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SCOPE AND ETHICAL CONSIDERATIONS OF AI IN JOURNALISM: THE PERSPECTIVE OF JOURNALISM STUDENTS***

Abstract

This study examines the perceptions of journalism students at the University of Belgrade concerning the integration of artificial intelligence (AI) into the journalistic profession. Specifically, it explores their opinions toward the potential benefits and drawbacks of AI, its appropriate and inappropriate applications in newsroom settings, and the ethical dilemmas it may pose. The research was conducted among 204 final-year journalism students from the Faculty of Political

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Sciences at the University of Belgrade. A mixed-method survey was used, incorporating both closed and open-ended questions, as well as rating scales, to gather comprehensive data. Findings suggest that future media professionals are highly aware of the growing influence of AI on journalism. A significant majority of respondents perceive AI as having a strong or very strong impact on the field, while only a small number consider its influence to be minimal or limited. Although participants acknowledge both the opportunities and challenges posed by AI, the overall perception of its impact on journalism is predominantly negative.

Keywords: Artificial intelligence, contemporary journalism, journalism students, journalistic ethics, Serbia

INTRODUCTION: ARTIFICIAL INTELLIGENCE AND JOURNALISM

The rapid evolution of artificial intelligence (AI) and the expansion of AI-based tools have revealed immense potential for its application in media and journalism. This development reinforces the notion that "the digital media era is defined by innovation and radical change across all aspects of journalism" (Franklin 2014, 481). This technology, particularly generative artificial intelligence (GenAI), has already been in use in newsrooms worldwide for several years, yet its scale and diverse applications raise numerous ethical concerns and professional dilemmas. Nevertheless, despite all limitations and potential risks it brings, it is already evident that AI will represent one of the greatest challenges for journalism in the coming years. The way it is adopted by journalists and editors, as well as the extent of its integration into editorial processes, will significantly influence newsroom efficiency, media credibility, and public perception of the value of journalism itself.

In most discussions to date regarding the impact of AI on journalism and the future of media, the emphasis has primarily been placed on the technological dimension, highlighting the capabilities of AI as the driving force behind media evolution and its expanding role in news production. This trend is evident in our country as well, as illustrated by the fact that "academic debate on the digital

transformation of traditional media in Serbia shows that authors often focus on issues related to the adoption of digital technologies, concerns over privacy, anonymity of users' comments and sources, as well as the general decline in trust in digital tools" (Krstić 2023, 1016). While this approach is valid – since it is impossible to overlook the fact that "journalism is always shaped by technology" (Pavlik 2001) – scholars are increasingly drawing attention to the often-overlooked influence of journalists' and editors' perceptions and expectations concerning the scope and manner of AI implementation. In other words, although technological advancement unquestionably brings new possibilities, the specific ways in which these tools are integrated into editorial workflows largely depend on the attitudes and decisions of newsroom professionals themselves (Nerlich and Halliday 2007).

Taking this context into account, this paper explores the attitudes and expectations of future media professionals regarding the role of AI in journalism. These attitudes will significantly influence the ways in which AI is utilized once they enter the journalism field. Moreover, understanding how journalism students in Serbia perceive AI, specifically its positive and negative impacts on the profession, justified and unjustified uses, and the ethical challenges that arise, can serve as a valuable corrective tool in journalistic education and professional development. Their perspectives are important because they reflect how young journalists approach this technology and how, based on their current understanding, they might employ it in their future work. These insights are highly valuable for identifying the new knowledge and skills that need to be cultivated in aspiring journalists and editors to ensure responsible and constructive use of AI. After all, "today's media workers, in order to survive, must possess knowledge and skills that go beyond their immediate responsibilities" (Deuze and Steward 2011, 8).

The findings of this study gain additional significance when considering that AI-based tools will predominantly be used by younger professionals, a trend already established in most leading media organizations worldwide. This means that final-year journalism students represent one of the most critical target groups for professional training in the responsible and constructive use of AI in the media. In fact, the use of certain AI tools will likely become part of their daily responsibilities from their very first editorial assignments. "Precisely because of this, digital-age journalists must pay special attention to

acquiring the knowledge that will be key to future success," and it is clear that among these essential skills today is the ability to effectively use AI in newsrooms (Kljajić i Nedeljković 2015, 318).

THEORETICAL FRAMEWORK: DEVELOPMENT AND TYPES OF ARTIFICIAL INTELLIGENCE

In order to adequately understand the evolution, current state of development, and potential applications of AI in journalism, it is essential to begin by defining this technology, outlining its various types and purposes, and exploring its practical uses in the media industry. Rather than a single unified technology, AI is often described as a loosely defined set of algorithms, techniques, and tools that offer a powerful "mathematical method for prediction" (Broussard 2018, 32). Given the vast and diverse nature of the AI field, several types of AI have already been classified according to their functions and use cases. Each type serves a specific purpose, incorporates different tools and technologies, and therefore operates in unique ways. One of the tech giants and pioneers in AI development, Microsoft, identifies the foundational category as "traditional artificial intelligence." This type relies on machine learning models and is primarily used to automate repetitive tasks where efficiency and precision are crucial. Within this traditional AI framework, two key subtypes are most commonly distinguished: predictive AI, which analyzes historical data and past behaviors to identify patterns and forecast future outcomes; and conversational AI, which enables interaction between humans and machines (such as chatbots and virtual assistants) through text-based or voice-based interfaces (Microsoft 2025).

Of particular relevance to the field of journalism and media studies is generative artificial intelligence (GenAI), which is distinguished by its capacity to produce original media content across diverse formats. "Generative AI performs tasks that no other form of artificial intelligence can – it creates new, unique content," utilizing deep learning, "a sophisticated subset of machine learning designed to handle complex tasks and process large volumes of data. Through this process, GenAI is capable of generating new outputs in response to relatively simple prompts articulated in natural language" (Microsoft 2025). This enables GenAI to produce distinctive textual content, images, video, music, and various forms of code, and it is frequently

described as "creative and innovative." However, such creativity is inherently constrained by the system's dependence on existing data. GenAI's outputs are derived from its ability to detect and replicate patterns embedded in pre-existing, human-produced media content and other accessible data sets. Consequently, the content it generates is not the result of autonomous or original thought, but rather an outcome of the recombination and imitation of recognizable patterns. As the volume of available data and published media content continues to expand, the number and diversity of detectable patterns similarly increase. This, in turn, enhances the system's generative capacity over time, leading to more sophisticated and contextually nuanced outputs.

