DOI: https://doi.org/10.30525/2256-0742/2025-11-3-100-110

ARTIFICIAL SOCIALITY AS A CONCEPT AND TECHNOLOGY

Vladimir Menshikov[1], Oksana Ruza[2], Anastasiia Simakhova[3]

Abstract. The notion of artificial sociality occupies an emerging but still underdeveloped niche at the intersection of artificial intelligence (AI), social theory, and research on human-technology interaction. In contrast to traditional approaches focusing on the cognitive capabilities of AI, artificial sociality focuses on the modeling, reproduction, and transformation of social norms, roles, and forms of behavior within artificial agents and socio-technical systems. The aim of the article is to identify the essence and features of the phenomenon of artificial sociality as a new concept and technology, to determine its impact on social processes and the economy. The methodology of the article on artificial sociality is based on an interdisciplinary approach and includes the analysis of scientific literature, identification of key research areas, and assessment of the impact of technology on social processes and economy. The article discusses artificial sociality as a conceptual framework and as a technological practice. It describes its theoretical foundations, dating back to sociology, cybernetics, and AI ethics, and analyses current implementation examples, from social robots and voice assistants to collective digital platforms. Based on bibliometric analysis, the topic's marginalization is emphasized compared to the dominant discourse focusing on the cognitive aspects of AI. Furthermore, the cultural and disciplinary contexts influencing the development of artificial sociality in different countries are discussed. The authors argue that artificial sociality requires a more integrative and reflexive approach – not only as a technological vector but also as a critical perspective on the role of machines in social life.

Keywords: Artificial sociality, social machines, artificial intelligence, sociotechnical systems, social robotics, digital society, algorithmic agency, machine behavior, AI sociology.

JEL Classification: B55, Q55

1. Introduction

Modern society is at the stage of active implementation of artificial sociality technologies, which are becoming an integral part of everyday life. Artificial sociality manifests itself in the form of virtual assistants, intelligent decision support systems, social networking algorithms and many other digital technologies. These systems not only automate routine processes, but also actively participate in human communication, influencing the formation of social norms and behavior.

The relevance of the topic is due to several key aspects. Artificial sociality is increasingly becoming an intermediary in human communication with the surrounding world, affecting domestic, professional and educational spheres. The emergence of new forms of interaction with "smart" systems leads to the building of relationships of trust and emotional attachment to technology. Artificial sociality is actively transforming business models, customer experience management processes and even the labour market. The use of such technologies requires a rethinking of privacy, fairness and accountability. New cognitive habits emerge, social bonding structures and patterns of interaction in society are changing. Artificial sociality can be a tool for manipulating public opinion, which requires the development of regulatory mechanisms. Thus, the study of artificial sociality as a concept and technology has a significant scientific and practical potential, offering new approaches to understanding social and economic processes.

Purpose of the study: To identify the essence and features of the phenomenon of artificial sociality as

[1] Daugavpils University, Latvia
E-mail: vladimir.mensikovs@du.lv
ORCID: https://orcid.org/0000-0003-4280-427X
[2] Institute of Humanities and Social Sciences of Daugavpils University, Latvia
E-mail: Oksana.ruza@du.lv
ORCID: https://orcid.org/0000-0002-6194-3841
[3] State University "Kyiv Aviation Institute", Ukraine *(corresponding author)*
E-mail: anastasiia.simakhova@npp.kai.edu.ua
ORCID: https://orcid.org/0000-0001-7553-4531

a new concept and technology, to determine its impact on social processes and the economy.

Research objectives:

1. To analyze the scientific literature on the topic of artificial sociality in order to identify key research areas and existing gaps.
2. To determine the common and distinctive features of artificial intelligence, social machine and artificial sociality.
3. To investigate the impact of artificial sociality technologies on the social economy, including its positive and negative aspects.
4. To develop practical recommendations for representatives of science, business and government to adapt to the new conditions of social economy in the conditions of artificial sociality technologies spreading.

2. Materials and Methods

The methodology of the article on artificial sociality is based on an interdisciplinary approach and includes the analysis of scientific literature, identification of key research areas, and assessment of the impact of technology on social processes and economy. The article focuses on aspects such as human-technology interactions, the impact on social norms and behaviour, and issues of privacy and fairness.

Methods of analysis, such as the reflection of publications on the topic of artificial sociality in indexed databases (e.g. Scopus) and SWOT analysis, play a key role in assessing the current state of research and potential development of the field.

The analysis of publications allows us to assess the volume and dynamics of research, identify leading authors and the most active research centres. It also helps to understand which aspects of artificial sociality are most developed and where gaps exist. SWOT analysis helps to systematise information about the strengths, weaknesses, opportunities and threats associated with the spread of artificial sociality. This is useful for strategic planning and making recommendations to various stakeholders.

Thus, the methodology of the article not only supports academic interest in artificial sociality, but also contributes to the development of practical recommendations for different sectors of society, including business, education and public administration.

3. Results and Discussion

The world actively talks about artificial intelligence, but much less often discusses its social aspects. The concept of social machines is still niche but promising. The idea of artificial sociality is still almost unexplored or is just emerging as a concept.

Statistics on the frequency of use of three different concepts related to the topics of artificial intelligence and society. The most popular combination of 'artificial & intelligence' is a classic pair of words found everywhere from scientific articles to news. It is the standard phrase for "artificial intelligence" (AI), and its frequency indicates its dominance in the topic. Less common, but still prominent, is the term "social machine." "Social machine" can refer to a system in which technology and humans interact to form hybrid forms of collective intelligence (e.g., Wikipedia or crowdsourcing). The rare term 'artificial & sociality' – 84 mentions, hardly used (Fig. 1). It probably refers to the concept of artificial socialisation or artificial sociality – where machines are not only intelligent but also social (e.g. companion robots, AI for communication, etc.).

