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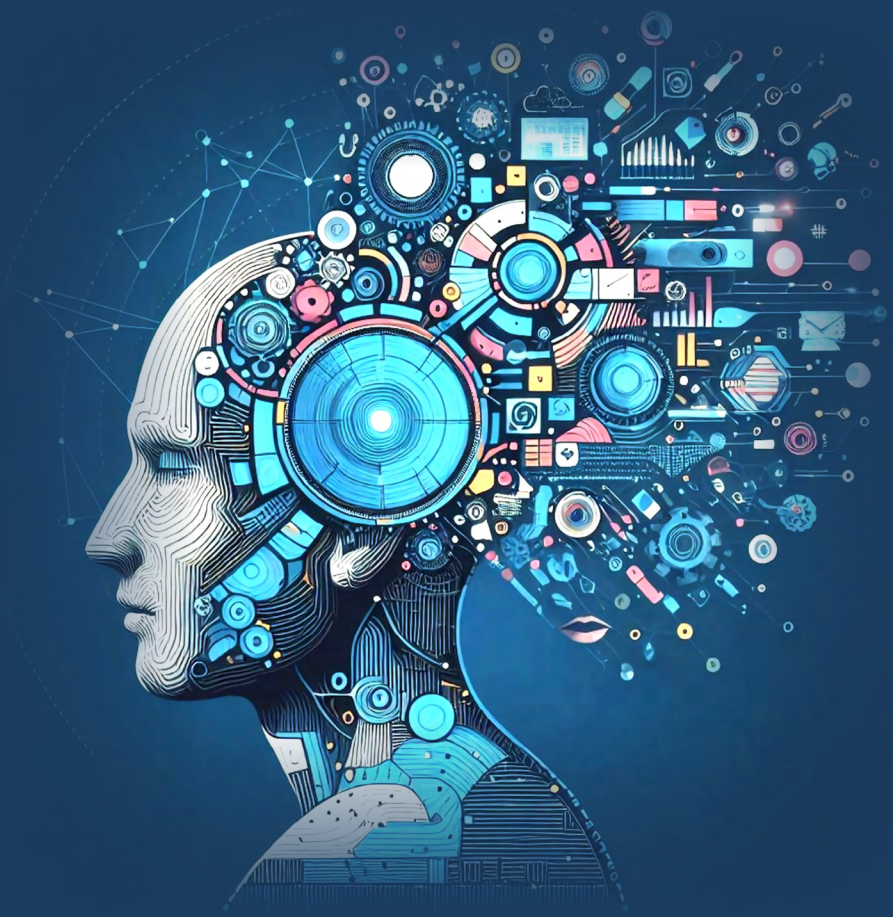

International Scientific Conference

Social Aspects of the Application of Artificial Intelligence and Transhumanism

Institute of Social Sciences
Kraljice Natalije 45, Belgrade

SOCIAL ASPECTS OF THE APPLICATION OF
ARTIFICIAL INTELLIGENCE AND TRANSHUMANISM

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INTERNATIONAL SCIENTIFIC CONFERENCE

SOCIAL ASPECTS OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE AND TRANSHUMANISM

BOOK OF ABSTRACTS

INSTITUTE OF SOCIAL SCIENCES
Institute of national significance for the Republic of Serbia

THE INSTITUTE FOR ARTIFICIAL INTELLIGENCE RESEARCH AND DEVELOPMENT OF SERBIA

Belgrade, 23–24 October 2025

BOOK OF ABSTRACTS*

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SOCIAL ASPECTS OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE AND TRANSHUMANISM

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INSTITUTE OF SOCIAL SCIENCES
and
RESEARCH AND DEVELOPMENT INSTITUTE
FOR ARTIFICIAL INTELLIGENCE OF SERBIA

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INTRODUCTION

We are witnessing an era in which artificial intelligence (AI) and transhumanist technologies are no longer confined to the realm of science fiction. They are increasingly present in our everyday lives – transforming how we work, communicate, make decisions, access culture, media, education, and even understand what it means to be human. These developments raise not only technical challenges, but also profound social, ethical, legal, and philosophical questions.

The international scientific conference "Social Aspects of the Application of Artificial Intelligence and Transhumanism" aims to create a dynamic and inclusive platform for critical reflection on broader consequences of these technologies. It brings together scholars and professionals from a wide range of disciplines – social sciences, humanities, engineering, media, military, law, and culture – to explore how AI and transhumanist practices are reshaping societies around the globe.

Key themes addressed at the conference include the ethical use of AI in decision-making, the impact of automation on labour and social inequality, the influence of algorithms on media and culture, questions of data privacy and digital rights, and the philosophical implications of merging human and machine. Discussions also explore the promises and perils of transhumanist visions – such as enhanced cognition, life extension, and human-AI symbiosis – while emphasizing the need for inclusive, democratic, and equitable technological development.

This **Book of Abstracts** reflects the rich diversity of thought and research presented at the conference. Each contribution offers insights into the complex intersections between emerging technologies and social realities, highlighting both the opportunities and the risks they bring. The abstracts represent an effort to map out the rapidly changing landscape of our digital and posthuman future, offering perspectives from both established experts and emerging voices in the field.

By fostering dialogue across disciplines and borders, this conference and its accompanying publication aim to contribute to a deeper understanding of how we might responsibly navigate the AI age – ensuring that technological progress goes hand in hand with social justice, human identity, dignity, and ethical awareness.

SESSION I

AI, CULTURE AND IDENTITY

Artificial intelligence (AI) is reshaping the cultural sector – redefining how we protect, present, and interpret cultural heritage. From automating the digitization of archives to enabling immersive storytelling and predictive conservation, AI offers new tools for preserving the past and making it accessible to future generations.

This section of the conference explores the intersection of **AI and culture**, with a focus on the ethical and innovative use of technology in museums, archives, heritage sites, and creative industries.

As we integrate advanced technologies into cultural work, it is crucial to reflect not only on the possibilities but also the responsibilities that come with them. These contributions invite dialogue on how AI can serve not as a replacement but as a partner in cultural expression and preservation – enhancing human understanding, rather than replacing it.

Keynote speaker
1
Mr Georgios Karagiannis
Dr. Electrical Engineer & Computer Engineer
Scientific Director, ORMYLIA Foundation
Founder of Diagnosis Multisystems

SMART SPECIALIZATION, IN THE TRUE SERVICE OF THE LIFE-EXPERIENCE OF NEW HUMAN (WELLBEING) THROUGH THE DEVELOPMENT AND USE OF THE SCIENCE OF DIAGNOSIS, DOCUMENTATION AND CONSERVATION OF CULTURAL HERITAGE OBJECTS AND BIOMEDICAL TECHNOLOGY: THE EXAMPLE OF THE ORMYLIA FOUNDATION

The "ORMYLIA" Foundation (OF) as a whole, as it emerges from its course so far, offers people two important benefits: preventive medicine (living) but also the possibility of understanding one's spiritual/cultural tradition and heritage (it could be said as "wellbeing" in spite of the modern prevailing view of it). The OF adopts a holistic approach to various, yet intelligently interconnected (smart specialized) areas of activity, which include early prognosis of cancer in medical preventive diagnosis, documentation, preservation and ontological promotion of cultural heritage, as well as provision of specialized non-invasive – non-destructive testing services.

The way it achieves this is based on the use and smart specialization of techniques and methods, which combine an extensive set of non-destructive tomography technologies, with the accuracy ranging from a few dozen nanometres to metres, providing high-reliability measurements combined with the development and application of advanced signal processing techniques, such as multidimensional and multimodal data fusion and their use by artificial intelligence applications. Data management follows protocols and high-level laboratory ISO-17025, while their storage is carried out in a database that highlights the semantics of the documentation and facilitates the documentation of end users through 3D endoscopic navigation software and artificial intelligence.

In fact, through the research made in recent years, the OF in collaboration with Diagnosis Multisystems (DM) has developed an important

knowledge base that derives from both of its activities, i.e. a database for the technology of creating thousands of cultural heritage objects of various temporal and spatial coordinates, styles, typologies, materials, dimensions (in DICOM/DICONDE) and a database of tens of thousands of mammograms (DICOM/PACS). The richness of this scientific knowledge and its interpretation is a legacy for the osmosis of today's man with the spiritual tradition of yesterday, but also his care.

All known and published, to a certain extent, above scientific and applied papers are supported by a semantically common vision between the Greek-Orthodox heritage and information science, signal processing and, more recently, deep learning and artificial intelligence.