However, although this characterization of GenAI may, at first glance, suggest boundless opportunities for its application in journalism, the fact that its "creativity and innovation" are fundamentally rooted in replicating patterns recognized in pre-existing, human-generated media content implies that its editorial potential remains rather limited. From the outset, the use of AI for generating written formats has been largely restricted to producing texts characterized by low complexity and a high degree of standardization. Such outputs are primarily feasible when clean, structured, and reliable datasets are available, such as official statistics from sporting events, data from institutional financial reports, or meteorological forecasts (Graefe 2016, 14). At the core of this process of automated journalism lies an algorithm that explores existing databases, evaluates and analyzes the data, and subsequently generates narratives autonomously by utilizing pre-programmed text modules (Graefe 2016). "In practice, the use of this capability is confined to a limited number of scenarios in which the data and information used for media content creation are so reliable and credible that they require no further journalistic verification, nor do they pose a risk of misinterpretation" (Nedeljković 2023, 61–62).

Based on the above, it can be concluded that AI primarily generates textual forms that are fact-based and exhibit a more objective linguistic style (Tatalović 2018). These are predominantly fact-centered journalistic formats, namely news reports and factual accounts. However, as artificial intelligence tools continue to evolve, the complexity of the texts that can be generated by AI-driven systems is also gradually increasing to some extent (Brennen, Howard, and Nielsen 2020). Nevertheless, all such advancements remain considerably limited within the domain of journalism. This is largely due to the fact that, at present, we still only

have access to what many researchers refer to as "narrow or weak" AI, whereas "general or strong" AI remains an aspirational goal for the future. "Narrow or weak artificial intelligence refers to systems capable of performing one or two tasks that require human intelligence," while "general or strong artificial intelligence refers to systems that would be capable of performing any task that involves human intelligence." The limiting factor, however, lies in the fact that general AI does not yet exist, and many experts believe it is uncertain whether such a level of development will ever be attained, even though it remains the ultimate objective (Brennen, Howard, and Nielsen 2020, 33).

Thus, although debates surrounding the role of AI in journalism frequently raise the question of whether it is capable of replacing journalists, the fact that Artificial General Intelligence (AGI) does not yet exist renders this question, to some extent, irrelevant within the current phase of technological development. As noted, "despite the sense of AI inevitability, its future is still in the process of being built" (Brennen, Howard, and Nielsen 2020, 34). The clearest indication that AGI remains a distant prospect is provided by the most recent study conducted by the British public broadcaster, the BBC (*BBC* 2025), which reveals that AI assistants produce various types of errors in as many as 51% of responses that incorporate the BBC's content. Specifically, "19% of all AI assistant responses that cite BBC content include factual inaccuracies – incorrect statements, figures, and dates," while simultaneously, "13% of quotes attributed to BBC texts were either altered or did not appear in the cited articles at all" (*BBC* 2025, 2). These findings offer compelling evidence of the current limitations of AI, and the report concludes with a warning that AI assistants risk misleading audiences by distorting BBC journalism (1).

Another crucial factor limiting the application of AI in journalism is the fact that transparency regarding the process of text generation and the identity of the author is one of the key elements in fostering greater trust in the media (Kovach and Rosenstiel 2007). The lack of such transparency represents one of the most significant challenges associated with the integration of AI into newsrooms. The reality is that AI tools – and the models that drive them – are often unclear even to those using them, including journalists, and this inherently complicates the assessment of their reliability. According to Thomson and associates, "without transparency about the sources and materials used, and the functioning of the algorithms, AI tools and the content

they generate pose a challenge to journalism, which has historically valued verifiability, authentication, and a certain level of openness. AI tools that explain their decision-making processes, disclose the source material they rely on, and are transparent about when and how their outputs are utilized, present fewer risks to journalists than those that do not" (Thomson *et al*. 2025, 9).

Therefore, one of the key imperatives concerning the use of AI in journalism is the clear labeling of media content that has been fully or partially generated by AI, as well as content in which AI has been used during the production process. According to Thomson and associates, "both audiences and journalists consider transparency about when and how artificial intelligence is used to be important. The public states that a label indicating the use of artificial intelligence should be clearly displayed at the beginning of the media content, whether it is video, audio, or written format" (Thomson *et al*. 2025, 9). For audiences, it is also essential to be informed about the extent to which AI has been used in the generation or editing of news and other media content, that this information is consistently placed in the same location within the media output, and that a universal symbol is adopted to indicate content generated or edited by AI (Thomson *et al*. 2025, 9).

Due to the evident importance of transparency in the use of AI, ethical guidelines and journalistic codes – from international to national levels – have already been updated to reflect this standard. These guidelines particularly emphasize the irreplaceable role of editorial and journalistic responsibility in the use of AI. For example, Reporters Without Borders in the "Paris Charter on AI and Journalism" (2023) state that "any use of artificial intelligence that has a significant impact on the production or distribution of journalistic content must be clearly indicated and publicly disclosed to users," and that "media organizations bear responsibility for the use of AI in the process of gathering, processing, and disseminating information" (Reporters Without Borders 2023). The same principles are reflected in the amendments to the "Code of Journalists of Serbia," particularly in Chapter Three, which addresses journalistic responsibility – "Media outlets must use artificial intelligence in a transparent, responsible, and proportionate manner in content creation and are fully accountable for any such published content. Media organizations are obliged to inform the public when media content has been created using tools based on artificial intelligence" (Savet za štampu 2025, 12).