An analysis of the frequency of use of the concepts "artificial & intelligence", "social machine" and "artificial & sociality" in the period from 2015 to 2024 demonstrates the clear dominance of the first

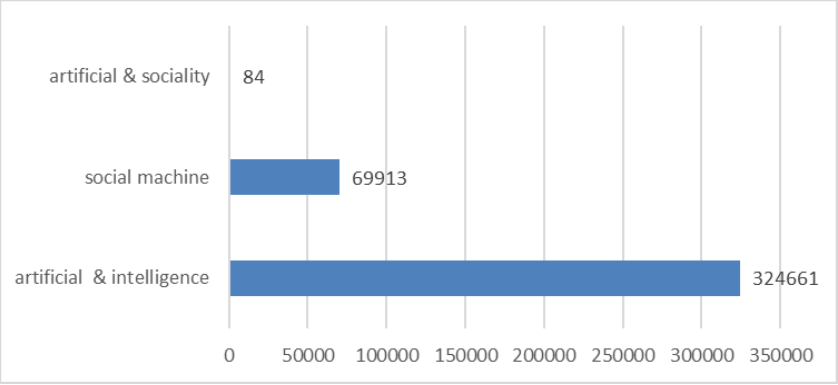

Figure 1. Documents by frequency of use the words "Artificial Intelligence", "Artificial Sociality", "Social Machine" in the title, abstract, or keywords, within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

term in academic and public discourse (Fig. 2). Throughout the decade, "artificial & intelligence" maintains its leading position with a steady increase from 2020, peaking in 2024 (56,211 mentions). This reflects the rapid expansion of interest in artificial intelligence technologies and their adoption in various areas of society. The term 'social machine' also shows a positive trend, especially in recent years, reaching 11,964 mentions in 2024, which may indicate a growing interest in the interaction between technology and human communities within digital platforms and networked systems (Fig. 2). At the same time, "artificial & sociality" remains a marginal concept, practically not represented in the corpus of the texts studied (a maximum of 37 references in 2024), which may indicate either the lack of development of this concept or its potential novelty as an object of future research (Fig. 3). Taken together, the data point to the dominance of a technocentric approach in the study of AI with insufficient attention to its social dimensions.

An analysis of the distribution of researchers in the topics "artificial & intelligence", "social & machine" and "artificial & sociality" demonstrates different degrees of maturity and formation of these areas. The most developed is the area related to artificial intelligence, where the leading authors, such as V. Wiwanitkit (169 references) and A. Mosavi (138)

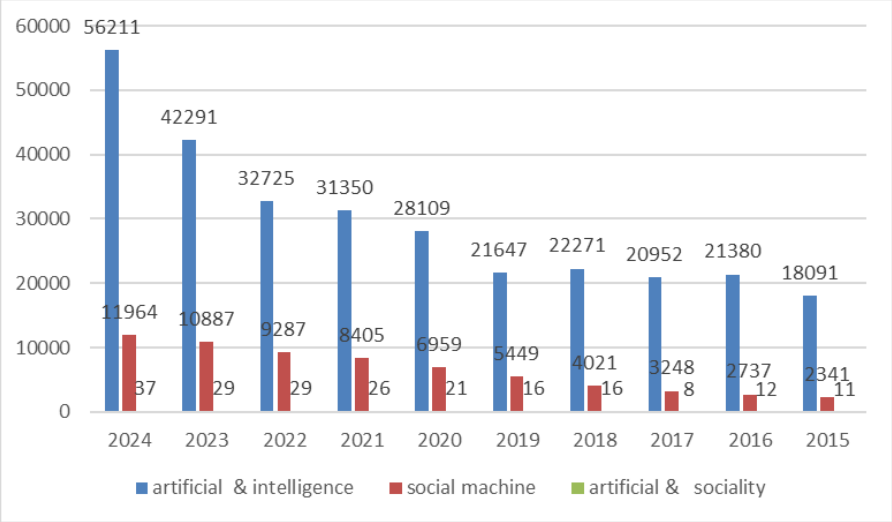

Figure 2. Documents by year, which contain the words "Artificial Intelligence", "Artificial Sociality", "Social Machine" in the title, abstract, or keywords, within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

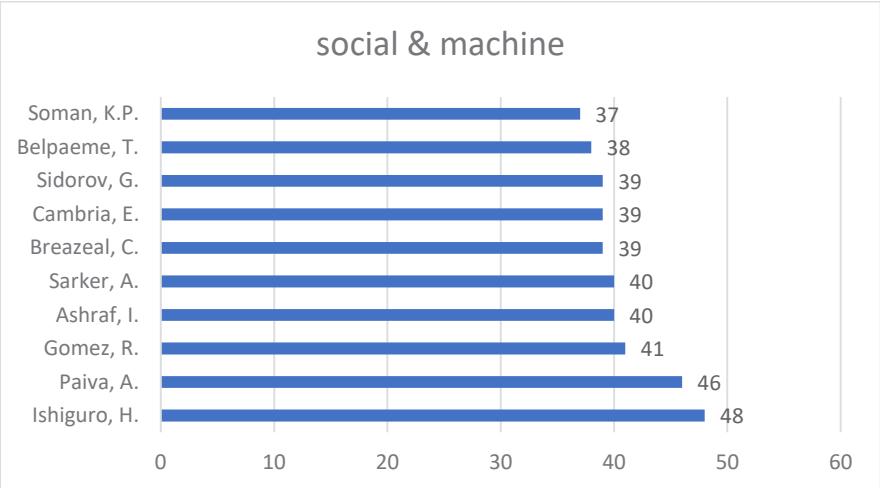

Figure 3. Documents by Citation, which contain the words "Social Machine" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