This vision experientially serves the new (modern) man, in whom there is an ontological need for demanding support of his existence as a body, but also to nourish him as a soul-brain, with his in-depth participation in the timeless wealth of our culture and tradition.

This unique combination reveals and exposes the high level of Greek-Orthodox achievements over time in the extensive field of engineering science, technology and signal processing, data, and through artificial intelligence techniques.

In particular, and following this position, the OF has two/three main activities based on its founding act:

1. Implementation of preventive medicine, promotion of medical research with the collaboration of higher education institutions (HEIs), offer of medical care to patients and development of social welfare actions, moral and spiritual and material support to the population of the wider region, especially to young people and those in need.

2. Development of technological research for the study – documentation of cultural heritage elements with the collaboration of HEIs-Universities, improvement of technology and development of new methods and organizations for the continuous upgrade of laboratory infrastructure, and corresponding methodology covering the full range of applications for the documentation and protection of works of art and monuments in our cultural heritage.

3. With the experience of the two above-mentioned activities, for some years now, the OF has been developing research activity in the field of biomedical technology with the smart specialization of the technologies it has and synergies with universities and specialized high-tech application companies.

Keynote speaker
2
Ms Isidora Đurić
University of Novi Sad, Faculty of Technical Sciences

REIMAGINING CULTURAL HERITAGE THROUGH GENERATIVE AI

Generative Artificial Intelligence (AI) is rapidly transforming the ways we engage with and interpret cultural heritage. From re-creating lost artefacts to digitally reviving artworks and generating immersive narratives, these tools open new avenues for storytelling, education, preservation, and presentation of cultural heritage. Generative AI technologies offer new possibilities for visualizing, interpreting, and communicating the past.

This lecture explores both the creative potential and the critical challenges of applying generative AI within cultural heritage contexts. The focus is not on reconstructing the past with certainty, but on reinterpreting and reimagining it in a meaningful way. The lecture will address the conceptual and ethical distinctions between reconstruction, reinterpretation, and fiction in the heritage visualization. Drawing on current research into emerging trends in the use of artificial intelligence in cultural heritage, as well as a personal practice-based project, the lecture will present case studies that illustrate the diverse applications of generative AI in the heritage field, while raising important questions about plausibility, authenticity, and ethical responsibility.

Among the examples discussed will be a 2024 project, carried out by the team from the Faculty of Technical Sciences, University of Novi Sad, and supported by the Ministry of Culture of the Republic of Serbia, focused on applying generative AI to reimagine architectural heritage with little or no surviving visual documentation. This project demonstrates how AI-generated images have been used to visualize hypothetical interiors of architectural heritage sites in the contexts where conventional reconstruction techniques would be highly demanding or impractical. Working with fragmentary historical data, textual descriptions, and photo references, generative AI tools can produce plausible and evocative visualizations that help bridge gaps in our understanding. These reinterpretations are not intended as definitive reconstructions, but as speculative visual narratives that encourage critical engagement and invite both professionals and the wider

public to reflect on the complexities of historical representation. The methodology combines architectural expertise, historical research, and carefully guided AI prompting strategies to produce outputs that are stylistically consistent with relevant historical periods. Through this process, generative AI becomes a creative partner, expanding the interpretive possibilities available to heritage practitioners.

By reflecting on interdisciplinary practices at the intersection of technology, heritage, and design, this lecture invites participants to consider not only what we can generate, but why and for whom we generate it. It will also address the role of professional expertise in guiding AI outputs and how we can balance creative interpretation with historical rigor.

Ultimately, this lecture argues that generative AI should not be viewed as a replacement for traditional heritage research or documentation, but as an additional tool, one that fosters interdisciplinary collaboration and opens new avenues for storytelling, interpretation, and engagement. By embracing AI as a means of informed speculation, we can create richer, more imaginative, and critically reflective dialogues about the past.

Keywords: Generative AI, cultural heritage, visualization

3

Ms Asja Drača Muntean
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THE USE OF ARTIFICIAL INTELLIGENCE IN THE CULTURE OF REMEMBRANCE

Artificial intelligence (AI) is widely present in the culture of remembrance. It is dominant, above all, in the public spaces of the Internet. The cultural institutions that are engaged in nurturing the culture of remembrance and educating young people are still cautious about its use.

Dealing with the past and understanding it, especially complex historical events such as the Holocaust and the genocide during World War II, represents a great challenge for educators, researchers and curators in cultural institutions, but also for young audiences, especially since there are no longer survivors who were the main conveyors of the historical events through their personal experience. It is precisely this gap that AI should fill.

There are examples of the use of "machine learning" and the use of AI in the culture of remembrance that are based on learning from examples, data and experience. Such projects have great advantages in educating young people, but they represent a great challenge for the institutions themselves. Insufficient knowledge of the technology itself, data collection and processing of the "final" result are just some of the challenges. For successful projects, adequate preparation is particularly important, which includes prior digitization of the resources, enabling access, as well as the formation of "realistic expectations" by both educators and the audience.

When it comes to the culture of memory and the very nature of history, it should be borne in mind that even when using AI, the challenge remains of overcoming the differences arising from the "truth" generated by AI and the "objective truth" when it comes to sensitive topics. It is also important to "incorporate" empathy into education about the culture of memory, which previously came from living people, i.e. conveyors.

In addition to the existing challenges, the inclusion of AI in the culture of remembrance, and by the institutions themselves, is very important because it is also a form of fighting against the distortion of history

and disinformation that mainly occurs “online” and has a great impact on society, especially on young people.

Keywords: Artificial intelligence, culture of remembrance, cultural institutions, digitalization, disinformation

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European Center for Peace and Development (ECPD),
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CULTURE IN THE ALGORITHM: THE IMPACT OF CULTURAL MODELS ON THE DESIGN AND PURPOSE OF ARTIFICIAL INTELLIGENCE SYSTEMS

The development of artificial intelligence is not only a technological process, but also a cultural phenomenon in which social norms, value systems, and conceptual frameworks of societies deeply inform the architecture, purpose, and functions of the systems themselves. This paper explores how culture permeates the algorithms themselves, shaping the relationship to data as a resource, the ways in which information is managed and the metrics of success, and the decision-making criteria that these systems produce. Special emphasis is placed on the differences between individualistic and collectivist cultural models and how they influence the architectural solutions and value orientations of artificial intelligence. Through critical reflection, the limits of the existing technical architectures in reflecting the complexity of human thought and social dynamics are pointed out, as well as the need for culturally sensitive design and application of these technologies. The aim of the paper is to open space for an interdisciplinary discussion on the responsible development and regulation of artificial intelligence in the global cultural context.

Keywords: Artificial intelligence, cultural pattern, Western paradigm, epistemology, ontology, digital sovereignty, alternative models of AI

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ARTIFICIAL INTELLIGENCE IN THE SERVICE OF CULTURAL HERITAGE: ENHANCING PROTECTION AND MUSEUM INFORMATION SYSTEMS

The application of Artificial Intelligence (AI) in the cultural heritage sector offers transformative opportunities for the protection, preservation, and accessibility of historical and artistic assets. As institutions face increasing challenges related to conservation, digitization, and public engagement, AI technologies provide new solutions that extend beyond traditional practices. This paper explores the role of AI in supporting cultural heritage, with a particular focus on two core areas: (1) the protection and documentation of tangible and intangible heritage, and (2) the development and maintenance of advanced information systems in museums.

AI tools are already being implemented to detect deterioration in historical artefacts, predict structural damage in heritage buildings, and monitor environmental risks. Machine learning algorithms can assist in identifying at-risk sites through satellite imagery, while computer vision helps analysing damage patterns or reconstructing missing pieces of ancient objects. Simultaneously, AI-driven systems are reshaping how museums catalogue, interpret, and disseminate knowledge. By automating metadata generation, natural language processing, and object recognition, museums can more efficiently manage their collections and offer enriched user experiences through chatbots, virtual assistants, and personalized digital tours.

This paper also addresses the social aspects and ethical implications of applying AI in cultural institutions. While AI contributes to the democratization of access to heritage, it raises critical concerns about data ownership, authenticity, and the representation of diverse narratives. Through interdisciplinary case studies and analysis of ongoing projects, we evaluate best practices and provide recommendations for the responsible integration of AI in the cultural heritage sector. The aim is to highlight how technology, when aligned with human-centreed values

and professional standards, can foster resilience, sustainability, and innovation in the protection of cultural heritage.

