



I know but I Imagine... Algorithmic Stories on the Borderline of Journalism

Lo sé, pero me lo imagino... Historias algorítmicas en los márgenes del periodismo

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ABSTRACT

Research on algorithmic knowledge has primarily focused on professional users or so-called ordinary people. This segmentation highlights a gap in studying those who fall in between. To fill this gap, we conducted research among journalism students pursuing higher education in journalism who found themselves on the “borderline”: they are no longer “ordinary” users, but are not yet professional specialists. Drawing from latest research we have formulated a theoretical concept of “algorithmic stories on the borderline of journalism”. Through 41 semi-structured interviews with journalism students recruited through snowball sampling, we found that journalism students’ knowledge of AI consisted of imaginaries: ranging from those closely related to the realities of journalism to conspiracy theories. Students perceive knowledge of how social media works as something natural, almost intuitive, coming from many years of experience. On the other hand, journalism studies play a key role in learning the mechanisms of news sites. Among the sources of knowledge, scientific sources are almost absent. In conclusions, we formulate recommendations for efforts to provide future journalists with reliable knowledge about Artificial Intelligence in journalism.

RESUMEN

La investigación sobre el conocimiento algorítmico se ha centrado principalmente en los usuarios profesionales o en las ‘personas normales’. Para llenar este vacío, hemos realizado un estudio entre estudiantes de periodismo, que se encuentran en medio: ya no son ‘usuarios habituales’, pero aún no son profesionales especializados. Al realizar 41 entrevistas semiestructuradas a estudiantes de periodismo reclutados mediante el método de la bola de nieve, descubrimos que el conocimiento de los estudiantes de periodismo sobre la inteligencia artificial consta de percepciones: desde las estrechamente relacionadas con las realidades del periodismo hasta las teorías conspirativas. Los estudiantes encuestados perciben el conocimiento del funcionamiento de las redes sociales como algo natural, casi intuitivo, derivado de años de experiencia. Por otro lado, los estudios de periodismo desempeñan un papel clave en el aprendizaje de los mecanismos de los sitios web de noticias. Entre las fuentes de conocimiento, las científicas están casi ausentes. Como conclusión, formulamos recomendaciones para las actividades destinadas a dotar a los futuros periodistas de un conocimiento sólido de la inteligencia artificial en el periodismo.

KEYWORDS | PALABRAS CLAVE

Digital Journalism, Cyberjournalism, Media Literacy, University Students, Social Media, Qualitative Analysis.
Periodismo digital, ciberperiodismo, competencia mediática, estudiantes universitarios, redes sociales, análisis cualitativo.

1. Introduction

Interest in integrating AI into journalism has grown with the progress of research on large language models (LLMs) enabling the creation of journalistic content. This has led some researchers to conclude that journalism is in a critical period of change, in which the understanding and meaning of these technologies have not yet been formed. In the meantime, these technologies are being delegated to tasks that are fundamental to knowledge production and that were previously the domain of journalists, including decision-making, interpretation, and judgment (e.g. Jones, Jones, & Luger, 2022). These changes are taking place in the journalism landscape, where university-based journalism education is becoming increasingly important (Josephi, 2020). Interest in AI is reflected in recommendations for journalism and media curricula (Kirchhoff, 2022). Research has confirmed the need to prepare journalists to cover AI transformations (Gordon & Lule, 2019) and to equip the next generation of journalists with digital and AI skills (e.g. Katzenberger, 2024) and critical thinking skills (Marconi, 2020). Journalists are required to have the knowledge and skills to integrate digital technologies into the newsroom and keep up with the latest developments (Bro, Hansen, & Andersson, 2016). However, knowledge about journalism education in higher education is an under-researched area (Ripatti-Torniainen & Mikkola, 2023).

Building on the already well-rooted research interpretation of “algorithm as culture” (Bishop, 2019; Bucher, 2017; Seaver, 2017), we understand the algorithms not as a technological object, but as a cultural artifact, “unstable objects that are enacted through the varied practices that people use to engage with them” (Seaver, 2017, p. 1). Research in this approach is concerned with understanding what people know and think about algorithms. Following the tradition of media studies and algorithmic imaginaries and folk theories, this article highlights the role that algorithmic stories on the borderline of journalism play in the processes of imagining algorithms and identifies aspiring journalists’ knowledge of Artificial Intelligence.