demonstrate a high level of publication activity (Fig. 5). The topic of "social & machine" is more evenly represented, with leaders H. Ishiguro (48) and A. Paiva (46), reflecting an interdisciplinary interest in the interaction between humans and technology (Fig. 3). On the contrary, the concept of "artificial & sociality" remains on the periphery of the research field: the number of references of the leading authors here is significantly lower (no more than 16), indicating either the novelty of the research framework or its limited spread (Fig. 4). These differences underline the current dominance of technocentric approaches and reveal the potential for further developments in the field of artificial sociality.

The geographical distribution of publication activity in the topics "artificial & intelligence", "social AND machine" and "artificial & sociality" demonstrates the varying degrees of countries' involvement in the development of the respective research areas. The USA (68,993 references), India (65,807) and China (32,478) are the most active in the field of artificial intelligence, which reflects the global leadership of these countries in digital and computational technologies (Fig. 7). The "social AND machine" strand is also led by the USA (14,797), followed by India (10,896) and the Russian Federation (9,812), indicating an interest in socio-technological systems and their humanitarian dimension (Fig. 8). The artificial & sociality category shows the most interesting picture: here the US (55), Russia (48) and the UK (31) dominate, while the leading technological powers (China, Germany, Japan) rank lower (Fig. 6). This may indicate that the topic

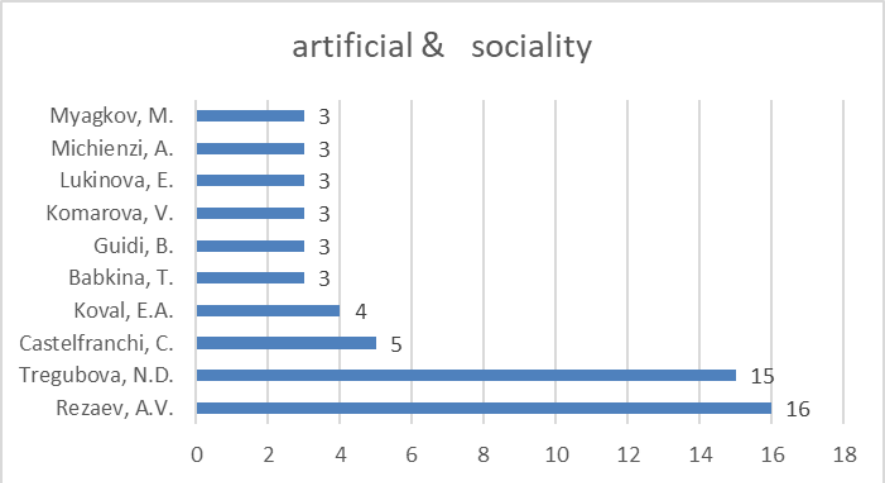

Figure 4. Documents by Citation, which contain the words "Artificial Sociality" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

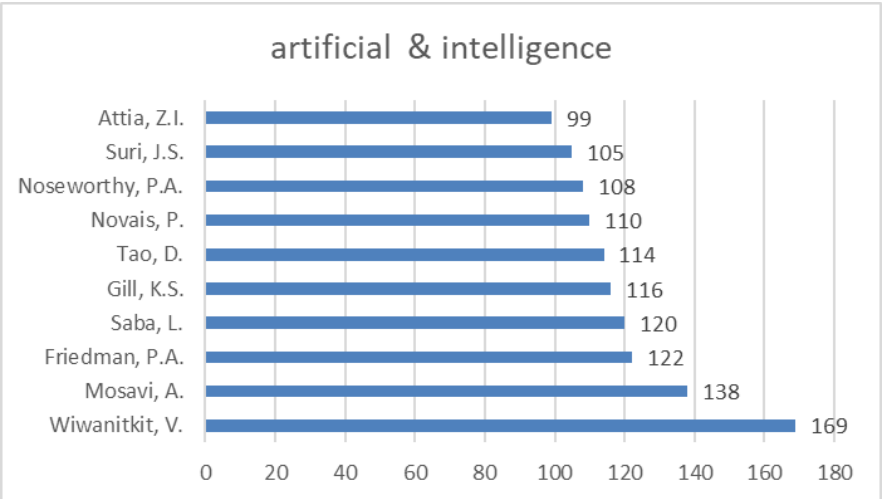

Figure 5. Documents by Citation, which contain the words "Artificial Intelligence" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

of artificial sociality is predominantly developed in humanitarian-social contexts rather than in countries with a pronounced technological bias. In general, there is a pattern: as we move from a purely technical field to more socially oriented concepts, the geography of scientific interest shifts from global leaders in AI to more specialised research centres.