Keywords: Cultural heritage, Artificial intelligence, museums, digital preservation, information systems

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ARTIFICIAL INTELLIGENCE FOR CULTURAL HERITAGE

Recent technological advances have opened a growing spectrum of research focused on developing artificial intelligence (AI) tools tailored to the needs of cultural heritage preservation. AI is now actively applied in inpainting techniques for restoration of aged oil paintings and manuscripts, as well as in 3D reconstruction of archaeological artefacts and historical sites, as well as enhancement of accessibility through virtual and augmented reality experiences. Deep-learning models also contribute to the attribution of authorship, stylistic analysis, and even deciphering of ancient or damaged scripts. Additionally, AI-driven monitoring systems are being used to safeguard cultural heritage and detect risks from environmental threats such as natural disasters and conflicts in real time, using satellite imagery and real-time analytics. Despite the promising developments, challenges remain regarding ethical issues, standardization, cross-disciplinary coordination, and more. Initiatives such as AI4Culture and HeritageWatch.AI indicate a strategic shift toward embedding AI into cultural policy and practice. This abstract outlines the expanding role of AI as a structural component in the future of heritage restoration, conservation, research, and engagement.

Keywords: Artificial intelligence, cultural heritage, digital restoration, AI in art conservation, cultural policy

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Mathematical Institute of the Serbian Academy of Sciences and Arts

LIBRAIFY

Scanned books, newspapers, and manuscripts in low-resource languages remain unreadable by search engines and language models, leaving many speakers without digital access to their own heritage. LibrAIfy tackles this gap by turning page images into structured text and, in the same process, generating the training corpora that modern language tools require. Its pipeline links layout analysis, optical character recognition, and language-specific post-processing in a closed loop: each extraction pass enlarges the corpus; the enlarged corpus refines the models; the refined models raise the next pass's accuracy – a practical route around the cold-start barrier that stalls many minority-language projects.

Technology alone is not enough. LibrAIfy embeds localisation at the platform level so that workflows can be adapted without touching the core code. The same modularity applies to the AI stack, allowing the introduction and annotation of new collections.

LibrAIfy 1.0, funded by the Serbian GovTech initiative and completed in July 2025, implements the initial pipeline on Serbian collections such as Politika. LibrAIfy 2.0, now in development with support from the French Ministry of Foreign Affairs, will package this method into an open, production-ready framework, to be released globally by UNDP as a digital public good, with added support for languages in the 170+ developing countries in which UNDP operates.

Keywords: Low-resource languages, optical character recognition, digitisation pipeline, cold-start problem, language technology infrastructure

8
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PARTICIPATORY AI DEVELOPMENT THROUGH AN ANTHROPOLOGICAL LENS

Anthropologists are often asked why they study digital technologies. It is easier to answer that question today, with artificial intelligence (AI) developers seeking to mimic human capacities—teaching, assisting, entertaining, driving, and even healing us. For AI to achieve these goals, it must "understand" who we are – our actions, preferences, needs, thoughts, knowledge, and values. In this sense, AI development mirrors a vast ethnographic project aimed at learning about humanity.

This global AI "ethnographer" is neither human, nor an anthropologist, yet it echoes the early days of anthropology. Like AI-focused computer science today, early anthropology was marked by a confidence that human behaviour could be fully captured, understood, and objectively interpreted, guiding "less-advanced" societies along the presumed linear path of progress. This same arrogance is now reflected in the AI research's efforts to reduce human complexity into rigid models, often containing ethical blind spots. An anthropological lens reveals the limitations of AI models and highlights the need for more ethical and inclusive technology development. The AI-focused computer science must learn what anthropology did over decades – that such reductive missions are not only impossible, but also unethical. Anthropology's evolution toward principles of reflexivity, cultural relativism, and participatory research provides a framework for rethinking AI development. Drawing from research and the author's ethnographic work in AI-focused software industries, this paper explores participatory AI development grounded in sustainable development, participatory design, and the anthropology of emerging technologies. Viewing AI development as a process of co-construction—one that embraces participatory approaches and involves diverse communities in shaping its trajectory – ensures that AI technologies are developed with, rather than imposed upon, the people they are meant to serve. This approach also addresses the risk of turning anthropology into merely another "training set" for AI's vast data collection.

Keywords: Participatory AI development, anthropology of emerging technologies, continuous user engagement

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APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE DEVELOPMENT OF CULTURAL HERITAGE TOURISM

Contemporary trends in the tourist market emphasize the accelerated development of special forms of tourism characterized by the absence of the mass tourism, among which cultural tourism, i.e. tourism of cultural heritage, occupies an increasingly important place. Cultural heritage implies cultural goods inherited from previous generations or created in the present, as a form of interaction between man and space. Cultural tourism, i.e. cultural heritage tourism, is an effective way to promote, preserve and sustainably develop cultural heritage. With the development of tourism, cultural heritage becomes an attractive resource that attracts interested tourists and visitors. The presentation and interpretation of cultural heritage in order to develop a cultural tourist product of a specific tourist destination must be harmonized with modern innovations and current trends in the society. In this regard, the most dominant innovations currently applied in the modern interpretation of cultural heritage are realized with the help of digitization and artificial intelligence, which can be a powerful tool for the promotion of cultural heritage in tourism available to a wide population. The application of tools such as machine learning for the recognition and classification of cultural objects, AR/VR technologies for creating virtual tours, as well as recommendation systems that enable the analysis of user behaviour and interests, form an important part of modern solutions in the field of cultural tourism, i.e. tourism of cultural heritage. During the coronavirus pandemic, technological innovations and digitization that were applied in cultural tourism and cultural heritage contributed to the realization of numerous benefits. Today, more and more work is being done when it comes to the application of digital tools in the promotion of cultural heritage, in order to increase the effect of attendance and spread awareness about the

significance and importance of cultural heritage. The aim of this work is to review artificial intelligence tools, as well as digital methods used in the promotion and interpretation of cultural heritage in order to achieve numerous benefits in the development of cultural tourism, i.e. tourism of cultural heritage.

Keywords: Cultural tourism, digitization, virtual tours

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Mr Lazar Velimirović
Mathematical Institute of the Serbian Academy of Sciences and Arts

KALEIDOSCOPE OF THE PAST: EXPLORING OLD PERIODICALS WITH AI

Old periodicals bear witness to numerous historical events and social transformations, while also capturing the rhythms of everyday life and reflecting political and cultural contexts, including voices and perspectives that are often marginalized. Thanks to modern equipment and technological innovations, the digitization process now allows these valuable resources to be scanned and preserved as high-quality images. However, to unlock their full potential in satisfying the curiosity of the general public and making them usable for a wide range of research, from historical analysis to anthropological studies, it is essential to convert the images into searchable text. This requires advanced tools for complex layout analysis, optical character recognition, and text enhancements.

The National Library of Serbia began its digitization efforts quite early, in the 2000s, gradually building a rich and diverse collection of digitized periodicals. However, due to the physical characteristics of the materials, including artefacts influenced by time and non-standard printing practices, along with the linguistic complexity of the local languages, neither open nor commercial software alone could produce searchable texts of sufficient quality. With the support by the Innovation Fund of the Republic of Serbia, under the GovTech program, the Mathematical Institute of the Serbian Academy of Sciences and Arts joined the National Library of Serbia in advancing these digitization efforts. Together, by developing a customized solution based on AI technology, the team managed to uncover hidden patterns in the periodicals and significantly improved the accuracy of the extracted text.

With the goal to share the experiences of this joint initiative and highlight the potential of modern AI tools for libraries that serve as guardians of cultural heritage, the working pipeline behind LibrAIfy,

a tool designed and developed for the digitization of periodicals in the Serbian language from the 19th and 20th centuries, will be presented. In addition to showcasing the open-source tools and AI models used for intelligent image and text processing, the challenges faced, as well as the reflections and ideas about further development, will be discussed. Furthermore, efforts will be made to inspire and encourage collaboration across disciplines on culture-revealing projects, demonstrate some of the positive aspects of AI, and emphasize the importance of building local communities around the intersection between AI and the humanities.

Keywords: Old periodicals, digitization, AI, digital humanities

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Ms Nevena Novaković
Institute of Social Sciences

ARTIFICIAL INTELLIGENCE VERSUS AUTHORSHIP: A CHALLENGE FOR THE CREATIVE INDUSTRY

Artificial intelligence represents the latest technological achievement, but also a challenge of modern society. It has confronted modern man with his own civilization, as a set of knowledge, technological achievements and cultural heritage. Artificial intelligence raises the fundamental question on the kind of society we are creating, and therefore also the kind of culture we are creating.