DIFFERENT APPLICATIONS AND SCOPE OF ARTIFICIAL INTELLIGENCE IN THE MEDIA

After defining the basic types of AI, its actual capabilities in journalism, and the key ethical considerations, the next important aspect concerns the various ways in which AI is applied in the media. Based on current research, several different domains of AI use in media can be identified, and one particularly useful classification was employed in last year's study by the strategic research agency Craft and the Reuters Institute for the Study of Journalism. This study distinguishes three domains of AI use in journalism, reflecting the processes of news gathering, content production, and distribution. The first category, labeled "Behind the Scenes", refers to the use of AI as an assistive tool in news gathering and journalist preparation – processes that are typically invisible to the audience. This includes tasks such as information gathering, interview transcription, speech or text translation, automated fact-checking, and similar activities. The second category, titled "Creating Content," is directly visible to the audience, as it involves the production of media content that consumers interact with, such as writing articles, generating images, graphics, or video materials. The third category, named "Delivering News in New Ways," relates to the use of AI to create new modes of news consumption. This includes the development of new formats, chatbot-facilitated conversations, personalized front pages, automated summarization, and AI-generated news narration (Collao 2024, 16).

The aforementioned study reveals that among the identified domains, the audience most readily accepts and approves of the use of AI "behind the scenes", followed by "delivering news in new ways," while significantly less support is expressed for the use of AI in "content creation." In other words, the more limited and journalist-supervised the role of AI in newsrooms, the more acceptable it is to the audience. Conversely, as AI operates with greater autonomy, public trust decreases, and the level of acceptability declines. One of the study's key conclusions is that human presence remains indispensable in journalism, particularly in the domain of content production. According to Collao, "human judgment and journalistic skills are still needed to offer interpretation and, where relevant, emotion in journalistic storytelling", as "journalism is often more than just relaying objectively verifiable facts" (Collao 2024, 16).

Interestingly, a direct correlation can be observed between the previously mentioned audience attitudes toward the use of AI in journalism and the views of media leaders regarding how AI should be implemented in newsrooms. The latest research conducted by the Reuters Institute for the Study of Journalism, based on a sample of 326 media leaders from 51 countries worldwide, reveals that over the past year, the perceived importance of AI use has increased across all media domains, particularly in those areas most acceptable to the audience (Newman and Cherubini 2025). More specifically, the results indicate that backend automation corresponding to the "behind-the-scenes" domain (e.g., tagging, transcription, and copyediting) is by far the most significant area of AI application in media, according to media leaders. As many as 96% of media publishers report that the use of AI for these purposes will be either very important (60%) or somewhat important (36%) in the years to come (Newman and Cherubini 2025, 31). Ranked second in importance is the use of AI to enhance personalization and recommendations, aligning with the "new ways of delivering news" domain (e.g., personalized homepages and alerts/notifications), which 80% of publishers regard as either very important in the future (41%) or somewhat important (39%). As with audience preferences, AI-assisted content creation with human oversight (e.g., summarization, headline writing, graphic and video generation) ranks third, with 77% of publishers considering it important. However, in this case, a smaller proportion identify it as very important (30%), while a larger portion sees it as somewhat important (47%) (Newman and Cherubini 2025, 31). It is also worth noting that the use of AI for newsgathering (e.g., verification, data processing, research) ranks fourth, with 73% of publishers deeming this domain either very important (24%) or somewhat important (49%). This application largely corresponds to the "behind-the-scenes" domain, which has already emerged as the leading area of focus (Newman and Cherubini 2025, 31).

The majority of media professionals in Serbia also believe that artificial intelligence cannot replace media workers or traditional journalistic roles, as confirmed by a 2024 study conducted on a sample of 110 media practitioners. Media professionals primarily identify the negative aspects of AI use in journalism as the "unverified nature of information, loss of authenticity and content quality, manipulation of information, job displacement, and lack of creativity," which leads to "concern over the spread of disinformation and the erosion of public

trust in the media as a result of AI adoption" (Tadić i Medić, 2025). On the other hand, the study also acknowledges that "there are positive aspects of using artificial intelligence in the media sphere, such as speed, efficiency, process automation, reduction of monotonous tasks, and support for journalists" (Tadić i Medić 2025).

On the other hand, the BIRN study "Digital Transformation and Artificial Intelligence," conducted in 2024 on a sample of 124 journalists and editors, reveals that media professionals in Serbia are unprepared for the use of AI, noting that "not a single media outlet has yet developed internal ethical guidelines for AI use," and consequently, there is also no "clear definition of how AI is employed in processes such as information gathering, processing, or presentation" (Maksić 2025, 31). This study also confirms that media professionals remain highly skeptical regarding the use of AI in content creation, as such content may be both biased and inaccurate. One example cited by journalists and editors in focus groups is that "the quality of video materials and accompanying graphics is unsatisfactory, and hallucinations have been observed during the analysis of larger data sets" (29).

Another study conducted last year among media editors reveals an even greater level of distrust in the ability of AI to generate specific journalistic genres, particularly those that require authenticity and in-depth analysis. "Among the genres deemed unsuitable for AI-generated content, editors most frequently cite commentary and opinion columns, high-quality interviews, feature stories – which some theorists consider *the pinnacle of journalistic craft* – as well as investigative journalism as a distinct and complex branch of journalism" (Cvejić 2024, 88–89).

Based on all the previously mentioned findings, we can identify at least three key domains of AI applications in journalism:

1) *The domain of routine operations* involves the use of AI as an aid to journalists in performing technical, repetitive, or simple tasks – those that do not require a high level of journalistic expertise. This domain includes, for example, data collection and verification, transcription, and translation, and is therefore largely invisible to the audience.

2) *The domain of journalistic production* entails the use of AI in the creation of media content and encompasses a broad range of tasks and roles assigned to AI, depending on assessments of its actual capabilities. This domain may include texts that are fully or partially generated by AI, as well as photographs, audio and video materials,

infographics, and similar outputs. As a rule, all AI roles within this domain are subject to the oversight and editorial control of journalists and/or editors, since the content produced in this way is directly visible to the audience.