“Algorithmic stories on the borderline of journalism” will be theorized as the ways in which journalism students share knowledge and imaginations about AI algorithms in journalism. We argue that such stories about omnipresence of AI or reading users’ minds, are key mechanisms for the emergence and maintenance of algorithmic imaginaries that enable journalism students to make sense of algorithms as partners in their future professional activity. Knowing them can facilitate the creation of journalism and media education programs (Adjin-Tettey, 2024; Hossain & Wenger, 2024; Wenger, Hossain, & Senseman, 2025).

2. Literature Review

Since algorithmic systems are often complex and opaque (Burrell, 2016), most users understand them poorly (Eslami et al., 2016). In the case of Artificial Intelligence, the problem is exacerbated, because even its creators may not be sure about its operation (Castelvecchi, 2016). Therefore, it is a challenge not only for lay people but also for professionals such as journalists to understand algorithms. Research to date provides limited information on journalists’ knowledge of algorithms. While much attention has been paid to journalists’ perceptions of AI and algorithms (e.g. Thurman, Dörr, & Kunert, 2017; van Dalen, 2024), little is known about what journalists know about it. The exceptions are those by de Haan et al. (2022), Jones et al. (2022) and Peterson-Salahuddin and Diakopoulos (2020) who used the concept of folk theories in their study to explore how journalists and editors understood social media algorithms. Coining the term “algorithmic folk theories,” they found that most interviewees were aware of algorithms and wondered how they worked in relation to content distribution. Their knowledge came from a mix of information sources, including direct communication from social media platforms from press releases and company representatives or persons who communicated directly with editors (Peterson-Salahuddin & Diakopoulos, 2020).

Although AI algorithms are common tools in journalism and media, there is a disconnect between the change in news production technologies and the understanding of these systems within the journalistic community (Jones et al., 2022). The resulting “knowledge vacuum” is filled by perceptions, folk theories, and rumors that are rooted in the lack of visibility of AI and the algorithmic infrastructures that underpin many newsroom technologies. While the research on journalists’ skills with AI and their attitudes toward its incorporation in newsrooms is expanding, few studies focus on journalism students’ perceptions and proficiency with AI. Zhu et al. (2024) researched factors affecting Chinese journalism students’ interest in having AI training integrated into their university courses. They found that crucial positive factors are perceived usefulness and perceived ease.



The meta-analysis conducted by Bhaskaran, Kashyap and Mishra (2024) revealed that so far most of the studies prioritize data journalism education for teaching technological and management skills over fostering critical data literacy, although the importance of inculcating data literacy is acknowledged in many studies. Journalism and mass communication students in Brazil and the United States participated in the research by Seo et al. (2025). The study examined perspectives, attitudes, and behavioral intentions regarding AI, revealing factors such as higher level of familiarity with AI and perceived efficiency co-occur with higher levels of AI self-efficacy. Journalism students' understanding of generative AI tools was studied by Veenstra et al. (2024), who revealed that students perceive these tools are inevitable in their future careers. However, in the same study authors have proven that students lack fundamental knowledge about digital tools, and therefore often misunderstand how these tools generate content. Studies so far have emphasized the need for incorporating data literacy as part of data journalism programmes (Heravi, 2018) and raising so-called algorithmic awareness of students and academic staff (Pavlik, 2023).

2.1. Conceptualizing “Algorithmic Stories on the Borderline of Journalism”

In social research, the interpretation of the algorithm as culture is popular (Seaver, 2018). By definition “algorithms are enacted by practices which do not heed a strong distinction between technical and non-technical concerns, but rather blend them together. In this view, algorithms are not singular technical objects that enter into many different cultural interactions, but are rather unstable objects, culturally enacted by the practices people use to engage with them” (Seaver, 2017, p. 5). In other words, an algorithm is a type of socio-technological relationship, part of a family of knowledge-creation or decision-making systems in which human and non-human actors provide data and are placed in systematic mathematical relationships by that data, and then receive information resources based on the analysis and evaluation of the input data (Christin, 2020; Seaver, 2017). This is a different interpretation from the technical one, in which algorithms are sequences of logical operations that provide computers with step-by-step instructions to operate on data (e.g. Barocas & Nissenbaum, 2014).

