simulation of the human mind.

At the same time, digital civilization gives rise to a scientized definition of consciousness, whereby human consciousness is viewed as an integral model of the world and one's own self, that follows the principle of maximum probability for a given scenario (Velichkovsky B., 2012: 54). Within this model we do not speak of self-consciousness, self-assessment, goal-setting and life-meaning reflection, which are absolutely necessary if we want to stop dehumanization of man (Leshkevich T., 2019).

Global Network Communications and Digital Loneliness. The forth paradox is related to the global network communication and increased

loneliness among Internet users. In spite of the fact that Internet provides enormous opportunity for human interaction, it also gives rise to a specific kind of “interactive” loneliness (Tyumenceva G., 2014: 12) and “digital solipsism”. Aimed at quick indirect interaction, the digital world offers a ready-made online resource, thus, omitting the stage of personal communication. Internet users express feelings through “smileys” and icons; thus, network communication appears to be a simulacrum that distorts cultural practices. The extreme case might be complete virtualisation and inability to cope with real life.

However, the physical body of a digital native belongs to the real world. Network behavior and its consequences are radically different from real life practices. The lack of face-to-face interaction has a negative impact on human sociality.

Discussion: “Network cooperation” and Big Data as the Factors of Social Capital Expansion

Modern scholars view the phenomenon of “network cooperation” as the factor that enhances the development of social capital (Vojskunsky A., 2017: 308). The phenomenon arises due to network users' participation and has a distribution effect. Anyone who can react to a query becomes a participant of network cooperation. Here we should differentiate between “crowdsourcing”, which anyone can be a part of, and “noosourcing”, which is a kind of professional network behaviour. Network cooperation is characterized by a specific democratic equality of the participants, a high degree of sensibility and understanding, a certain level of oppositionism.

Searching for new tools to expand social capital is also an issue to be discussed. Big Data technologies, that collect and structure information, is a priority area. In the context of massive digitalisation, Big Data appears to be a resource which changes modern environment. The analysis of large amounts of diverse information may reveal hidden relations and regularities. Big Data expand human abilities, enabling us to define typical algorithms and calculate probabilities. Processing real-time information, Big Data can provide answers to complicated questions of modernity and contribute to effective administration.

However, some debatable questions arise. Does quantitative analysis alone fully meet the needs of Homo sapiens? Will technology have control functions? Can Big Data technologies change the world? We think that functional potential of Big Data should not be reduced to quantitative analysis alone; it should be expanded to processing the received data aimed at the improvement of adaptive, managerial and functional effectiveness. That is why “social maturity” of Big Data becomes an issue. There is a need for a new type of subjectivity – a “data scientist”. The interpreter of the Big

Data should aim at a subject-centered information platform with due regard to the system of values and needs. According to V. Mayer-Schönberger and K. Cukier, in the world of Big Data data should “speak” for itself (Mayer-Schönberger V., Cukier K., 2013.).

Having discussed the development of social capital, we have come to the following conclusions. Extensive use of Internet technologies have made the Internet a constructor of every-day life activities. Techno-socialization appears to be a meeting point for an individual and modern civilization. Comparative analysis of advantages and disadvantages of the Big Data technology reveals the main problem that is connected with anthropological perspective when using Big Data. Quantitative analysis alone is not enough for sustainable development, which can be ensured by a reflexive understanding of the Big Data. Finally, when analysing the functional aspect of social capital it is important to consider the gap between the digital world and hybrid physical reality which integrates various life practices.

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