The global neoliberal capitalist society perceives technological progress from precisely that neoliberal capitalist logic, that is, as a means to achieve economic profit. If we apply the economic logic to the scope of artificial intelligence, we can expect that it can do many things for us and instead of us. In addition, the consumer society dictates the commodification of everything, including technological progress. This means that access to artificial intelligence tools is sold, and that there are branded ones, better ones, and worse - cheaper ones.

The cultural field (Bourdieu, 1993) is viewed from one perspective, represented by many contemporary creators (Hayao Miyazaki, Nick Cave, etc.) as untouchable in the face of artificial intelligence, while others, the more enthusiastic among the creators, see artificial intelligence as an interesting and useful innovation, and the most concerned see it as a serious threat to the cultural field as a whole. Cultural economy, which is a relatively new discipline, deals with the creative industry as an economized field of cultural production. The rapprochement of economy and culture, as well as the creation of a cultural industry, is not a new phenomenon. It is a process that has been actively happening for the past thirty years and is discussed by many authors, while the cultural economy is a new field in which capitalism tends to prosper. We find the reason for this in the profitability, receptivity and the apparent or real innovation and authenticity of cultural products. The cultural economy foregrounds the creative industry or the creative economy, avoiding the term cultural industry which was characteristic of the pejorative attitude towards that industry held by the Frankfurt School (Adorno and Horkheimer, 2008). The economic becomes woven into the cultural (Crang, 1997) and that is a fact. The

easiest link between the cultural and the economic in the consumer society arises as a consequence of cultural tourism, which manifests itself in conspicuous consumption (Veblen, 2008) by which consumers make distinctions among themselves (Bourdieu, 1996), but also due to the influence of the logic of "faster production" of cultural products, including their content and simpler sales. It should not be so surprising that the contribution of artificial intelligence has been found in this field as well.

The creative industry faces several challenges in meeting artificial intelligence and developed AI tools for generating a wide variety of content, from images to entire ideas and texts, and the first, and perhaps the most obvious, concerns authorship. The question arises as to who is the author of the content generated with the help of artificial intelligence tools and whether the death of the author occurs in this way. Another, more economically relevant challenge concerns the potential loss of jobs in the creative industry, precisely thanks to the neoliberal logic that modern society applies consistently. The third challenge concerns the problem of global distribution, that is, the division of the world into the centre, semi-periphery and periphery (Wallerstein, 2005), and access to AI tools, which – like any other product in the global consumer society – are charged for, and therefore not available equally to everyone.

In this paper, we will attempt to examine the current reach of artificial intelligence and its present impact on the creative industry.

Keywords: Artificial intelligence, authorship, creative industry, cultural economy, AI

SESSION II

AI AND MEDIA

INTRODUCTION

The rapid advancement of artificial intelligence is transforming the media landscape, reshaping how information is produced, distributed, and consumed. From algorithmically curated content to synthetic media and deepfakes, AI technologies are challenging traditional notions of authorship, authenticity, and journalistic integrity. These changes raise critical questions about the ethics, transparency, and the role of media in democratic societies.

This section of the conference explores the complex relationship between AI and media, examining how intelligent systems influence public discourse, manipulate perception, and redefine the boundaries between truth and fiction. Contributors address topics such as AI-driven journalism, content moderation, misinformation, surveillance, and the evolving role of media professionals in an automated environment.

By bringing together interdisciplinary perspectives, we aim to foster a deeper understanding of the societal impacts of AI in the media sector, and explore strategies for responsible and inclusive development of media technologies that uphold democratic values and human rights.

Keynote speaker
12
Mr Borislav Vukojevič
University of Banja Luka, Faculty of Political Sciences

BEYOND THE ALGORITHM: NAVIGATING THE DUAL FACES OF AI IN CONTEMPORARY NEWS MEDIA

The integration of artificial intelligence (AI) into newsrooms is reshaping how information is sourced, produced and circulated. While generative models streamline editorial workflows and open new creative possibilities, the same technologies facilitate large-scale fabrication of "synthetic news," amplifying disinformation and eroding public trust. This paper presents a mixed-methods study that examines both sides of this transformation. First, a content-analysis of AI-assisted news items from European outlets (2023–2025) quantifies stylistic shifts, error patterns and audience engagement. Second, semi-structured interviews with journalists, fact-checkers and AI engineers explore perceptions of agency, accountability and editorial autonomy. Finally, we develop a risk-benefit matrix that maps generative versus assistive AI use-cases onto ethical, economic and regulatory dimensions. Preliminary results indicate that AI-driven automation can reduce production time by up to 35 %, yet simultaneously introduces subtle biases that remain invisible to standard verification pipelines. We argue that a "human-in-the-loop" governance model–combining transparent disclosure, algorithmic audits and newsroom training–offers a pragmatic path forward. By situating these findings within the broader social implications of AI adoption, the paper contributes concrete policy recommendations for media organizations and regulators.

Keywords: Artificial intelligence, news media, generative journalism, disinformation, algorithmic governance, media ethics

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Mr Slobodan Bubnjević
Institute for Physics

MEDIA IN THE AGE OF GENERATIVE AI

The emergence of generative artificial intelligence is already reshaping the landscape of contemporary media. This presentation explores how to measure its impact and make a smart assessment of the extent to which AI is transforming journalistic practices, audience experience, and the dynamics in the public sphere. It offers a framework for examining a fundamental question: Is AI in modern media truly a tool that empowers creativity and accelerates content production, or has it become an autonomous force that redefines the boundaries of reality and authorship?

Many scholars agree that we are currently witnessing a phase transition in the world of media in the third decade of the 21st century. Following the Covid crisis, amid a deepening crisis of trust, the rise of populism, and the advent of new technological paradigms, several simultaneous forces are now competing for media dominance. The two-decade transition from print to digital content has effectively ended. The notion of source credibility has been entirely redefined. Social media and big tech companies, in a prolonged conflict with traditional media, have created a significant generational split in audiences. The classical 21st-century media funding mode l– sponsor pays, user gets free content – has collapsed, prompting a shift toward paywall systems as the only sustainable solution for online editions. Meanwhile, terrestrial television networks are locked in a battle with streaming platforms.

In this context, AI as a new disruptive technology, may act as a catalyst for the complete transformation into a new media phase. This presentation introduces three case studies – as models – to examine this transition: the distribution of news, the dissemination of science communication content, and the spread of anti-science narratives. Through their analysis, the presentation explores how algorithms, generative AI models, and recommendation systems shape the media ecosystem, and influence content visibility, public opinion formation, and the boundaries between the real and the artificial. Special attention is given to the questions of authenticity and authorship, as well as to the emerging forms of manipulation and misinformation enabled by AI.

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Ms Marija Mitrović Dankulov
University of Belgrade, Institute of Physics Belgrade, National Institute of the Republic of Serbia

AI AND COMPUTATIONAL SOCIAL SCIENCE: EMPIRICAL STUDY AND MODELLING OF COLLECTIVE SOCIAL BEHAVIOUR

The shift in the way we consume media and create content, enabled by Web 2.0, has led to the emergence of a new interdisciplinary research field: computational social science. The computational social science combines the tools, methods, and paradigms from sociology, psychology, political science, economics, physics, and computer science, and applies them to studying of social phenomena using computational methods. Artificial intelligence (AI) and computational social science intersect in many ways. AI brings advanced capabilities to the computational social science in the areas such as natural language processing, predictive modelling, social network analysis, and agent-based modelling. On the other hand, the computational social science can help in better understanding how interactions between humans and AI power systems lead to changes in how we create and disseminate information. In this presentation, I will explain how we can utilize various aspects of AI to collect, curate, and extract information from different social media platforms. I will demonstrate how we use this data to investigate the emergence of collective trust in social media communities and information sharing. I will explain how we can leverage large language models (LLMs), datasets, and empirical analysis to create realistic simulation dynamics in social media communities. These agent-based models enable us to examine various scenarios in information and opinion sharing, representing a paradigm shift in how we study social systems.

Keywords: Computational social science, social media communities, information sharing, AI, LLM

SESSION III

CHALLENGES IN THE ERA OF TRANSHUMANISM AND THE USE OF AI, AND THE TRANSHUMANISATION OF SOCIETY

ARTIFICIAL INTELLIGENCE AND TRANSHUMANISM: RESHAPING SOCIAL FLOWS

INTRODUCTION

Challenges in the Era of Transhumanism and the Use of Artificial Intelligence: Towards the Transhumanisation of Society

The rapid advancement of artificial intelligence and biotechnological innovations is ushering in a new era – one increasingly defined by transhumanist ideals. This transformation envisions the advancement of human capabilities beyond their natural limits through integration with technology, from neural interfaces and genetic engineering to AI-driven decision-making. As we approach the threshold of a transhuman society, critical challenges emerge: ethical questions about identity, autonomy, and inequality; social disruption driven by uneven access to improvements; and regulatory gaps that lag behind innovation.