Following the approach of “algorithm as culture” we are guided by the related idea of “algorithmic imaginary”. The foundation of research on algorithmic imaginary is to know what people know and think about algorithmic systems because they do not have complete knowledge of how algorithms work, given algorithms' proprietary and variable nature, as well as their indeterminacy (Low, Ehret, & Hagh, 2025). In this article, we rely on the concept of algorithmic imaginings because it signals the speculative nature of this popular theory. An important contribution to research on understanding algorithms is the concept of the algorithmic imaginary by Bucher (2017), defined as “ways of thinking about what algorithms are, what they should be, how they function and what these imaginations in turn make possible” (Bucher, 2017, pp. 39-40).

The “algorithmic imaginary” is sometimes used interchangeably with “folk theory” (e.g. Peterson-Salahuddin & Diakopoulos, 2020), which focuses on mapping diverse conceptions of different user groups about different algorithmic systems and typically does not address specific strategies of resistance or acceptance (DeVito, Gergle, & Birnholtz, 2017; Eslami et al., 2016). Folk theories like scientific theories are the result of an inductive-deductive reasoning process used to explain social phenomena. The term “folk” denotes both that these theories are shared by a social group and that they are derived from everyday experience, for example in contact with artificial intelligence algorithms and/or social interactions (Shelby, Rismani, & Rostamzadeh, 2024). The value of folk theories lies not only in the way they guide behavior, but also in the way they make sense of experiences and influence our knowledge of the world.

This research is complemented by Schellewald's (2022) idea of “stories about algorithms”, which is important for our research and was developed as part of a reflection on designing research on “algorithmic imaginaries.” Stories allow us to understand the ways in which so-called ordinary users express and share their lived experiences with algorithms. “Algorithmic stories” provide intuitive, fleeting, and constantly reinvented knowledge in response to the need to explain a difficult-to-understand but intensely experienced operation of Artificial Intelligence algorithms. In this, let's call it “fluid” form, imaginaries facilitate the implementation of various individual and collective responses to the algorithm, acts of power, and resistance (Siles et al., 2020).

3. Research Approach

Knowledge about algorithms has so far been studied in a specific environment, for example professional users (e.g. Peterson-Salahuddin & Diakopoulos, 2020), and there have also been studies focused on so-

called ordinary people (e.g. Schellewald, 2022). Such segmentation led us to the conclusion that algorithmic imaginaries are insufficiently studied and developed among people who have chosen the path of higher journalism education. They are no longer just so-called ordinary users, i.e. people who mainly sit on the recipient side of recommendation algorithms and are more focused on recipients than producers (Schellewald, 2022), but they are also not just skilled internet users such as, for example, influencers on YouTube (Bishop, 2019) and Instagram (Cotter, 2019), nor are they equipped only with practical knowledge of algorithms (Cotter, 2024), but they are not yet professional specialists in journalism.

In constructing our research, we assumed that the division into “ordinary people” and “professional specialists” may be unreliable, or at least requires reflection. First, people rarely act as professional specialists (such as journalists) with “educated” professional knowledge, especially in sectors characterized by high technological progress. The dynamic nature of this process (Deuze, 2006) is illustrated by the successful metaphor of the professional “path” that one enters and follows.

Secondly, according to this logic, we assume that journalism students who learn the secrets of the profession from an academic theoretical perspective do not enter their professional path as a blank slate, a “tabula rasa” - this concept expresses the view that all knowledge comes from experience, and a mind deprived of experience is “unwritten” (discussion on this topic in the context of artificial intelligence, e.g. Marcus (2018)). In our study, we assume, following Wilson (2007), that they are not a “blank slate”, but have their own experiences of contact with algorithmically controlled media.