3) *The domain of media content distribution* refers to the use of AI to enhance the efficiency of delivering media content to audiences. This domain includes, for example, intelligent targeting, content personalization for individual users, and the generation of various media formats to more effectively tailor content to the diverse needs of users or specific content distribution platforms.

METHODOLOGY

The research conducted for the purposes of this paper was carried out through a survey of final-year journalism students at the Faculty of Political Sciences in Belgrade (fourth-year students and graduates), using a written questionnaire of a mixed format that included both closed and open-ended questions, as well as rating scales. The sample included 204 respondents, and the survey was conducted in person at the Faculty of Political Sciences during May and June 2024. The questions were organized into three thematic sections in order to obtain systematic, precise, and comprehensive responses, enabling an accurate assessment of respondents' dominant views regarding the intensity of AI's impact on journalism, its application in newsrooms, as well as related ethical issues.

The first section of the questionnaire included more general closed-ended questions and rating scales regarding the impact of AI, with the aim of precisely identifying students' main attitudes about the extent to which AI generally influences journalism, as well as the nature of that influence, i.e., whether it is perceived as positive or negative. The second section contained considerably more specific rating scales and open-ended questions relating to various domains of AI use in newsrooms, specifically focusing on the three most frequently mentioned domains in the literature: performing routine operations, creating media content, and distributing content to the audience. The objective of this segment was to reveal which AI applications respondents consider useful and justified, because they can facilitate journalists' work without negatively affecting the quality and reliability of the media, and which applications they regard as potentially harmful

and thus unjustified. Finally, the third segment of the questionnaire comprised both open and closed-ended questions concerning ethics, credibility, and the reliability of AI-generated content, aiming to identify the risks that students recognize and consider most significant.

It should be noted that the theoretical framework served as the basis for the development of the questionnaire, and the three thematic sections previously mentioned were defined according to the three key questions most commonly addressed in theoretical discussions. Similarly, the part of the questionnaire relating to the specific application of AI in newsrooms was also structured to correspond to the three theoretically defined domains of AI use in the media (routine operations, content creation, and distribution). In this way, the perception of AI use in the journalism profession by journalism students was first clearly established, along with their attitudes toward different domains of application and ethical issues. Subsequently, their views were compared with those of media professionals both domestically and internationally, in order to clearly identify similarities and differences between them.

RESEARCH RESULTS

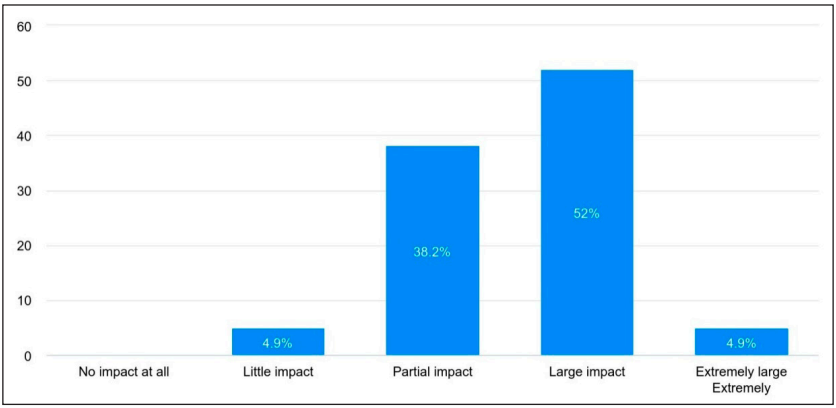
The Impact of Artificial Intelligence on Journalism

The first question that most frequently arises in both theoretical and practical discussions is the extent to which artificial intelligence impacts journalism. The data presented in the previous section clearly demonstrate that media professionals perceive this impact as significant and increasingly intense year after year. The results of the research conducted for this paper reveal similar trends among future media professionals, as they are well aware of the influence AI has on the journalistic profession.

The findings of this research indicate that a significant majority of respondents consider AI to have a significant or extremely significant impact on journalism, while only a small number perceive this impact as minor or limited. More precisely, the largest group consists of those who believe the impact is significant (52%), followed by respondents who acknowledge a partial impact (38.2%), whereas an equal number of respondents consider the impact to be either small or extremely significant (4.9% each). Simultaneously, the results show that there

were no respondents who believed that artificial intelligence has no impact on contemporary journalism.

Chart 1. The impact of artificial intelligence on journalism



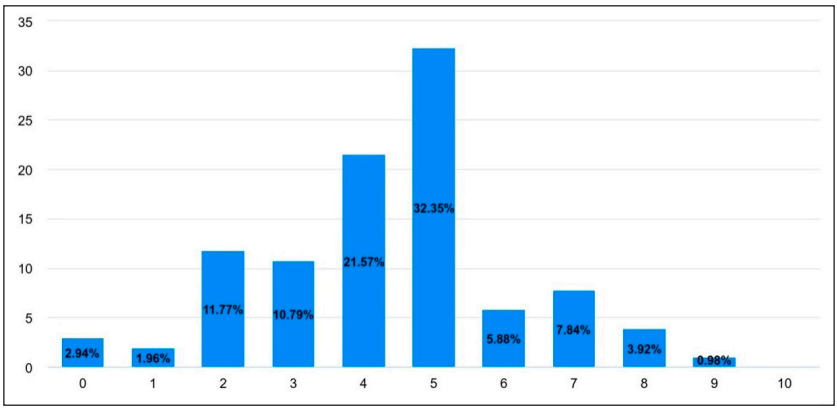
Source: Authors

The second most common question concerns the nature of this impact, specifically whether it is predominantly positive or negative, and consequently, whether artificial intelligence is regarded as an opportunity or a threat. Based on the prevailing stance on this issue, two general positions can be identified. On one side are the optimists who believe that the positive impact and numerous benefits AI brings to journalism and the media prevail, while on the other side are the pessimists who claim that the negative impact is greater and that AI is predominantly detrimental to the journalistic profession.