At the heart of these questions lies the question of what it means to be human in an age where the line between man and machine is blurring. The societal implications of artificial intelligence and transhumanism extend far beyond technical feasibility – they strike at the core of democratic values, cultural continuity, and human dignity. This session invites reflection on the multidimensional impact of transhumanism and artificial intelligence, exploring both the promise of expanded human potential and the dangers of unintended consequences. How we address these challenges today will shape the future contours of society, humanity, and life itself.

PART ONE – VULNERABLE SOCIAL COMMUNITIES

Keynote speaker
15
Ms Pilar Orero
Universitat Autònoma de Barcelona

PARTICIPATORY HUMAN-CENTRIC VIRTUAL WORLDS: CAN THE CITIVERSE BE INCLUSIVE AND DEMOCRATIC?

The information society has not managed to bridge the gap and offer full participation to all citizens. Most of technology developments have ignored those members of society who are unrepresented: vulnerable groups. With some planning at the onset of any IT development this could be avoided. Now Artificial intelligence is again reproducing the same pattern. Data driven technology development – products and services – do not take into consideration smaller data models, leading to a biased development of AI based tools and services. Again, with some small effort at the design stage this could be avoided, leayding towards an inclusive digital society. The presentation will show efforts taken at the UN ITU agency towards breaking this digital divide, focusing on the Citiverse.

Keywords: Digital inclusion, media accessibility, universal design, Human centric participatory methodologies

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Mr Veselin Mitrović
Institute of Social Sciences

FROM SOCIAL AND SPATIAL TO MINDLESS-BASED VULNERABILITIES: RETHINKING RESILIENCE IN THE AGE OF AI

As the field of disaster studies continues to develop, our understanding of vulnerability is expanding. Traditionally, vulnerabilities have been viewed through social and spatial lenses. Social vulnerabilities – rooted in factors such as economic inequality, demographic pressures, and limited access to resources – can leave certain groups disproportionately exposed to harm during crises. Spatial vulnerabilities compound these risks through physical separation, the formation of marginalized urban areas, and the impacts of uncontrolled development. Often, these vulnerabilities overlap, creating environments of prolonged stress and reduced capacity to adapt and recover.

Yet, a new and more elusive form of vulnerability has been emerging in today's technologically mediated world: *mindless-based vulnerability*. This concept captures a subtle but profound shif – the diminishing of our capacity for critical thinking, anticipation, and ethical judgment as we increasingly rely on artificial intelligence. While AI offers efficiency and convenience, the overdependence can lead to disengagement from meaningful social interaction, reduced motivation for learning, and heightened exposure to online harms, particularly for younger individuals navigating digital spaces during crises.

The COVID-19 pandemic brought many of these dynamics into a sharp relief. AI played a vital role in managing the crisis, yet it also reflected and reinforced global inequalities. For instance, access to life-saving vaccines was often dictated by a nation's technological and economic power, rather than by need, reminding us of the deep imbalances that persist within our interconnected systems.

Looking to the future, we imagine a scenario of a *Dystopian Global AI Society* (GAIS) – a world where AI oversees much of society's planning and resource allocation. While efficient on the surface, such a system risks embedding existing injustices even more deeply, weakening local agency, and eroding collective resilience. This vision underscores the urgent need for global frameworks that govern AI ethically and inclusively.

In conclusion, recognizing *mindless-based vulnerabilities* challenges us to rethink how we define and address risk in the 21st century. It is not enough to tackle only the social or spatial aspects of vulnerability – we must also confront the cognitive and ethical implications of AI dependence. Building a resilient society means ensuring that technological advancement is guided by human values, equity, and a commitment to the common good.

Keywords: AI, mindless-based vulnerabilities, resilience, spatial and social vulnerabilities, Dystopian AI society

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FROM AI TO NATURE AND BACK: ADDRESSING ADOLESCENT MENTAL HEALTH THROUGH AI, EDUCATION AND NATURE-BASED ACTIVITIES

Adolescent mental health is facing an unprecedented global crisis, marked by rising levels of anxiety, depression, emotional dysregulation, and related psychological challenges. Factors such as prolonged social isolation, increasing academic pressures, and the pervasive influence of digital technologies have significantly exacerbated these issues, demanding urgent, multidimensional interventions. In response to this complex landscape, this paper introduces the AI@Smile framework, a comprehensive, interdisciplinary model that uses artificial intelligence (AI) to promote early detection, prevention, and support for youth emotional well-being.

The framework integrates advanced AI methodologies with human-centred strategies, aiming to identify early signs of emotional distress through non-invasive, ethical digital monitoring while prioritizing user privacy and data protection. It features a dynamic digital platform that offers multilingual massive open online courses, interactive tutorials, and a gamified mobile application designed to engage adolescents in proactive mental health management.

Recognizing the pivotal role of adult stakeholders, AI@Smile also delivers targeted digital training for teachers, parents, and caregivers, enhancing their capacity to interpret AI-generated emotional health insights, and intervene effectively before more severe issues arise. Simultaneously, the framework emphasizes the restorative power of nature-based interventions as a critical complement to digital tools. Structured outdoor activities – including eco-therapy sessions, guided hikes, and community gardening – are integrated to promote anxiety reduction, improve emotional regulation, and foster resilience among adolescents. These activities aim to reconnect young individuals with the natural environment, offering therapeutic benefits that technology alone cannot provide.

The main contribution of this paper lies in testing insights from the existing literature against practical phases of chatbot development and

initial field implementation. The study adopts a narrative review approach, synthesizing findings from academic literature on adolescent mental health, supportive legal frameworks, and emerging best practices in AI-driven mental health support. This review is complemented by the data collected through surveys conducted with adolescents, providing a direct understanding of user needs and emotional states, as well as by the practical experiences gathered during the design, testing, and initial deployment of the emotionally intelligent chatbot. The paper concludes by outlining key directions for future research, including opportunities for refining AI models, expanding nature-based interventions, and further strengthening ethical and privacy standards for youth mental health technologies.

Keywords: Artificial intelligence, emotional distress detection, digital education, nature-based interventions, project management

PART TWO – SOCIETY AND AI

Keynote speaker
18
Ms Yayla Gül CERAN KARATAŞ
Istanbul Medeniyet University

WHAT IS THE METAPHYSICS OF MEANING IN A TRANSHUMANISED SOCIETY?

The transhumanisation of society raises a crucial question: are we enhancing artificial intelligence for the benefit of humanity, or reshaping humanity itself through the evolution of intelligent technology? As early as 1959, the Turkish mathematician Cahit Arf claimed that artificial intelligence was essentially just a sophisticated technology. Therefore, modern technology is not just tools; it is a way of understanding the world. It has evolved exponentially to become a metaphysical structure. Stiegler claims that before we can address the challenges facing technology and humankind, we must first understand how technics and technology are intrinsic to humanity and predate its birth. Today, we are discussing not merely advanced tools, but the possibility of a symbiotic relationship between human beings and machines – an idea at the heart of Society 5.0, which is often described as a 'technology-based, human-centred' society.

Atsushi Deguchi said that "society 5.0 aims to transform not only industrial production through IT integration, but also to reshape everyday life, including our habits, social relations, and spatial environments. It proposes a system where all societal functions – healthcare, mobility, education, commerce, and leisure – are interconnected and enhanced through artificial intelligence and the Internet of Things (IoT). In this model, vast amounts of real-world data are gathered, processed, and transformed into what is termed 'meaningful information' through iterative AI-based feedback loops."

Yet this concept of "meaningful information" deserves deeper philosophical scrutiny. What does "meaningful" mean? For whom is it meaningful, and through what ontological or metaphysical lens do we define it? These are not mere technical or semantic issues; they open profound philosophical discussions regarding knowledge, existence, and value.

Rather than treating each system in isolation – "such as regulating room temperature or ensuring timely transport" – Society 5.0 envisions a holistic intelligence embedded into the very fabric of society.

However, this requires not only technological innovation, but also a rethinking of ontology: what kind of being is presupposed in a society where intelligence circulates across human and non-human actors? For example, Yunus Emre, from an entirely different metaphysical tradition, speaks of knowledge as love (ilm-i aşk), and of the heart as the site of understanding. How might this non-instrumental, affective, and embodied conception of meaning challenge the cognitive-centric paradigm of Society 5.0?