Since our interviewees aspire to work in a profession related to creating information using currently available technological tools, it should also be expected that they have their own ideas about what algorithms are and how they work in journalism and confront these ideas with the knowledge acquired in the higher education process. Because they are on the frontier of professional journalism, we assumed that their “algorithmic stories on the borderline of journalism” would be a lens through which to explore these imaginaries. Since the emergence of imaginaries about algorithms has been identified in newsrooms, the lens of “algorithmic stories on the borderline of journalism” seems to be a promising way to explore students’ imaginaries and understanding about algorithms’ role in journalism. Based on this concept, we formulate the following research questions:

1. RQ1: What do journalism students know about the presence of AI algorithms in journalism and what are their imaginaries about these algorithms?
2. RQ2: What are the main sources of journalism students’ knowledge about AI in journalism?

The aim of this study was to explore journalism students’ knowledge of AI algorithms and gain insight into how future journalists perceive algorithmic tools in journalism. Since previous research has indicated a possible lack of algorithmic awareness, we asked semi-structured follow-up questions to gain insight into awareness of the possible impact of algorithms.

3.1. Materials and Methods

Before beginning the study, the team obtained approval from the ethics committee of a university affiliated with one of the authors. All interviewees signed an informed consent prior to being interviewed. In May and June 2024, we conducted forty-one semi-structured interviews with first-cycle (BA) journalism students (S1-S41) at a leading private university in Poland. The semi-structured interview design allowed for openness and the inclusion of topics that emerged situationally. The sample was selected using the snowball sampling method. The participants were aged 17-38 (average age 23) and came from various backgrounds: rural areas (9 people), cities up to 50,000 inhabitants (8 people), cities with more than 50,000 to 150,000 inhabitants (4 people), or cities with more than 500,000 inhabitants (20 people). The group included 17 part-time students (3 in the first year and 14 in the third year) and 24 full-time students (5 in the first year and 19 in the third year). The sample consisted of 21 women, 19 men, and 1 non-binary person. The study took place at the end of the academic year, which allows us to assume that all participants, including first-year students, had already had the opportunity to learn the theoretical foundations of the journalism profession. The interviews were conducted via a video conferencing service licensed by the university and recorded with the participants’ consent. Then, an anonymous transcription was made and the recordings were deleted. The transcript was subjected to thematic analysis (Braun & Clarke, 2021; Gibbs, 2018), using in-vivo codes in the first cycle of

coding, and turning them into more abstract codes in the second cycle of coding (Saldaña, 2013).

The study was conducted in the Polish media ecosystem, where editorial offices are implementing AI. In Poland there is the highest acceptance of AI among 10 European countries in terms of its usefulness, honesty, and objectivity, while concerns about AI manipulation are below average (Araujo et al., 2023).

4. Results and discussion

4.1. The Knowledge of AI

4.1.1. AI Algorithms in Media

When asked about expectations regarding journalistic knowledge of algorithms, most students agreed journalists should understand content creation and distribution mechanisms. This highlights their belief that journalists must know AI algorithms. When asked about the use of artificial intelligence in Polish media, students were cautious, which is well reflected in the language. Usually, the answers began with an indication of ignorance: “I know little” (S1), “nothing” (S15, S39, S41), “not much” (S3, S4, S8), “I have no idea” (S14), “my knowledge is not extensive” (S5); or by emphasizing that students have rather ideas and assumptions than knowledge of facts: “I think that” (S10, S11), “rather slogans” (S17), “it seems to me” (S19), “I assume” (S34), “I only have such assumptions” (S38).

Some participants claimed that their poor knowledge of AI in Polish media is a result of the practices of these media:

It seems to me that [I know] not much, because there is also not much of this information provided to us. [...] it seems to me that we as recipients are still increasingly, well, uninformed about whether, for example, a given article was written using artificial intelligence or a script for a program was created in this way. [...] journalists probably won't be willing to brag about it. (S13)

Although the interviewee imagines the effect of using artificial intelligence, they also allows themselves to evaluate this effect. As another statement shows, the imagination also concerns the prevalence of AI in the media: *Currently, AI is used literally everywhere, in every possible way. (S2)*

The idea of the ubiquity of AI is combined with the conviction of the inevitability of its development, demonstrated, for example, in the study by Nara (2024). Such an interpretation places the user in the role of an entity deprived of sovereignty, as they do not participate in decision-making processes (Reviglio & Agosti, 2020). As Hapek's (2024) analysis shows, these inequalities may result, for example, from the provisions of the regulations of AI-based services. It can also be observed that students construct a narrative of the omnipresence of artificial intelligence, which aligns with their general belief that AI is a system potentially operating beyond the user's control. This view may reflect a limited sense of user agency and suggests that AI is often perceived not as a tool to be mastered, but as an autonomous system that influences media practices in ways that remain largely opaque. Such thinking may be linked to how people understand AI through the lens of folk theories, which rely on everyday observations rather than technical or factual knowledge.