The research reveals that respondents recognize positive effects of AI on contemporary journalism, yet they nonetheless assess this impact as predominantly negative. Thus, journalism students rated the positive impact of AI on journalism with an average score of 4.36 on a scale from zero to 10 (where zero means "no positive impact" and 10 means "extremely positive impact"), while simultaneously rating the negative impact at 6.41 (where zero means "no negative impact" and 10 means "extremely negative impact"). If the score of five is treated as the midpoint on the 0-to-10 scale, the perception of positive impact falls below this value, whereas the perception of negative impact exceeds it – specifically, the average rating of the negative impact is 2.05 points higher than that of the positive. Considering the theoretically defined

scope of AI in the media and comparing it with the aforementioned results, it could be concluded that respondents are neither pessimists nor optimists but rather take a very realistic view of AI's impact on journalism, especially when all results detailed below are taken into account.

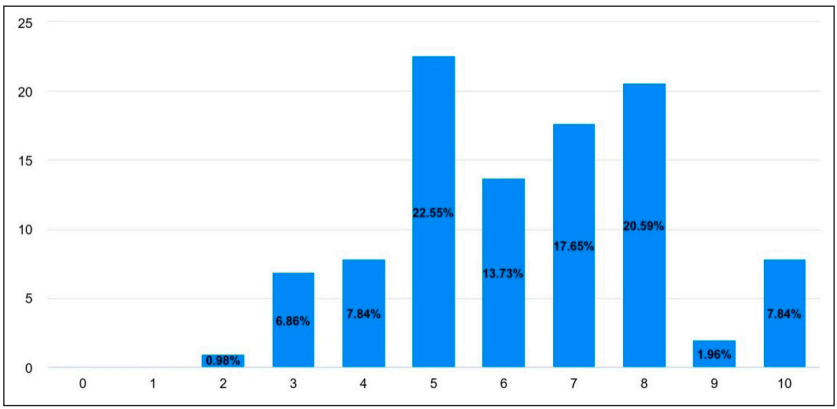
Chart 2. The positive impact of artificial intelligence on journalism



Source: Authors

Assessment by journalism students of the extent to which artificial intelligence has a positive impact on journalism, measured on a scale from zero to 10, where zero means "has no positive impact at all", and 10 means "has an extremely positive impact."

Chart 3. The negative impact of artificial intelligence on journalism



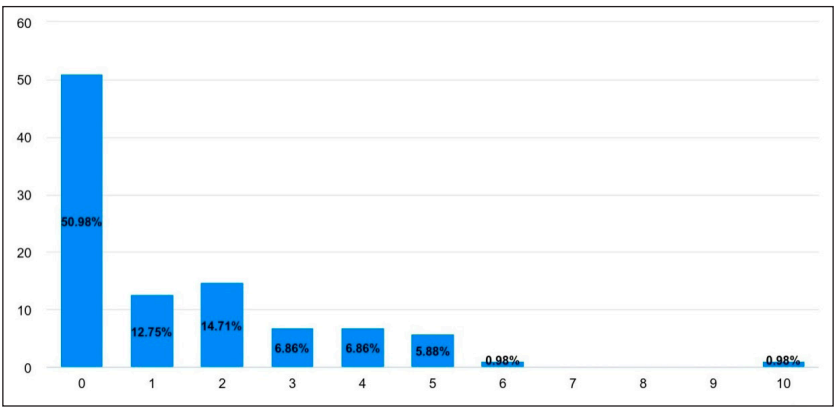
Source: Authors

Assessment by journalism students of the extent to which artificial intelligence has a negative impact on journalism, measured on a scale from zero to 10, where zero means "has no negative impact at all", and 10 means "has an extremely negative impact."

Application of Artificial Intelligence in Newsrooms

Although the previous insights are valuable as they reveal the basic attitudes of respondents, the most significant findings emerged from investigating the following key question: for what purposes is the use of artificial intelligence (AI) in media justified? The results indicate a strongly negative stance among journalism students regarding the possibility of AI completely replacing journalists in performing their work, specifically in creating journalistic content. The positive impact of such replacement was rated with an average score of 1.35, whereas the average score for the negative impact was 8.75. This means that the perceived negative impact is more than six times greater than the positive one, clearly demonstrating the respondents' dominant view that replacing journalists with AI would be detrimental to the journalism profession.

Chart 4. Positive Impact of Replacing Journalists with Artificial Intelligence

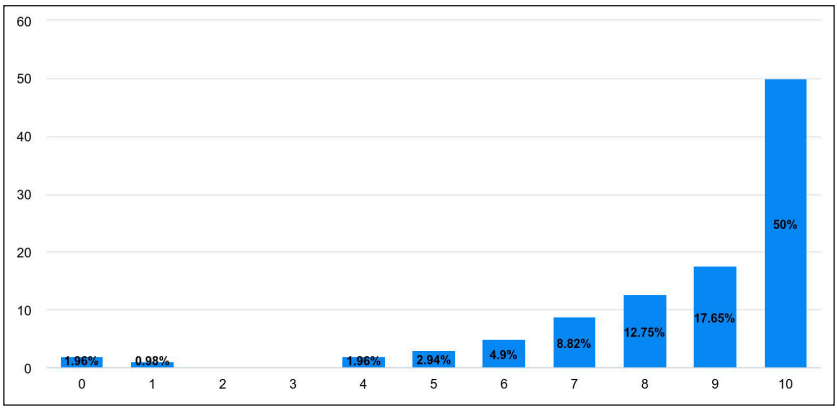


Source: Authors

Assessment by journalism students of the extent to which the complete replacement of journalists by artificial intelligence in creating

certain types of media content has a positive impact on journalism, measured on a scale from zero to 10, where zero means "no positive impact at all" and 10 means "extremely positive impact."