In seeking to define what makes Society 5.0 different, we must turn not only to technical innovation but to philosophical inquiry. What kind of metaphysics will allow us to imagine a future where information is not just processed but understood, shared, and lived meaningfully?

Keywords: Metaphysic, Human-centred technology, meaningful information

Keynote speaker
19
Mr Ernest Ženko
University of Primorska

BRIDGING THE DIVIDE: DEMYSTIFYING ARTIFICIAL INTELLIGENCE AND THE TWO CULTURES PROBLEM

The rapid proliferation of artificial intelligence has reignited a long-standing intellectual tension: the divide between the natural sciences on the one hand and the humanities and social sciences on the other. Originally framed by C. P. Snow as the "two cultures" problem, this schism continues to hinder our collective ability to make sense of technological change, which today is closely tied to the development of AI. While AI is often portrayed in exclusively scientific and technical terms, its societal impact, ethical implications, and cultural significance demand a broader interpretive lens – one that draws on disciplines from the so-called non-technical camp. Unfortunately, this divide means that the technological perspective often fails to consider cultural and ethical contexts, while the humanistic perspective frequently lacks a clear understanding of how AI systems actually work "under the hood."

In this presentation, we intend to explore the need to demystify artificial intelligence by addressing not only its technical architecture but also the cultural myths that surround it. We argue that misunderstanding AI is not merely a public issue – though it certainly is that as well – but also a scholarly one, rooted in disciplinary silos and a failure to engage in genuine cross-cultural dialogue between academic domains. It must be emphasized that key ethical questions, such as the problem of AI alignment, cannot be meaningfully addressed by focusing on technological considerations alone, and that without such dialogue, there can be no proper education in the field of AI.

Drawing from philosophy of technology, ethics, and the history of ideas, we aim to outline how this divide manifests today, how it distorts our understanding of AI, and why an integrated perspective is urgently needed. We conclude with concrete proposals for educational reform, research collaboration, and institutional structures that could help bridge this epistemological gap, and we point to examples demonstrating that such bridging is not only necessary but also possible.

In doing so, we call for rethinking of both artificial intelligence itself, and our cultural reflexes toward knowledge, expertise, and meaning.

Keywords: Artificial intelligence, philosophy of technology, ethics, interdisciplinary education, two cultures problem

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THE IMPACT OF AI IMPLEMENTATION IN THE ARMY ON MILITARY ETHOS AND MILITARY CULTURE

The application of artificial intelligence (AI) today in various spheres and segments of military activity and organization represents a challenge with the greatest transformative potential for the entire defence system. It is certain that the implementation of AI initiated a new and current wave of revolution in military affairs (Revolution in Military Affairs - RMA) which, according to the almost unanimous assessment of experts in this field, will cause greater and more substantial changes than the previous five waves of RMA. Along with the expected adaptations and changes that will be necessary at all levels (tactics, operations and strategy) and in all domains of military power application (land, water, air, space and "cyber"), it is necessary to investigate and explain the changes that the implementation of AI causes in the sphere of military ethos, culture and identity itself. Application of AI in the processes of armed struggle, decision-making at the tactical, operational and strategic levels, selection, military training and education, command and control, intelligence work, etc. represents an essential challenge for the sustainability of the traditional assumptions of the military ethos, i.e. the key virtues and character traits of the members of the military, as well as the specific values and norms of the military profession. Therefore, the institutional and traditional military culture, which in many ways shapes the professional, and thus to a significant extent the overall identity of the members of the military profession, is less and less compatible with the new "reality" of the army, in which AI will be implemented at almost all levels of organization and functioning. The specific and unique military culture, based on the traditional military-warrior ethos and orthodox military virtues, will in the decades ahead undergo a period of adaptation and transformation in order to harmonize with the new reality of the army as an institution that will, almost inevitably and surely, be determined by the current and future spheres of application of AI. The mentioned adaptations and transformations will be reflected in every dimension of the army as an institution – from its structure and organization, through the form and way of functioning, to the profile of its members.

Keywords: Artificial intelligence, military ethos, military culture, military virtues, military values

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Institute of Social Sciences

USE OF ARTIFICIAL INTELLIGENCE (AI) IN THE EDUCATION SYSTEM – A COMPARATIVE ANALYSIS OF SERBIA AND ITS NEIGHBOURS

The concept of modern education has been in a constant state of flux in the 21st century, influenced by new technologies that redefine the paradigm of traditional learning models. Artificial intelligence (AI) has already been a topic for debate for years. – However, its rapid development and use across numerous fields have only recently gained momentum. Leading nations worldwide, along with governmental and non-governmental sectors, have quickly recognised the advantages of AI and begun its implementation. The benefits of using AI have been swiftly acknowledged both in the education system (primary and secondary schools, universities) and in cultural institutions (museums, archives, libraries). This paper examines the current state of AI application in the education systems in Serbia and its neighbours, highlighting the specificities of AI implementation in these countries. Special attention is dedicated to the use and analysis of advanced platforms in education, such as ChatGPT, MidJourney, and HeyGen. With their transformative potential, these technologies are reshaping traditional teaching models and steering the education process toward modernisation. However, the modernisation also entails the integration of intelligent technological-pedagogical knowledge about content, and offers opportunities to combine technological competencies with teachers' (educators') pedagogical skills in AI. The potentials for personalised learning are expanding, allowing educational materials to be tailored to the specific needs and abilities of each pupil or student, which could ease the workload for teachers and other educators, including administrative school staff. This enables the introduction of more modern curricula and didactic teaching materials, fostering a more creative environment for working and learning. Additionally, new technologies significantly streamline certain administrative tasks across all levels, from preschool institutions to universities and education centres. The authors of the paper present the characteristics

of the current state of AI use in Serbia and neighbouring countries, and through a comparative analysis, explore the potential uses of AI in education, as well as the challenges and risks arising with new technologies. This comparative approach provides an insight into the progressiveness, inclusivity, and technological orientation of the education environment.

Keywords: AI, education system, personalised learning, Serbia, comparative analysis

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WHEN A MACHINE INTERPRETS EMOTIONS: A COMPARATIVE ANALYSIS OF HUMAN AND AI-BASED EMOTION ANNOTATION IN TEXT

Emotions are a fundamental part of human experience, significantly influencing decision-making, communication, and how we perceive the world. People use language to express their inner states, and in today's digital age, these expressions increasingly appear in online texts – on social media, forums, and blogs. As a result, automatic emotion recognition in text has become a key area of artificial intelligence (AI), particularly for developing systems that simulate empathy, such as emotional assistants and human-machine interfaces – core components of transhumanist visions.

Emotion analysis involves identifying states such as joy, sadness, or fear, while sentiment analysis contributes by determining emotional polarity (positive, negative, neutral). Modern techniques increasingly rely on large language models (LLMs), which automatically recognize emotions based on learned patterns. Theoretical approaches include categorical models (e.g., Ekman's model with six basic emotions; Plutchik's wheel of emotions) and dimensional models (e.g., valence, arousal, dominance).

This study uses the GoEmotions model, trained on a dataset of 58,000 manually labelled Reddit comments, covering 27 emotion categories and based on the taxonomy by Crowell, J. L. (2019). Since the model was developed for English, the original texts (written in Serbian) were translated using the Google Translate API.

The dataset analysed consists of 485 posts collected from the women's forum Ana.rs, in response to the question: "What are the feelings you will never forget?" The participants shared deeply personal emotional experiences. Manual annotation identified 118 distinct emotions, demonstrating the richness of linguistic expression and the human ability to detect subtle emotional nuances. In contrast, the AI model is limited to 28 predefined categories. When comparing polarity labels

from human and machine annotations, a 95% agreement was found, indicating high surface-level reliability. However, deeper analysis revealed that AI often failed to recognize complex emotions such as suffering, emptiness, or inner conflict – likely due to limited contextual understanding and a restricted emotional vocabulary. The highest agreement occurred for basic emotions like sadness, fear, and disappointment, while more complex feelings were often missed.

These findings highlight the strong potential of AI in recognizing primary emotions but also emphasize the need for more flexible models capable of capturing the depth and complexity of human emotional expression.