To avoid blurring the concepts, we need to clearly distinguish the following differences: Artificial intelligence focuses on the development of algorithms and technologies capable of solving problems, performing cognitive functions and adapting to new conditions. Implies automation of intellectual processes, but does not always imply social integration. The key aspect is technical – learning, prediction, decision-making. Social machine is a system in which humans and algorithms interact within certain social processes. The concept focuses on the joint functioning of technology and people in a single socio-technical mechanism. The key aspect is the organisation of collective interaction between humans and digital agents. Artificial sociality focuses on the creation of systems that model or even form new social practices and social relations. The emphasis is on the ability of technologies to be not just tools, but full-fledged "participants" in social interactions. The key emphasis is on embedding technologies into socio-cultural contexts and forming new norms of behaviour

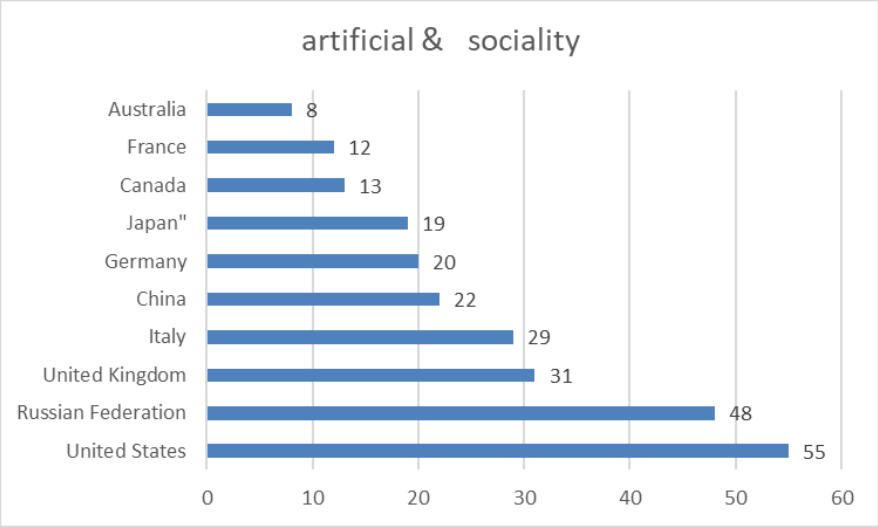

Figure 6. Documents by country, which contain the words "Artificial Sociality" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

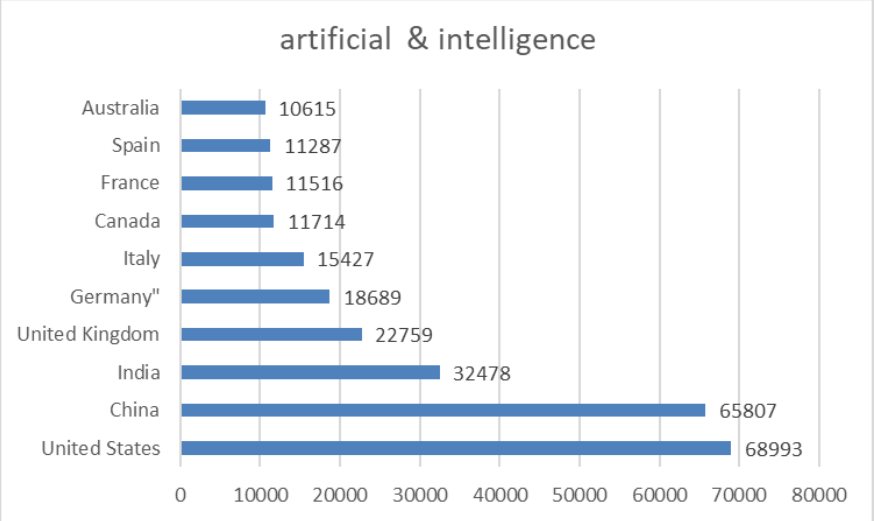

Figure 7. Documents by country, which contain the words "Artificial Intelligence" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

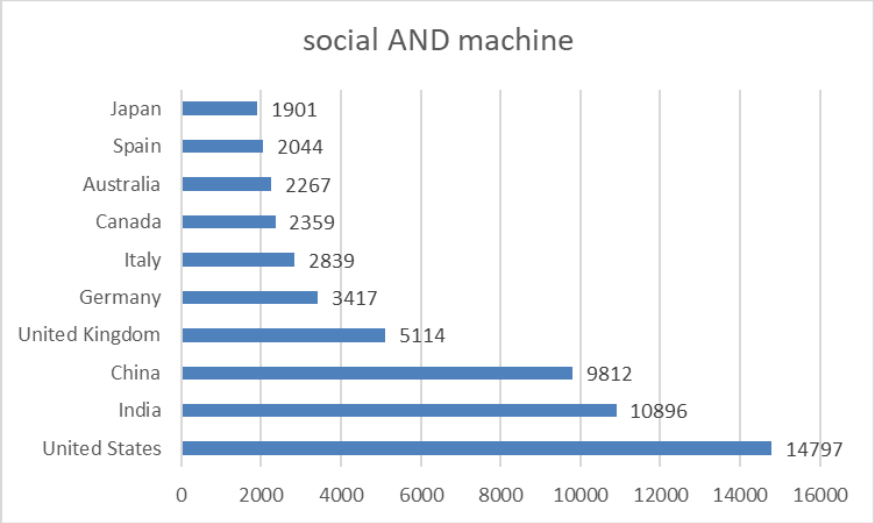

Figure 8. .Documents by country, which contain the words "Social Machine" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024

Source: elaborated by the authors based on the SCOPUS database

(Latour, 2005); (Berners-Lee & Fischetti, 1999); (Russell & Norvig, 2021); (Shadbolt et al., 2006); (Woolgar, 2022)

Let us consider how these concepts can be related in the dynamic and accelerating process of technology development. Let us represent the process as a sequential expansion of AI concepts and technology: Initially, AI was developed to perform specific tasks, such as pattern recognition or natural language processing. As technology evolved, AI began to be integrated into social systems, creating social machines – hybrid systems where humans and AI interact to achieve common goals. Examples include social media platforms where AI algorithms manage content and user interactions. The next stage involves the formation of artificial sociality, where AI not only participates in social processes, but also begins to shape new social structures and norms. This includes the creation of virtual communities where AI agents interact with humans as equals, influencing social dynamics and cultural practices.