Chart 5. Negative impact of the replacement of journalists by artificial intelligence

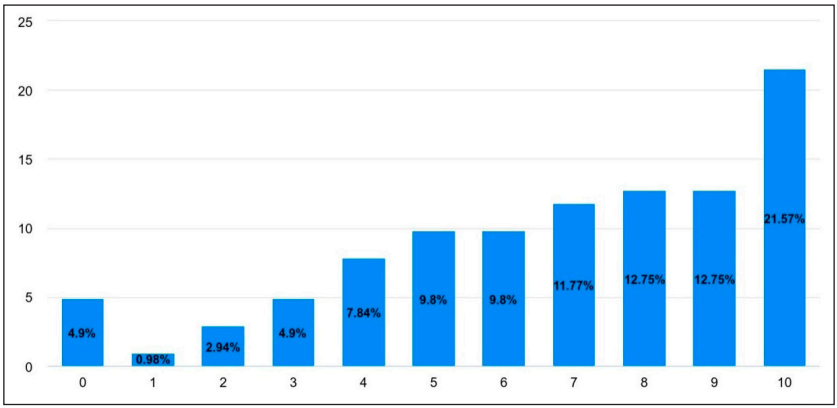


Source: Authors

Assessment by journalism students of the extent to which the complete replacement of journalists by artificial intelligence in creating certain types of media content has a negative impact on journalism, on a scale from zero to 10, where zero means "no negative impact at all" and 10 means "an extremely negative impact."

However, respondents' attitudes shift dramatically when it comes to the use of AI as an auxiliary tool in the process of producing media content, which implies that journalists remain the primary content creators but utilize AI to independently generate or facilitate work with certain elements such as photographs, illustrations, infographics, or video. The positive impact of such AI use was rated at 8.75, while the negative impact received a score of 3.33, indicating that the perceived positive effects of this form of AI application are two and a half times greater than the negative ones.

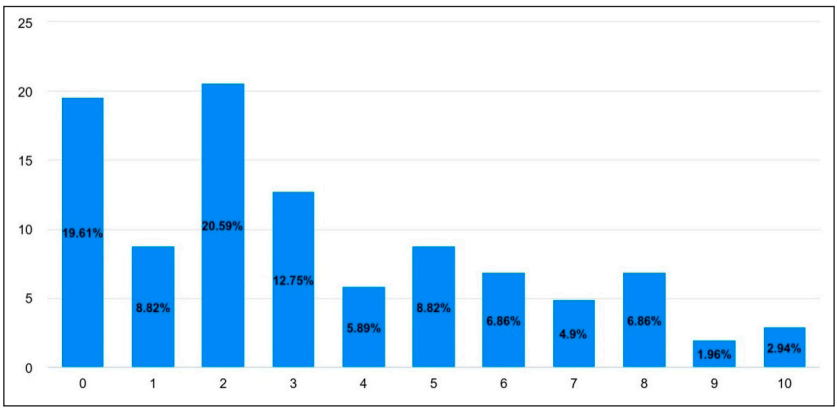
Chart 6. Positive impact of artificial intelligence as an aid (assistant) in journalists' work



Source: Authors

Assessment by journalism students of the extent to which the use of artificial intelligence as additional support for journalists in creating media content would have a positive impact on journalism, on a scale from zero to 10, where zero means "no positive impact at all" and 10 means "an extremely positive impact."

Chart 7. Negative impact of artificial intelligence as an aid (assistant) in journalists' work



Source: Authors

Assessment by journalism students of the extent to which the use of artificial intelligence as additional assistance to journalists in creating media content would have a negative impact on journalism, on

a scale from zero to 10, where zero means "no negative impact at all" and 10 means "an extremely negative impact."

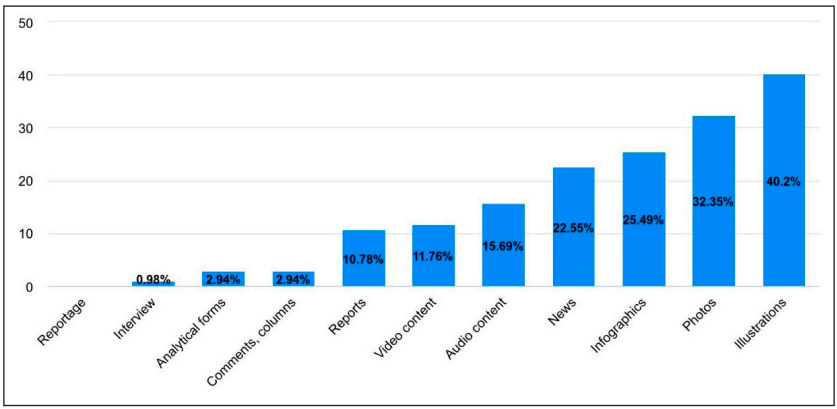
The specific domains of AI application that respondents recognize as predominantly positive and beneficial for the media relate to the execution of technical tasks or auxiliary journalistic duties that are an integral part of newsroom work but do not require a higher level or more demanding journalistic competencies. Thus, among the six most valuable aspects of AI applications in journalism, the following domains stand out:

1. analysis of large volumes of data (positive impact rated at 7.60, negative impact at 2.50);
2. automation of routine journalistic tasks, such as transcribing audio recordings/interviews, automatic subtitling of video content, automated photo processing, etc. (positive impact rated at 7.38, negative impact at 2.83);
3. more efficient content distribution to the audience through more precise user targeting (positive impact rated at 6.89, negative impact at 3.16);
4. search engine optimization (positive impact rated at 6.84, negative impact at 3.14);
5. verification of specific data or sources (positive impact rated at 6.55, negative impact at 3.45);
6. content personalization (positive impact rated at 6.48, negative impact at 3.78).