Keywords: Emotion analysis, Artificial intelligence (AI), manual annotation, large language models, Human-AI comparison

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ARTIFICIAL INTELLIGENCE, TRANSHUMANISM AND THE EVOLUTION OF LOVE RELATIONSHIPS

This paper deals with a critical analysis of the symbiotic relationship between the rapid development of artificial intelligence (AI), emergent transhumanist paradigms and the consequent, potentially radical, transformation of human intimate relationships. Starting from the assumption that AI goes beyond the role of a mere technological tool and becomes an active agent in the reconfiguration of social structures, we explore how its integration with transhumanist aspirations to overcome biological limitations raises fundamental questions about the future of love, partnership and human nature itself. The paper questions the ontological status of emotions in the context of algorithmically mediated and potentially artificially generated affective states, as well as the implications of genetic engineering and cybernetic enhancements on the perception of attractiveness, compatibility and durability of relationships. Through an interdisciplinary approach that synthesizes philosophy of technology, sociology, neuroethics, and futures studies, we speculate on the eroding boundaries between the biological and the artificial, "the natural" and the "designed" in the sphere of intimacy. We pose a provocative question whether we are on the threshold of a posthuman era in which traditional concepts of love will be deconstructed and replaced by new, technologically modulated forms of connection, or whether we are witnessing a renaissance of humanity through technologically mediated deepening of emotional intelligence and empathy. The ultimate goal of the paper is to stimulate academic debate about the ethical, existential and social challenges that this inevitable evolution poses to humanity.

Keywords: Artificial intelligence, transhumanism, evolution, love, intimacy

PART THREE –
AI AND ECONOMY

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ARTIFICIAL INTELLIGENCE OF THINGS (AIOT) AND PHYGITAL TOURISM EXPERIENCES: UNDERSTANDING THE IMPLICATIONS OF AI-POWERED SMARTPHONES

The integration of artificial intelligence (AI) into smartphones marks a transformative shift in mobile technology, enabling a seamless convergence between physical and digital environments and creating new possibilities for phygital tourism experiences. This conceptual paper explores how AI-powered smartphones – through advancements in generative AI, hyper-customization, and intuitive interaction – are reshaping tourist engagement with smart destinations. Building on insights from smart tourism, phygital marketing, and AI research, it identifies new modes of pervasive interaction, agile service integration beyond traditional app-based models, and enhanced experiential personalization.

A key dimension discussed is the intersection of AI-powered smartphones with the broader evolution of the Artificial Intelligence of Things (AIoT). As smartphones increasingly interact with smart environments – connected sensors, augmented reality interfaces, and ambient intelligent infrastructures – they become central nodes in a distributed network of the AIoT-enabled tourism services. This fusion allows for real-time adaptation of services based on context, user behaviour, and environmental data, further dissolving the boundaries between digital and physical spaces.

The paper highlights both the opportunities and challenges posed by this transformation, including overcoming infrastructural limitations, addressing privacy and ethical concerns, and promoting digital well-being within tourism contexts. By analysing the creational and conversational affordances of AI-integrated devices, it outlines potential experiential outcomes ranging from functional task support to enhanced and transformational tourism experiences. The study concludes by proposing future research directions, including the integration of AIoT with extended reality environments, the scalable governance

of phygital tourism ecosystems, and the role of AI in fostering more human-centred and responsible smart destination experiences.

Keywords: Artificial intelligence, Artificial intelligence of Things (AIoT), AI-powered smartphones, phygital tourism experiences, smart destinations, generative AI

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DOES AI ADVANCEMENT DRIVE TECHNOLOGY-LED ECONOMIC GROWTH? EVIDENCE FROM A SHORT PANEL

Technological development has long been identified as a major engine of economic growth (Aghion & Howitt, 1992; Bravo-Ortega & García-Marín, 2011; Griffith et al., 2004; Jones, 1995; Romer, 1990; Soete et al., 2022; Ulku, 2004). While this effect has held steady since the first two industrial revolutions, the rapid emergence of artificial intelligence (AI) tools over the past decade calls for a fresh investigation into AI's role in the technology-driven growth. This paper presents an empirical assessment of AI advancement on economic growth using a panel of 38 countries from 2014 to 2019. We employ first differences of log GDP per capita (constant prices, PPP) as the dependent variable and AI patents per million inhabitants as the key explanatory variable. Several model specifications – some with interactions between AI patents and standard technology measures – capture AI's relative contribution to overall growth. Control variables follow Mirestean and Tsangarides (2009), and country fixed effects address unobserved heterogeneity. Preliminary findings indicate that AI-based technological change exerts a significantly positive effect on growth, suggesting that policymakers should prioritize AI development alongside other technological investments.

Keywords: Artificial intelligence, economic growth, fixed effects model, endogenous growth

PART FOUR – PHILOSOPHY, ETHICS, MORALITY AND AI

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THE MAGIC OF TRANSHUMANISM: TOWARDS THE TRANSCENDENCE OF THE EGO

The paper problematizes transhumanism as a contemporary techno-philosophical ideology through the prism of nemoism (lat. "nemo": nobody), i.e. nihilism and gnosticism (the understanding that the body and spirit are separate, that the spirit is good, and the body is evil and should be destroyed).

At the centre of the discussion is the thesis that transhumanism represents the latest phase of the Western nihilistic project in which not only the biological and psychological limits of man are rejected, but also his spiritual, moral and religious dimensions. In this sense, transhumanism is interpreted as an anti-humanistic and anti-Christian phenomenon.

Starting from Spinoza's rationalist naturalism, through Kant's concept of autonomy and Hegel's dialectic of spirit, the paper traces how modern thought gradually loses its foothold in transcendence and divine law. This process culminates in Nietzsche, in the proclamation of the "death of God", which is not only a theological thesis, but also a diagnosis of the cultural and existential position of man. It is precisely on this foundation of Nietzschean nihilism that the transhumanist subject emerges – one who wants to redesign, reformulate, improve and, ultimately, replace himself. Man is no longer created in the image of God, but becomes a project of his own making, without a given purpose and teleological starting point. In this transhumanist postulate, we also recognize its magical component. Magical thinking, let us remember, is characterized by its striving to realize its own will, not the Will of God.

By introducing Schmitt's notion of the sovereign as the one who decides on the exception, the paper shows how the transhumanist man assumes the position of the one who suspends every "natural" or "dated" state, including biological differences, gender, age and even death. In doing so, he enters the field of political absolutism. In this context, transhumanism also appears as a form of anti-Christianity, because it denies the basic postulates of Christian anthropology – that man

is created, that he is finite, that he has fallen and that his salvation is given, not produced. In contrast to the Christian understanding of the person as an inextinguishable icon of God, transhumanism seeks to replace the person with a cybernetic system, the subject with an algorithm, and life – with eternal technological control.

Through the analysis of Heidegger's understanding of technology, as well as Sloterdijk's theory of the anthropotechnical, the paper indicates that transhumanism is not only a utopia of progress, but also a manifestation of the profound dissolution of the concept of man. Instead of the earlier notions of freedom and dignity, optimization and immortality without a way out are offered.

Finally, the question is raised: is the transhumanist ideal the last form of modern rebellion against God – no longer in the name of man, but in the name of his abolition? As Sartre writes in *The Transcendence of the Ego*: "This absolute consciousness, when purified of the I, has nothing more than a subject, nor is it a collection of representations: it is simply the first condition and source of existence." This is the path taken by Kurzweil, Harari and Schwab, as well as other representatives of Transhumanism.

Keywords: Transhumanism, magic, absolutism, transcendence, Ego

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Institute for Political Studies

SCHELER'S PHILOSOPHICAL ANTHROPOLOGY AND THE PROBLEM OF TRANSHUMANISM

Although it was developed more than a hundred years ago, the philosophical and theological thought of Max Scheler proves to be current and relevant today, among other things, in the understanding of the phenomenon and problems of transhumanism. The transhumanist project cannot be adequately thought through without reflecting on the basic goals and tendencies of the entire modern age, about which Scheler left indispensable critical insights.

Modernism is born out of the criticism of medieval Christianity and worldview. The empty place of God as an absolute, to which this criticism led, is replaced by man. With that "discovery of man" at the very beginning of the modern era, the modern humanist philosophy of man was born, which with its anthropocentrism (placing man at the centre of being and knowledge) can be understood as a resistance to the medieval theocentric model. In Scheler's opinion, however, the foundation of the crisis of modern civilization is precisely in a specific understanding of man, where the anthropology that develops with the modern age and society, becomes dominant in it, and reaches its peak in modern times. It is about understanding man as "homo faber" (tool maker). On that anthropological basis the natural science, technology, and the most intensive scientific-technical-technological development, which has become leading forces in modern society, are being based.