Before moving on to the examples provided by the students, it is worth reflecting on a recurring phenomenon – students frequently offer examples of how AI works, even when they claim to lack knowledge about it. Their statements tend to be shaped more by intuition than by concrete understanding. While most of our interviewees admitted to having little knowledge about AI in the context of Polish media, they nonetheless shared various examples of its applications. Students most often mentioned the use of AI for advertising and marketing campaigns (S6, S24, S25, S35, S36, S37, S38) and product positioning (S20, S35, S40), text creation (S2, S6, S7, S11, S12, S18, S19, S24, S28, S31, S35, S36) and generating graphics (S6, S7, S26, S29, S35) and image manipulation (S3, S7, S18, S19, S27). There was a statement about the use of algorithms for creating games and for telephone scams (S27) and generating clickbait titles (S31). We assume that the illusion of knowledge “I don't know, but I will say something” (the so-called Dunning-Kruger error), i.e. the appearance of examples in statements results not only from excessive self-confidence, but may result from the need to reduce the dissonance that appeared when our interlocutors first they confirmed that journalists should know the mechanisms of media operation, and then they admitted their own ignorance, although they belong to a group that participates in the educational process of journalism and, to some extent, connect their future with in journalism. Moreover, this error is common in statements in social media (Rapeli, 2024) and, as such, may be an element of the natural media environment of journalism students.

4.1.2. Consequences of using AI algorithms

When asked about the effects of AI algorithms in the media, students were reserved, which confirms the results of Xu et al. (2024) that “unknown” is one of the most common opinions about AI. Admitting ignorance was usually accompanied by assumptions, e.g.

There are also some journalistic texts written by Artificial Intelligence, at least that's what I think, it's not confirmed knowledge, I just assume that journalists use it. (S36)

Among the positive effects, students most often mention faster work and facilitation of tedious tasks (S5, S6, S7, S9, S11, S12, S14, S16, S17, S19, S22, S23, S25, S33, S35, S36) as well as the use of LLM-based chatbots as sources of information (S26, S10). One of the interviewees indicated why the automation of tedious tasks is a positive effect for journalism:

This online journalism is [...] such a very reproductive work, so it would be great if artificial intelligence replaced such work, and real journalists could do journalism and acquisition, such creative work, because that's what it has always reminded me of: with inquisitiveness, with the fact that you have to draw your own conclusions, analyze various situations. (S12)

This opinion is reflected in many studies and is one of the most popular arguments in favor of automating journalism. The negative consequences reported by students were usually about the decline in the quality of content, both textual and visual (S2, S6, S7, S9, S11, S12, S18, S20, S33) and the possibility of job losses (S5, S11, S17, S30, S35, S37, S38, S40). Few of them addressed the problem of disinformation, information bubbles and manipulation (S4, S7, S13, S15, S31, S36), the threat to privacy and data security (S40, S37) and ethical issues:

The algorithm is not human, which means it cannot say what is good or bad. It has something programmed with zeros and ones, which means if it drives us some fake news, or anything appears on the Internet, well, that is the negative part of this algorithm. (S20)

Similarly to the results of previous studies (e.g. Xu et al., 2024), the algorithm is treated by students as a machine and, as such, is not supposed to be responsible for the consequences of its actions. Students also indicated that the negative consequence of using algorithms is. constantly appearing personalized ads (S3, S24, S32). In addition, content personalization has been called “mind reading”:

Negative consequences, maybe it will be difficult to surprise us with content, because it will be so tailored to each individual. They are already reading our minds, but they will be improved even more. (S17)