A table 1 clearly demonstrates the characteristics of the concepts of Artificial Intelligence, Social Machine and Artificial Sociality in three key aspects: Commonality with others, Differences, Primary authorship of the term (concept).

The term artificial intelligence (AI) was introduced by John McCarthy. This was in 1956, when he organised a famous conference at Dartmouth College, which is considered the foundation for the establishment of the field of artificial intelligence as a scientific discipline. At this conference, McCarthy, as well as others, presented the idea that machines could mimic human intelligence. The first official use of the term "artificial intelligence" appeared in a proposal for funding the conference that was written by John McCarthy. This was in the context of exploring the possibilities of "creating programmes that can mimic aspects of human intelligence". McCarthy went on to develop theories of artificial intelligence and was one of the founders of the field (TENEO.AI., 2025).

Artificial intelligence was originally designed as a system capable of mimicking human intellectual functions: learning, data analysis, and prediction. Early approaches relied on the development of algorithms capable of solving well-defined tasks. Let us note the key directions of development: weak AI (Narrow AI) – solves specific tasks (e.g. chatbots, pattern recognition systems). Strong AI (General AI): a hypothetical system with a level of intelligence comparable to human intelligence. Examples of implementation: recommendation systems (e.g. Netflix, Spotify), automated diagnostic systems in medicine, financial analysis algorithms. AI at this stage functions as an auxiliary tool supporting decision-making but does not participate directly in complex social processes.

Social machine as the next level. The term "social machine" (social machine) first appears in:

Bernard Scott, "Social Machines: Philosophical Engineering" (1983). This text was part of his research on the cybernetics of social systems (University of Surrey, UK). Scott used the term to describe social structures that function like mechanised systems, with people playing the role of "components". Bernard Scott used the term 16 years earlier than Berners-Lee, but with a different meaning. The modern interpretation (related to the Internet) owes its popularity to the wording of Tim Berners-Lee. "The Web is more a social creation than

Table 1
Characteristics of the concepts of "Artificial Intelligence", "Social Machine" and "Artificial Sociality"

Cathegories	Common with others	Differences	Primary authorship of the term (concept)
Artificial Intelligence (AI)	Use of data processing and machine learning algorithms. Meaning of automation of cognitive functions (learning, analysis, prediction). Can be part of a social machine or artificial sociality.	Focuses on automating intelligent functions without active human involvement. Focuses on technological aspects and programming.	John McCarthy, 1956 – proposed the term at a conference at Dartmouth.
Social Machine (SM)	Incorporates AI elements to process data and coordinate actions. Combines both human factors and automation algorithms. Can integrate elements of artificial sociality in the form of digital platforms.	Focuses on organising social processes through technology. Features human participation as an active agent within the system. Applied in community management, crowdsourcing systems, social networks.	Bernard Scott, 1983 – introduced the term as part of social systems research.
Artificial Sociality (AS)	Use of both AI algorithms and social machine elements. Meaning of active interaction between digital agents and humans. Formation of new social norms and interaction patterns.	Oriented to the creation of social structures where digital agents (bots, virtual assistants) become active participants in interactions. A focus on forming new social practices and even emotional connections between humans and digital agents	Thomas Malsch, 1998 – proposed the term in Sozionik – Sociologische Ansichten über künstliche Sozialität.

Source: elaborated by the authors

a technical one. I designed it for a social effect – to help people work together – and not as a technical toy. The ultimate goal of the Web is to support and improve our weblike existence in the world. We clump into families, associations, and companies. We develop trust across the miles and distrust around the corner. What I believe is that we need to be able to build social machines – machines in which the people do the creative work and the machine does the administration." (Berners-Lee & Fischetti, 1999); (Scott, 1983).

Key features: a social machine is a hybrid system that combines people and technology within social processes. People act as active participants, while technologies (including AI) manage information, coordinate actions and form the structure of interactions. The concept of a social machine is especially relevant in the context of digitalisation of social institutions. Key elements of the social machine: digital platforms – social networks, crowdsourcing platforms, marketplaces; interaction management algorithms – AI manages the flow of information, selects relevant content, and optimises communication routes. Examples of implementation: social networks (Facebook, Instagram) – algorithms manage what information users see, forming their worldview and social connections; digital platforms for work (Upwork, Freelancer) – a social machine manages the labour market, organising interaction between customers and performers; "smart cities" – systems for managing transport, energy and infrastructure. Relating to artificial sociality, the social machine is a transitional stage where AI begins to play the role of not only a tool, but also an active participant in social life.

We consider artificial sociality as the highest stage of evolution. The term "artificial sociality" was introduced into scientific circulation relatively recently thanks to the activities of a group of German scientists led by T. Malsch. T. Malsch understands IS as a communicative network in which other agents (e.g., AI) participate along with people (and sometimes instead of people); and the medium for their interaction is the Internet (Malsch, 1998). Main features: assumes that digital systems not only organise human interaction but also autonomously shape social structures, including behavioural norms and cultural patterns. In such systems, digital agents (AI robots, virtual characters) can participate in social life on an equal footing with humans. Key aspects of artificial sociality: digital communities (groups are created in which artificial agents play a significant role – e.g. virtual assistants, online avatars); emotional ties with machines (people form attachments and trust to digital agents, which reflects the development of social mechanisms; self-learning systems that adapt to changing social conditions and can develop their own patterns of behaviour. Examples of implementation: virtual assistants (Alexa, Google Assistant) – moving from mere tools to social agents capable of supporting emotional dialogues; digital interlocutors (Replika) – AI companions that form personal connections with users; virtual spaces (e.g. meta-universe) – creating an artificial environment where digital agents can be active participants of social life.