To gain a more detailed insight into the areas of media production in which respondents perceive journalists as irreplaceable despite the development of AI, a specific set of questions in the study focused on respondents' assessment of which journalistic genres and media formats AI can create in a journalistically relevant and professional manner, measured on a scale from zero to 10, where zero means "cannot create them in a journalistically relevant and professional manner at all," and 10 means "can fully create them in a journalistically relevant and professional manner." The findings reveal an almost unanimous belief among journalism students that AI cannot replace journalists in producing journalistic genres that require a high degree of authenticity, creativity, or analytical rigor. None of the 204 respondents believe that AI can fully create reports in a journalistically relevant and professional manner; one in one hundred considers this possible for interviews, and one in thirty-four for

analytical formats, commentaries, and columns. As the required degree of authenticity, creativity, or analytical rigor decreases for the creation of certain journalistic genres or formats, the percentage of respondents who rate the possibility of AI fully producing such content in a journalistically relevant and professional way with the highest score increases. For news reports, this percentage rises to 10.78%, followed by video (11.76%) and audio content (15.69%), with an additional increase observed in the case of news items, for which 22.55% of respondents believe AI can create them with equal journalistic relevance as journalists. The largest proportion of respondents believe that AI can fully and relevantly replace journalists in the domain of graphic production, specifically in creating infographics (25.49%), photographs (32.35%), and illustrations (40.2%).

Chart 8. Journalistic Genres and Media Formats That Artificial Intelligence Can Create in a Journalistically Relevant and Professional Manner



Source: Authors

The chart shows the percentage of respondents who rated with the highest score of 10 the possibility that artificial intelligence can fully create the specified journalistic genres and media formats in a journalistically relevant and professional manner.

Artificial Intelligence and Journalistic Ethics

One of the most critical issues concerning the use of AI in media is journalistic ethics, specifically whether all principles of journalistic ethics are upheld when employing AI in media, including transparency, credibility, and journalistic accountability.

The research findings indicate that the largest proportion of journalism students, precisely 47.06%, identify the greatest risk of using artificial intelligence in everyday journalistic work as the unreliability of media content produced by AI, highlighting concerns that such content is inaccurate or manipulative. The second most commonly recognized risk is the lack of journalistic ethics and professional responsibility, which 29.41% of respondents consider the greatest threat. The third most cited concern, noted by 23.53% of participants, is the insufficient originality, authenticity, and creativity of media content generated by AI.

The fact that unreliability is perceived as the greatest risk by journalism students is further reinforced by their responses to the question of how they would treat content known to be created by artificial intelligence: as many as 9 out of 10 respondents (90.2%) indicated that they would consider such content less reliable compared to content produced by journalists. Only one in ten (9.8%) regard such content as equally reliable, while none of the 204 respondents stated that they would treat AI-generated content as more reliable.

Considering the previous findings, it is not surprising that respondents demonstrate a moderate openness to the possibility of using artificial intelligence in their professional work. When asked to what extent they would use AI in their future newsrooms, the largest proportion of respondents indicated partial use (43.14%), followed closely by those who would use it minimally (39.22%). A significantly smaller group, approximately ten times fewer, reported that they would use AI to the fullest extent (3.92%). Additionally, 6.86% stated that they would not use it at all, while the same percentage were uncertain or declined to answer the question.

CONCLUSION

The results of our research clearly indicate that journalism students perceive the replacement of journalists by artificial intelligence as having extremely negative consequences for the field of journalism. However, this does not imply that future journalists oppose any use of AI by professional journalists and media organizations. On the contrary, respondents hold a distinctly positive attitude toward the use of AI as an auxiliary tool in everyday journalistic work, particularly in areas that facilitate the execution of certain routine tasks, as well as in the creation of specific elements within media content, provided

that the primary role in the process and the final oversight of tasks performed by AI remain firmly in the hands of journalists.

The findings of the conducted research also reveal that journalism students approach the current capabilities of AI use in the media in a rational and realistic manner, recognizing both its positive and negative impacts. Moreover, they assess very responsibly in which domains the application of AI presents opportunities for the media, and in which it poses risks. Thus, the positive influence of AI is primarily identified in the areas of performing routine editorial tasks and content distribution to the audience, as the use of AI-based tools can save time and facilitate journalists' work in executing these tasks. On the other hand, there is a noticeable skepticism and lack of trust regarding the use of AI for media content production, especially concerning the possibility of AI independently creating media content that would be relevant and professional from a journalistic perspective.

On the other hand, this study reveals that journalism students are highly skeptical regarding the ethical use of artificial intelligence, raising concerns about the credibility, journalistic ethics, and professional responsibility of media content created through AI. In all these aspects, the students' perception closely aligns with that of media leaders worldwide, as demonstrated by the studies referenced in the theoretical framework of this work. In both cases, there is a clear consensus that AI cannot fully replace journalists, but rather can provide valuable assistance in performing certain tasks, under the supervision and control of media professionals. Based on these findings, it can be concluded that, according to journalism students, AI remains far from a level of development that would enable it to perform any task involving human intelligence (general artificial intelligence), and that within journalistic newsrooms, respondents primarily regard AI as an assistant.

Thus, journalism, from the perspective of journalism students in Serbia, remains a profession in which artificial intelligence cannot replace the human element, and where journalists are superior to machines. The reason is straightforward. Future journalists, who attended the Faculty of Political Sciences, University of Belgrade, believe that adherence to professional and ethical standards, editorial responsibility, and the still irreplaceable authenticity of journalists remain beyond the reach of AI. Whether AI will bring positive or negative consequences to journalism will primarily depend on the role

assigned to it by the media. Existing findings from the global academic literature and numerous studies addressing this topical issue point to two possible outcomes. Firstly, those who use AI as an assistant for "behind-the-scenes" tasks could experience multiple benefits. On the other hand, media outlets that attempt to use AI as a replacement for journalists will face the downfall of professional journalism, transparency of media content, professional integrity, ethical standards, and credibility. In both cases, decisions will ultimately be made by the people working within newsrooms, which leads to the conclusion that journalistic responsibility will remain an irreplaceable category, at least for the foreseeable future.

REFERENCES

Brennen, J. Scott, Philip N. Howard, and Rasmus Kleis Nielsen. 2020. "What to expect when you're expecting robots: Futures, expectations, and pseudo-artificial general intelligence in UK news." *Journalism* 23 (1): 22–38. https://doi.org/10.1177/1464884920947535

Broussard, Meredith. 2018. *Artificial Unintelligence: How Computers Misunderstand the World*. Cambridge, MA: MIT Press.