In this respect, our study extends the existing knowledge on conspiracy theories in AI imaginaries (e.g. Low et al., 2025). Other statements refer to taking up the game of the algorithmic system and a sense of agency in relation to the algorithmic system: For example, interviewee (S4) stated that:

If someone chooses interesting content on the Internet, whether on YouTube or even on Facebook, then all the time - I have also experienced this from my own experience - that if I chose interesting content, it showed me very similar content all the time and of course I often lost a lot of time on this, I won't hide it, but I knew that it was quite productive. (S4)

Concerns that it will be difficult to be surprised by content due to algorithmic adaptation of content on the Internet coincide with the results of Swart's research (2021) - young people want journalism to include surprise effects.

Our analysis, illustrated by the above examples, allows us to answer the first research question. Although students declare the importance of understanding AI by journalists, their knowledge of it is limited. Such a contradiction may indicate a form of cognitive dissonance typical of folk beliefs — it emerges when a normative belief that one ought to know something clashes with actual experience and the level of possessed knowledge. Among the negative consequences of using AI algorithms in media companies, there was a decrease in the quality of content and the loss of jobs. The most frequently cited positive effects are the acceleration and facilitation of work, which, however, in the opinion of students, comes at the expense of a decrease in the quality of content.

4.2. Sources of Information about AI in the Media

4.2.1. Social Networking Sites

Since social media appeared as an AI environment in our interviewees' statements (S22, S27, S30, S32, S35), this prompted us to deepen our research. Drawing on the work of DeVito et al. (2018), who showed that people use various sources of information to create folk theories about media, we narrowed the research field and asked students about the sources of their knowledge about the operation of social networking sites. Most students indicated that their knowledge on this subject was based mainly on their own experience, often unable to indicate the source that allowed them to explore this knowledge. The intuitive approach they mentioned was considered by them to be a natural way of acting and adapting in the digital environment, e.g.:

I admit that I have never delved into this. I have always used it all intuitively. However, I think that when I use these sites, I draw my knowledge from my own experience, for example, when I use a site and I try to find out step by step how it all works. (S5)

Referring to the above quote, it can be observed that the intuitive use of artificial intelligence may be seen as a form of tacit knowledge, developed through the use of various AI-based technologies. This intuitive approach is also evident in how some interviewees describe acquiring knowledge about the functioning of social networking sites – primarily through personal use and experimentation. One student, when asked about the source of their knowledge, responded: *[I learn] by trying, i.e. clicking to check how it works and if it works, then it's great. (S7)*

The importance of one's own experience is confirmed by the results of research analyzing the opinions of Polish students on journalism studies (Stępińska et al., 2017). They indicate that students often do not perceive the knowledge acquired during their studies as fully valuable, arguing that the profession of a journalist can be mastered primarily through practice. We assume that our interviewees belong to a generation that has been in contact with the Internet and its AI-based applications since childhood. We can therefore speak of a type of tacit knowledge – people who indicate that their skills in using social networking sites are based on intuition may have acquired this knowledge unconsciously, in the process of constant use of these platforms. Similar conclusions have been drawn by other scientists (Dogruel, 2021; French & Hancock, 2017; Mukhopadhyay & Johar, 2005). Users of technology therefore create hidden sets of beliefs about the operation of systems, shaped by everyday experiences and observations related to these media.

AI does not appear spontaneously in statements about the operation of social media. However, it is present in the context of a statement expressing the belief that the use of chatbots is common, although it has negative consequences:

I first used chat-GTP, with my hand on my heart, when I was asked to use it to write a text for an assignment at the university. It was because of my studies that I first used this chat, because I always assumed that artificial intelligence, especially in journalistic work, kills creativity a bit. (S17)

Some students also mention the role of academic education when they recall learning the importance of social media regulations and instructions:

[I learn] From the sites' regulations. Does anyone else read them? I read them most often. At university, I did an assignment on data and cookies and after that I started reading these regulations and these cookies. Because before that I would quickly click "I accept" and that was it. And now I started reading. Journalism studies did give me something. (S25)

4.2.2. News sites

In comparison to social networking sites, journalism students describe the sources of knowledge related to news sites in a different way. It can be argued that they perceive knowledge about social media as something natural and "assigned from above". However, in the case of news services, the approach to defining sources of knowledge changes significantly.