Thus, we propose a dynamic model of evolution: at the first stage, AI develops intellectual functions to solve problems; at the second stage, the social machine

begins to manage social processes, combining AI with human activity; at the third stage, artificial sociality creates new forms of social life, in which digital agents are no longer just tools, but full-fledged subjects of social interactions. The concept of the social machine and artificial sociality does not contradict AI, but represents its logical continuation. These stages demonstrate the progressive role of technology in the organisation of social life.

One of the modern approaches to interpreting the phenomenon of artificial sociality from the position of sociology is the concept proposed by one of the authors of this article. According to our definition, "sociality (natural and artificial) is understood as the essence of communication of agents autonomously functioning in a self-organising network with autopoietic character" (Menshikov, 2020). This approach combines elements of the theory of self-organising systems, the principle of autopoiesis and ideas about the dynamic development of social structures in the digital environment. It expands the traditional understanding of artificial sociality, as the focus shifts to the ability of agents (both human and digital) to independently adapt and interact in a changing social environment.

Today, it is possible to propose a very broad formulation of artificial sociality, including various approaches of its interdisciplinary analysis. In this case, artificial sociality is a dynamic system of interactions between human and artificial agents, which is conditioned by both technological and social parameters. This system includes both direct interaction (communication via Internet platforms, use of computer models for analysis and simulation of social behaviour) and active participation of artificial agents in social processes, capable of influencing the formation of social structures and behaviour. Within the framework of this interaction, artificial agents not only imitate human behaviour, but also can independently make changes in the social environment, which requires a certain degree of autonomy and self-organisation. At the same time, the system implies the presence of self-regulation mechanisms and adaptation to changing conditions of interaction, which makes it capable of development and integration of new technologies and methodologies. This definition takes into account four approaches: Communicative approach – emphasises the role of the Internet as a medium for interaction. Modelling approach – focuses on the use of computer models to analyse social behaviour. Artificial agent participation – considers artificial agents as active participants in social processes. Self-organisation and systems approach – adds elements of autonomy and the capacity for self-development.

This definition emphasises the multifaceted nature of artificial sociality, providing a comprehensive view of the interaction between humans and artificial intelligence in a social context.

4. Discussion

There is no doubt that artificial sociality influences the development of social economy. The expansion of the space of artificial sociality – digital platforms, virtual communities, the introduction of AI in all spheres of life – is transforming socio-economic relations, bringing both gains and losses (Meņšikovs et al., 2024)

An analysis of the map shown in Fig. 9 allows us to identify key trends in the global development and regulation of artificial sociality:

1. Global distribution of AI strategies:

– most developed countries (USA, Canada, EU, UK, Japan, South Korea, Australia) have already implemented national strategies (Released category) – these countries have developed artificial sociality.

– Several developing countries (India, Brazil, Mexico, South Africa, Turkey) are at the In Development stage, which reflects the growing awareness of the importance of AI and the formation of artificial sociality.

– Africa and parts of Central Asia show the least activity (Not released), which correlates with digital inequality and suggests that artificial sociality is not developed in these countries.

2. Regional peculiarities:

– EU: A unified AI development strategy is complemented by national plans of Germany, France and others.

– Asia: China and Singapore are leading the way in integrating AI into public policy.

If we talk about the expansion of artificial sociality, it is necessary to consider which countries have adopted and implemented AI strategies as one of the elements of formation and development of artificial sociality (Fig. 9).

AI Latin America and Africa are lagging in AI development due to a lack of infrastructure and funding. Countries without AI development strategies risk becoming dependent on foreign technological standards (e.g. China or the US) and being influenced by their artificial sociality (Lukianenko & Simakhova, 2024).

It should be noted that the map in Figure 9 reflects the polarisation of artificial sociality:

– techno-democracies (EU, Canada) focus on security;

– techno-autocracies (China) focus on control and growth of influence;

– developing countries try to catch up but face resource barriers.

To assess the strengths and weaknesses of artificial sociality, as well as opportunities and threats in the context of further expansion of the artificial sociality