There is no doubt that we still live in an era of a marked dominance of the scientific-technical-technological civilization, which after Scheler, with the appearance and rapid development of cybernetics, and the IT-digital revolution based on it, only became more complicated and strengthened. Also, it is undeniable that "homo faber" is still the ruling image and type of man, the only thing is that the tools and tools he makes and manipulates have become more virtual, more sophisticated, but also more destructive. However, the tool maker made himself a tool, and increasingly began to lose his human form and essence, to transform into something other than human. Humanism, in a kind of dialectic of (post)Modernity, has been twisted and perverted into transhumanism and anti-humanism of the modern age.

In this light, according to the opinion of Predrag Krstić, the problem arises of what determination a person should have towards technologically developed machines, artificial intelligences and artificial life forms such as robots, cyborgs, clones and other almost unimaginable artificial entities that could have colonizing pretensions. Krstić refers to Lyotar, who, reflecting on the problem of the "(in)human", or "on the other side of the human" (trans-human), answered that by way of "politics", the only thing left for us is to resist the inhuman. However, opinions that, contrary to Lyotard's, celebrate and invoke the mutation of man show that the matter is not a simple one. Thus, the feminist author Donna Haraway encourages the transformation of people, especially women, into cyborgs, i.e. "hybrids of machines and organisms". Where Lyotard head-on confronts the universal spread of the inhuman, Haraway calls for the subversion of humanism, precisely in the light of man's ultimate end.

Scheler dealt with this (trans)humanist and a(nti)theistic tradition of Modernism, trying to bring man back into contact with nature, the cosmos and God. He calls for the idea of a "holy man" as "God's co-creator", believing that "superhumans and subhumans should become human in the ideal of a holy man". Bearing in mind the concern of contemporary philosophers, intellectuals and creators for the present, future and the destiny of man, the tendencies that go in the direction of theoretical and practical "anti-humanism" and "transhumanism", and the religious and theological responses to these problems, it can be concluded that Scheler's thought is still valid.

Keywords: Max Scheler, humanism, transhumanism, philosophical anthropology, theology

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BEYOND ANTHROPOCENTRISM? AI, MORAL RESPONSIBILITY, AND THE SHIFTING BOUNDARIES OF THE MORAL COMMUNITY

The accelerating integration of AI into diverse facets of human life – from cultural curation and media generation, to economic decision-making and social interaction – presents social and ethical challenges that extend beyond the immediate functional impacts. Besides bias, privacy, job displacement, and similar issues, a more fundamental transformation is occurring: AI systems are becoming autonomous actors, compelling a re-examination of moral responsibility and the constitution of our moral community. This presentation draws upon foundational work in normative and applied ethics concerning moral responsibility, moral agency, and the concept of the moral community to explore how AI disrupts traditional frameworks of accountability. The author argues that the current models attributing sole responsibility to human designers, users, or owners are becoming inadequate. Through their operational opacity ("black box" problem), emergent behaviours, and distributed nature within complex socio-technical systems, AI systems create 'responsibility gaps' or lead to a problematic 'diffusion of responsibility'.

Further, the presentation questions AI's potential status relative to the moral community. While not arguing for AI personhood, it will explore how treating AI as a mere tool overlooks its active role in shaping norms and influencing behaviours and relationships. This necessitates considering whether our understanding of the moral community – traditionally encompassing beings capable of reciprocating rights and duties – needs recalibration in an era of sophisticated non-human agency.

Drawing on philosophical inquiries into moral responsibility and the nature of the moral community, this paper argues that many advanced AI systems operate in a conceptual grey area. They exhibit behaviours often associated with the agency – complex decision-making, learning, adaptation, and interaction – yet lack the consciousness, sentience, or intentionality typically considered prerequisites for full moral agency and responsibility. Conversely, while not traditional moral patients (like humans or sentient animals), their capacity to cause significant harm or

benefit, as well as their integration into social systems raise questions about whether certain forms of consideration are owed to them, or at least regarding their function and impact, this liminal status generating social and ethical issues of redefining the moral community and posing the questions of whether the presence of sophisticated non-human actors necessitate a rethinking of who or what 'counts' within our sphere of moral concern, or how we integrate entities that can act consequentially but cannot be responsible in the traditional sense. This probes the very boundaries explored in defining a moral community.

The presentation examines whether AI systems should be treated as moral agents or moral patients, as well as their place within the moral community. The core argument is that AI systems are neither full moral agents nor traditional moral patients. Instead, they occupy a novel, instrumental, and impactful quasi-status that requires re-evaluating responsibility frameworks and the boundaries of the moral community.

Keywords: Artificial intelligence, ethics of AI, moral responsibility, moral community, moral agency

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SMART CONTRACTS AND TRANSHUMANISM: LEGAL AND ETHICAL CHALLENGES OF ARTIFICIAL INTELLIGENCE IN THE SOCIETY OF THE FUTURE

The convergence of artificial intelligence and transhumanist technologies reshapes foundational concepts in law, ethics, and social governance. Smart contracts – self-executing agreements encoded on blockchain platforms – serve as a cornerstone of this transformation by enabling automatic enforcement of obligations without human intermediaries. Their integration into systems involving brain-computer interfaces, biometric authentication, and AI-guided decision-making, introduces complex challenges to the legal architecture of modern society.

Legal subjectivity becomes increasingly ambiguous when contract participants operate through enhanced cognitive functions or delegated AI agents. Responsibility, consent, and autonomy must be reconsidered in cases where AI systems make or execute contractual decisions on behalf of enhanced individuals. Biometric and neuro-informational data embedded in these processes further complicate traditional definitions of privacy and personal agency, raising questions about the admissibility and governance of such data in contractual relations.

The immutable nature of blockchain contracts heightens risks in the environments where human judgment and error correction are essential. Automated enforcement, particularly when guided by opaque algorithms, risks reproducing or amplifying the existing social inequalities. Discrimination based on cognitive capacity, biometric traits, or technological access becomes a tangible threat, especially in the domains such as healthcare, labour markets, or education. Smart contracts in these contexts may not simply reflect bias but structurally encode it into decentralized systems.

The rise of "digitally enhanced persons" challenges the legal doctrines grounded in anthropocentric assumptions. When the boundary between human and machine becomes permeable, traditional markers of legal identity and responsibility may no longer apply. New forms of

agency, hybrid decision-making, and technologically mediated autonomy demand regulatory responses that are both adaptive and grounded in core human rights principles.

Legal norms must evolve alongside technological development to ensure that efficiency and innovation do not come at the expense of dignity, accountability, or fairness. Rather than smart contracts being treated as purely technical instruments, they must be understood as socio-legal constructs with far-reaching consequences. The interaction between algorithmic logic and legal reasoning requires critical scrutiny, especially as AI systems begin to shape contractual relations and the framework through which personhood and citizenship are defined.

Keywords: Smart contracts, transhumanism, Artificial intelligence (AI), legal subjectivity, digital identity

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TRANSHUMANISM AND PERSONHOOD: BETWEEN MAN AND MACHINE

The development of artificial intelligence (AI) and autonomous systems based on it, opens up questions about the nature of artificial agents, cognition and personal identity. In this presentation, the ontological status of artificial agents will be discussed in the context of the philosophy of spirit and the problem of personal identity, taking into account the transhumanist tendencies that advocate for the extension and modification of man by means of technology.

Starting from the functionalist point of view based in the philosophy of spirit, as well as the contemporary discussion of diachronic personal identity (with a focus on the criterion of psychological continuity), the key question will be whether and in what sense artificial agents can possess characteristics that we usually associate with the personality of the human subject – intentionality, cognitive capacities, continuity of identity over time and the ability to make moral decisions. In addition to ontological issues, the presentation will also cover the ethical and social implications of accepting or rejecting artificial and hybrid actors as subjects with rights, as well as morally relevant entities. For these purposes, the point of view on the personality criteria that AI can potentially satisfy will be presented, as well as a special case of the problem of persistence that occurs with AI as an actor. This problem rests on the notion of "para-personality" which appears in James DiGiovanna and which will be analysed separately. The aim of the presentation is to consider the question of the personality of the AI system as an entity that is characterized by hyperdistribution and the ability to modify itself, and also to present the social challenges of the relationship to the entities to which the above-mentioned characteristics apply to a certain degree or completely. Based on the challenges and questions arising from the mentioned topics, a discussion will be presented on the hybridization of people with the devices possessing the mentioned characteristics.

It will be argued that the current philosophical apparatus is not yet fully prepared for the challenges brought by the rise of AI, the possibility of hybrid persons and entirely non-human actors, with the aim

of contributing to the current discussion on the general status of AI and the challenges of transhumanism, relying on analysis from the fields of theories of personal identity, ethics and philosophy of mind and cognition.

Keywords: Artificial workers, diachronic personal identity, hybrid persons

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