BBC. 2025. "Representation of BBC News content in AI Assistants." Last accessed on April 28, 2025. https://www.bbc.co.uk/aboutthebbc/documents/bbc-research-into-ai-assistants.pdf

Cvejić, Bojan. 2024. „Upotreba veštačke inteligencije u kreiranju medijskog sadržaja u Srbiji." *Politički život* 27: 79–93. https://doi.org/10.18485/fpn_pz.2024.27.5

Deuze, Mark, and Brian Steward. 2011. "Managing Media Work." In *Managing Media Work*, edited by Mark Deuze, 1–10. Los Angeles (California): SAGE Publications.

Franklin, Bob. 2014. "The Future of Journalism." *Journalism Studies* 15 (5): 481–499. https://doi.org/10.1080/1461670X.2014.930254

Graefe, Andreas. 2016. *Guide to automated journalism*. New York: Tow Center for Digital Journalism, Columbia Journalism School.

Kovach, Bill, and Tom Rosenstiel. 2007. *The Elements of Journalism*. New York: Three Rivers Press.

Kljajić, Veselin, i Marko Nedeljković. 2015. „Perspektive preduzetničkog novinarstva u Srbiji." In *Politički identitet Srbije u globalnom i regionalnom kontekstu*, ed. by Vesna Knežević Predić, 315–327. Beograd: Fakultet političkih nauka.

Krstić, Aleksandra. 2023. "Digital transformation of journalism and media in Serbia: What has gone wrong?" *Journalism*, 25 (5): 1014–1030. https://doi.org/10.1177/14648849231151798

Collao, Konrad. 2024. *OK computer? Understanding public attitudes towards the uses of generative AI in news.* Oxford, UK: CRAFT & Reuters Institute for the Study of Journalism. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2024-07/RISJ%20-%20OK%20Computer%20-%20News%20and%20AI%20-%20Report%20from%20CRAFT.pdf

Maksić, Tanja. 2025. *Digitalna transformacija i veštačka inteligencija – etička i odgovorna upotreba u medijima*. Beograd: BIRN i OEBS. https://www.osce.org/files/f/documents/f/5/590435.pdf

Microsoft. 2025. „Generativni AI u odnosu na druge tipove veštačke inteligencije." *Microsoft*. Last accessed on May 4, 2025. https://www.microsoft.com/sr-latn-rs/ai/ai-101/generative-ai-vs-other-types-of-ai

Nedeljković, Marko. 2023. „Novinarstvo zasnovano na klikovima – uticaj analitike i algoritama na uređivanje onlajn medija." *CM: Communication and Media* 18 (53): 57–80. https://doi.org/10.5937/cm18-43830

Newman, Nic, and Federica Cherubini. 2025. *Journalism and Technology: Trends and Predictions 2025.* Oxford, UK: The Reuters Institute for the Study of Journalism. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2025-01/Trends_and_Predictions_2025.pdf

Nerlich, Brigitte, and Christopher Halliday. 2007. "Avian flu: The creation of expectations in the interplay between science and the media." *Sociology of Health & Illness* 29: 46–65. https://doi.org/10.1111/j.1467-9566.2007.00517.x

Pavlik, John V. 2001. *Journalism and New Media*. New York: Columbia University Press.

Reporters Without Borders. 2023. "Paris Charter on AI and Journalism." November 10, 2023. https://rsf.org/sites/default/files/medias/file/2023/11/Paris%20charter%20on%20AI%20in%20Journalism.pdf

Savet za štampu. 2025. „Kodeks novinara i novinarski Srbije." Last accessed on May 6, 2025. https://savetzastampu.rs/wp-content/uploads/2024/12/KODEKS-novinara-i-novinarki-2025-korekcija.pdf

Tatalović, Mico. 2018. "AI writing bots are about to revolutionise science journalism: we must shape how this is done." *Journal of Science Communication* 17 (01) https://doi.org/10.22323/2.17010501

Thomson, TJ, Ryan Thomas, Michelle Riedlinger, and Phoebe Matich [Thomson *et al*.]. 2025. *Generative AI & Journalism: Content, Journalistic Perceptions, and Audience Experiences*. Melbourne, Australia: RMIT University. https://doi.org/10.6084/m9.figshare.28068008.v2

Tadić, Gordana, i Duško Medić. 2025. „VI i mediji: Šta kažu novinari?" *Kaleidoskop media*. January 3, 2025. https://kaleidoskop-media.com/mediji/vi-i-mediji-sta-kazu-novinari-

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ДОМЕТИ И ЕТИЧКА РАЗМАТРАЊА ВЕШТАЧКЕ ИНТЕЛИГЕНЦИЈЕ У НОВИНАРСТВУ: ПЕРСПЕКТИВА СТУДЕНАТА НОВИНАРСТВА[***]

Резиме

Овај рад испитује перцепције студената новинарства Универзитета у Београду о примени вештачке интелигенције (ВИ) у новинарској професији, тачније њихове ставове о позитивним и негативним утицајима, оправданим и неоправданим доменима примене у редакцијама, али и етичким изазовима које ова технологија са собом доноси. У ту сврху спроведено је истраживање које је обухватило 204 студента новинарства на завршној години студија на Факултету политичких наука Универзитета у Београду, а као метода истраживања коришћен је писани упитник комбинованог типа који садржи затворена и отворена питања, као и скале процене. Резултати показују да су будући медијски професионалци итекако свесни утицаја који ова технологија има на новинарску професију, па велика већина испитаника сматра да ВИ има велики или изузетно велики утицај на новинарство, док само мали број њих препознаје овај

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утицај као мали или ограничен. Иако истраживање открива да испитаници препознају и позитивне и негативне утицаје ВИ на савремено новинарство, овај утицај ипак оцењују као доминантно негативан.

Кључне речи: вештачка интелигенција, савремено новинарство, студенти новинарства, новинарска етика, Србија

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