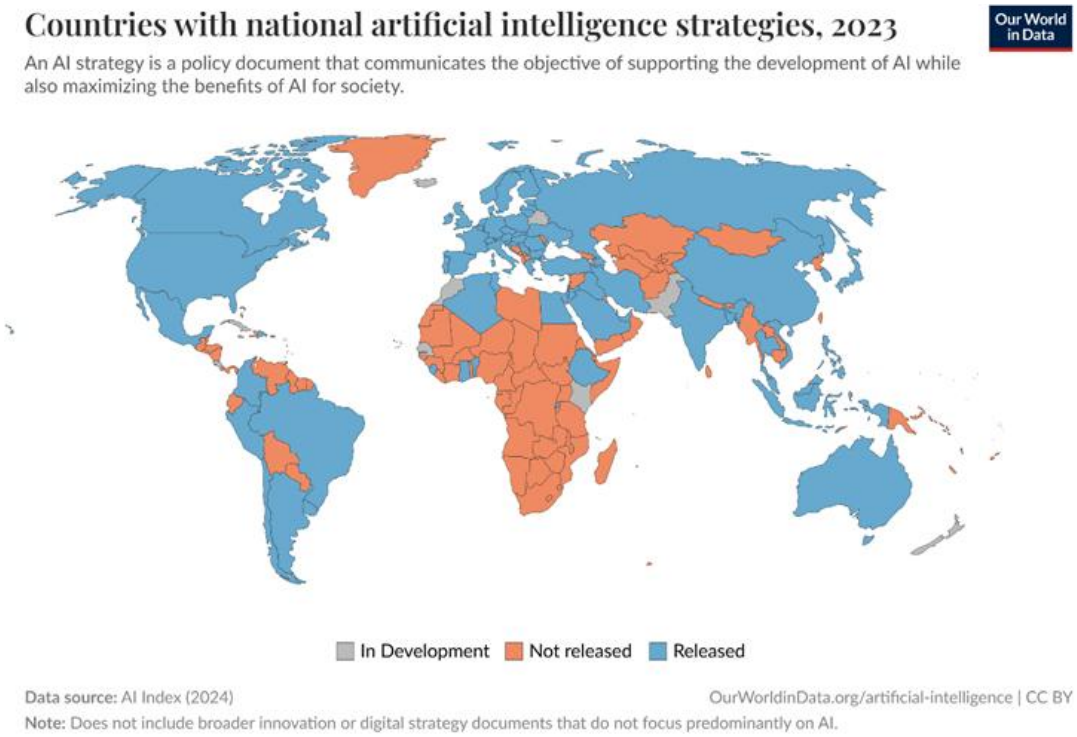

Figure 9. Countries with national AI strategy, 2023

Source: (Charlie et al., 2023)

space in the field of social economy, we will conduct SWOT analysis (Table 2).

Artificial sociality, on the one hand, provides unprecedented opportunities for cooperation and innovation, but on the other, it leads to the erosion of traditional socio-economic structures, increasing dependence on digital corporations. The future of the social economy depends on whether it will be possible to find a balance between technological efficiency and the preservation of human-centered values (Simakhova, 2021).

5. Conclusion

Artificial sociality as a new social paradigm is at the stage of active formation, therefore its study requires an integrated approach. To ensure a comprehensive understanding of this phenomenon and its impact on social processes, the scientific community should pay attention to the following key areas: develop interdisciplinary approaches that combine sociology, cybernetics and psychology; study the cognitive, behavioral and emotional aspects of human interaction with digital agents; pay special attention to issues of ethics, security and legal regulation; conduct applied research focused on the practical application of artificial sociality technologies in economics, education and public administration. With the spread of the phenomena of artificial sociality, social machines and artificial intelligence (AI), economic models, mechanisms of interaction with clients, the structure of the labor market and the principles of social policy are changing. To ensure the successful adaptation of business and government agencies to these changes, it is necessary to take into account several strategic recommendations. Successful adaptation to the conditions of the social economy requires investments in digital transformation; implementation of personalized digital solutions; training of personnel with new competencies; compliance with the principles of ethics and data protection; development of regulatory and social support mechanisms.

These recommendations will help business representatives and government bodies not only adapt to changing conditions but also use the opportunities of artificial sociality to increase competitiveness and sustainable development.

The development of artificial sociality in the social economy opens up enormous opportunities for improving the lives of citizens and increasing the efficiency of social processes, but it also carries significant risks that must be carefully analyzed and controlled. It is important to develop ethical, fair and inclusive models to minimize possible threats and ensure sustainable development. Prospects for the most significant and relevant research in the field of artificial sociality in terms of its impact on the social economy include Analysis of the

Table 2

SWOT-analysis of impact of artificial sociality on social economy at global level

Strengths	Weaknesses
1. New forms of co-operation and production (development of crowdsourcing, emergence of digital co-operatives (user-driven platforms). 2. The use of Big Data for personalised services and demand forecasting. 3. The development of digital social ratings (as a tool of trust in the social economy). 4. Automation and optimisation of social processes (artificial sociality can significantly improve the efficiency of various social processes such as resource allocation, access to services and communication). 5. Information accessibility (AI and algorithms can provide more affordable and transparent access to social data, which facilitates more informed decision-making). 6. Innovative approaches to solving social problems (AI can offer out-of-the-box solutions to challenges such as poverty, unemployment, and ageing populations, helping to create more equitable and effective social policy models).	1. Increasing inequality (concentration of wealth and information in the hands of platform owners (Meta, Alphabet), digital divide as unequal access to technology between countries and social groups). 2. Loss of autonomy (dependence on corporate ecosystems (e.g. App Store, Google Play dictate monetisation rules). 3. Dependence on data (artificial sociality depends on the quality and availability of data. Incomplete, incorrect or distorted data can lead to wrong decisions). 4. Lack of universality (not all social problems can be solved through technological solutions, and not all populations can easily adapt to technology). 5. Ethical and legal issues (AI may face challenges related to ethics, data privacy and citizens' rights. This may create difficulties in trusting technology).
Opportunities	**Threats**
1. Global partnership and access to global markets (social networks and marketplaces allow small entrepreneurs to reach international audiences without intermediaries). 2. Democratization of knowledge and resources (free educational platforms (Coursera, Khan Academy) and open knowledge bases; the sharing economy (car sharing, home sharing) reduces the cost of accessing benefits). 3. Improving the quality of life (artificial social systems can significantly improve the quality of life of citizens through the availability of high-quality social services, reducing bureaucracy and increasing transparency in the distribution of benefits). 4. Sustainable development (AI can be used to create sustainable and efficient models of the social economy that respond to the challenges of climate change and social justice). 5. Development of the social economy and innovation (artificial sociality can become an engine of new business models, startups and solutions in the field of social economy, creating new opportunities for jobs and entrepreneurship).	1. Dehumanisation of relationships (replacement of live communication with communication via chatbots, with AI, etc.; substitution of real social ties with virtual "likes" and superficial contacts). 2. Crisis of trust (spread of fakes, manipulation through social networks). 3. Loss of jobs (automation and AI implementation may lead to mass layoffs in traditional social sectors such as health, education and social work). 4. Privacy breach (AI systems can collect and analyse large amounts of personal information, posing the threat of data leaks and privacy breaches). 5. Technological dependence (the rapid spread of artificial sociality may lead to an overdependence of society on technology, leaving it vulnerable to technical failures or abuse).