The first and most frequently mentioned source of knowledge is academic classes. They also mention that they did not feel the need to explore these mechanisms before, and only thanks to their studies did they gain awareness. In the case of news sites, students more often than in the case of social media emphasize that their knowledge is insufficient:

Well, that's a bit of a problem, because I'm not convinced that I know a hundred percent how they work. I have the impression that I understand a little bit of the mechanisms they're based on, but not a hundred percent. (S18)

Unlike the knowledge related to social networking sites, in the case of news sites, some interviewees, especially those who do not plan a career in the media industry, believe that they do not need detailed knowledge about their operation:

In terms of news sites, never. I honestly say that I didn't draw on this knowledge. I didn't wonder how they functioned. But as for news sites, I assumed that they are reliable, objective, supported by facts, not opinions. (S41)

Surprisingly, although the interviewees pointed to the threat of disinformation and manipulation as disadvantages of using AI in the media (S4, S7, S13, S15, S31, S36), they also shared the assumption that news outlets can be a reliable source, as if AI existed outside of them. This is illustrated by the following statement:

As for news sites, never. I honestly say I didn't draw on that knowledge. I didn't wonder how they worked. But as for news sites, I assumed they were reliable, objective, supported by facts, not opinions. (S41)

We attribute this interpretation to the general lack of knowledge about the presence and impact of AI algorithms. The conducted analysis allows us to answer the second research question. The main source of knowledge of journalism students about the functioning of social networking sites is intuition and experience of using them. The knowledge created in this way is confronted with knowledge acquired in the process of academic education. Therefore, they co-shape the amalgam of imagined and academic knowledge. This phenomenon has a multidimensionally processual nature, in which AI algorithms (recommending and suggesting, e.g., sources of knowledge) are subject to evolution, are unstable, constantly improved and “fluid by nature” in terms of results (Neyland, 2015), and their mutual shaping with user interactions makes it difficult to approach them using predetermined assumptions about knowledge (Dogruel, 2021). In turn, students draw knowledge about the functioning of news sites mainly from their studies, although they often admit that they do not need it because they rarely use them.

5. Conclusions

In our study, we presented the concept of “algorithmic stories on the borderline of journalism” which we used to learn about Polish journalism students’ knowledge of AI algorithms. Imaginaries (Schellewald, 2022) and folk theories (de Haan et al., 2022; Jones et al., 2022) provide a dynamic and intuitive form of knowledge that arises in response to the need to understand complex but intensely felt phenomena, such as the operation of AI algorithms. We revealed limited students’ familiarity with the use of AI in journalism and an almost complete lack of knowledge of the practical application of AI in Polish media. Our results are consistent with those by Veenstra et al. (2024), who found misunderstanding about digital tools among journalism students.

When interviewees were asked to indicate the positive and negative aspects of AI in journalism, they did not go beyond the most popular issues (the threat of losing jobs, replacing routine activities and enabling journalists to engage in creative work). By revealing the ignorance of AI in journalism, we have identified a mechanism for building knowledge from ideas about AI. This is a complex mechanism, because while students unanimously state that journalists should know the mechanisms of creating and distributing content in the media and randomly indicate areas of using algorithms, they simultaneously share ideas about AI and, often, assess the imagined effects of AI.

In our study, academic education turned out to be a diverse source of knowledge about AI in journalism. We identified its different role in learning the mechanisms of social networking and news sites. Students perceive knowledge of how social media works as something natural, almost intuitive, coming from many years of experience. On the other hand, journalism studies play a key role in learning the mechanisms of news sites.

Previous studies have assumed that educational programs should contribute to increasing the so-called algorithmic awareness of students and academic staff (Pavlik, 2023). We suggest that the preparation of journalism study programs should take into account that knowledge about AI consists not only of knowledge from previous and current education (including academic), but also complex ideas, especially about difficult to learn new solutions with significant social impact, such as AI. The process of acquiring this knowledge does not begin or end with the academic education cycle and is crucial due to the cultural and social role of journalists.

Funding Agency

There is no funding to report.

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