Source: elaborated by the authors

impact of artificial sociality on the labor market – creation of new employment models, flexible forms of labor relations and retraining systems. Study of the economic efficiency of digital platforms – formation of strategies for business adaptation and regulation of the platform economy. Development of social responsibility standards for digital agents and algorithms – minimization of the risks of manipulation, discrimination and economic inequality. These areas of research have high potential for practical application and will be in demand in the coming years both in science and in the real economy.

Author contributions: Conceptualization, VM and OR; methodology, OR; software, OR; validation, VM, OR and AS; formal analysis, AS; investigation, VM, OR and AS; resources, OR; data curation, VM and AS; writing – original draft preparation, VM; writing – review and editing, AS; visualization, OR; supervision, VM; project administration, AS; funding acquisition, VM. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

References:

Berners-Lee, T., & Fischetti, M. (1999). Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web by Its Inventor. Harper San Francisco, p. 172.

Charlie, G., Mathieu, E., Samborska, V., & Roser, M. (2023). "Countries with National Artificial Intelligence Strategies." Our World in Data. Available at: https://ourworldindata.org/grapher/national-strategies-on-artificial-intelligence

Latour, B. (2005). Reassembling the Social: An Introduction to Actor-Network-Theory. Oxford University Press.

Lukianenko, D., & Simakhova, A. (2024). Artificial Intelligence in the Scientific and Technological Paradigm of Global Economy. *Problemy Ekorozwoju*, 19 (2), 55–65. DOI: https://doi.org/10.35784/preko.6256

Malsch, T. (Ed.) (1998). Sozionik ñ Soziologische Ansichten uber kunstliche Sozialitat. Berlin: Edition Sigma.

Menshikov, V. (2020). Sociologists on changing sociality. Socialo Zinātņu Vēstnesis. *Social Sciences Bulletin*, 31(2), 22–39. DOI: https://doi.org/10.9770/szv.2020.2(2)

Meņšikovs, V., Simakhova, A., & Šipilova, V. (2024). Harnessing Artificial Intelligence for Socio-Economic Development. *European Journal of Sustainable Development*, 13 (3), 569. DOI: https://doi.org/10.14207/ejsd.2024.v13n3p569

Menshikov, V., Kokina, I., Komarova, V., & Korshenkov E. (2020). Human-machine collaboration as a factor of labour productivity and efficiency. *European Scientific Journal*. Vol. 16, No. 13. DOI: https://doi.org/10.19044/esj.2020.v16n13p1

Russell, S. J., & Norvig, P. (2021). Artificial Intelligence: A Modern Approach (4th ed.). Pearson. DOI: https://doi.org/10.1109/MSP.2017.2765202

Shadbolt, N., Hall, W., & Berners-Lee, T. (2006). The Semantic Web Revisited. *IEEE Intelligent Systems*, 21(3), 96–101. DOI: https://doi.org/10.1109/MIS.2006.62

Scott, B. (1983). Social machines: A philosophical engineering. University of Surrey.

Simakhova, A. (2021). Social Economy models in a global dimensions. Warsaw, Sp. z o.o. "Diamond trading tour", 208 p.

SCOPUS data base. Documents by frenquency of use the words "Artificial Intelligence", "Artificial Sociality", "Social Machine" in the title, abstract, or keywords, within the SCOPUS database from 2015 to 2024

SCOPUS data base. Documents by year, which contain the words "Artificial Intelligence", "Artificial Sociality", "Social Machine" in the title, abstract, or keywords, within the SCOPUS database from 2015 to 2024

SCOPUS data base. Documents by Citation, which contain the words "Social Machine" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024.

SCOPUS data base. Documents by Citation, which contain the words "Artificial Sociality" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024.

SCOPUS data base. Documents by Citation, which contain the words "Artificial Intelligence" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024.

SCOPUS data base. Documents by country, which contain the words "Artificial Sociality" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024.

SCOPUS data base. Documents by country, which contain the words "Artificial Intelligence" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024.

SCOPUS data base. Documents by country, which contain the words "Social Machine" in the title, abstract or keywords within the SCOPUS database from 2015 to 2024.

TENEO.AI. (2025). Homage to John McCarthy, the father of Artificial Intelligence (AI). Available at: https://www.teneo.ai/blog/homage-to-john-mccarthy-the-father-of-artificial-intelligence-ai

Woolgar, S. (2022). Five Rules of Virtuality. In Virtual Society? Technology, Cyberbole, Reality. Oxford University Press. DOI: https://doi.org/10.1093/oso/9780199248759.003.0001

Received on: 10th of May, 2025
Accepted on: 23th of June, 2025
Published on: 24th of July, 2025