EMBEDDIA

Cross-Lingual Embeddings for Less-Represented Languages in European News Media

Research and Innovation Action

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D6.6: Interim report on ethics and responsible science and journalism (T6.5)

Executive summary

This document outlines the measures taken to assure ethical and secure development of the EMBEDDIA project and outlines public measures for responsible science and journalism with an analysis of news production and new tool development. To this end, the report presents an overview of the legal developments regarding artificial intelligence tools in media and journalism, together with an extensive insight into discussions and developments regarding regulation and ethical issues involving AI and the news media by various significant international stakeholders that define or influence current and potential future ethical framework for relevant AI tools and applications.

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The EMBEDDIA Consortium partner responsible for this deliverable has addressed all comments received. Changes to this document are detailed in the change log table below.

Change log

Date	Version number	Author/Editor	Summary of changes made
13/05/2020	v1.0	Marko Milosavljević (UL)	Draft report.
23/05/2020	v1.1	Dragana Miljkovic (JSI) & Carl Gustav Linden (UH)	Internal review.
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24/06/2020	final	Matthew Purver (QMUL)	Report quality checked and finalised.
30/06/2020	submitted	Tina Anžič (JSI)	Report submitted.

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List of abbreviations

AI	Artificial Intelligence
EC	European Commission
EU	European Union
DoA	Description of Action
GDPR	General Data Protection Regulation
IPR	Intellectual Property Rights
NLG	Natural Language Generation
NLP	Natural Language Processing
OECD	Organisation for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
WP	Work Package

1 Introduction

This deliverable reports on the results of the work performed within Task T6.5: "Towards responsible and ethical science and content creation", which focuses on the need for more transparent, accountable and responsible news journalism, with ethical and moral attitudes at its core. As detailed in the Description of Action (DoA), EMBEDDIA will ensure that the tools developed not only fit within a legal framework (e.g., regarding protection of data and user integrity) but that the developed tools are used in ways that do not break trust (for instance, in the case of news generation, publishers need to openly tell the audience how the content is produced).

This deliverable outlines the measures taken to assure ethical and secure development of the EMBEDDIA project, as defined in Deliverable D6.2 "Project's internal ethics policy (T6.5)", submitted at M6, which was approved by the EMBEDDIA external ethics and legal advisor and quality controlled by the Jožef Stefan Institute's GDPR officer. In Task 6.5, throughout the three-years project duration - our aim is to monitor the measures and recommendations for responsible AI development and overview the status of new tool usage and development in news production. To this end, we regularly and closely monitor all relevant issues concerning ethical development of AI and automation tools for news media content analysis and creation, the latest developments in the use of such tools in global media and legislation at the EU and the national levels.

We have regularly informed the EMBEDDIA partners on these developments and their impacts on EMBEDDIA at all four project meetings, held in

- Ljubljana, Slovenia in January 2019,
- Tallinn, Estonia in March 2019,
- La Rochelle, France in June 2019,
- Zagreb, Croatia in December 2019.

Moreover, we are regularly informing the general public and prospective end users of EMBEDDIA tools via social media and the EMBEDDIA project newsletter.

Until M17 we have held a number of successful meetings about ethical use of AI in journalism and discussed views and solutions to possible ethical issues with relevant stakeholders, including media editors and managers from:
- the BBC in March 2019,
- Styria Croatia and 24sata in March and December 2019,
- Radio France, L'Express, Liberation and BFM TV in January 2020.

We have discussed these issues and the EMBEDDIA ethics policy at a number of international events, lectures and conferences, including:
- the conference organised by the Council of Europe and Slovenian Ministry of Culture in November 2019 titled "(Last) Call for Quality Journalism", with a joint panel discussion with a member of our team and Head of Facebook for Russia and Central and Eastern Europe Gabriella Cseh,
- a public lecture at Ryerson University in Toronto, Canada in May 2019, titled "Between Euphoria and Dystopia: AI, journalism and perceptions in leading newsrooms".

In this deliverable, we first present the general ethics framework of EMBEDDIA and the security measures taken to protect the privacy of users and ethical tool development. This is followed by presenting challenges and measures, which we are taking to answer any open questions. We present an overview of recent legislative and ethical developments in the European Union regarding the use and development of artificial intelligence tools and review recent data on the use of automation tools in news media companies.

2 Ethics framework, challenges and measures

The EMBEDDIA technology aims at advancing cross-lingual NLP and NLG and uses only anonymous data, by which subjects cannot be identified (not any specific identification of one unique person, such as name, social security numbers, date of birth, address, mails, IPs). During our work we do not collect

or process any personal data for the purposes of developing the EMBEDDIA technology and the consortium takes all the necessary measures to avoid any possible user identification.

The EMBEDDIA researchers and media partners are aware of the need to follow the best practices related to GDPR, which took effect on 25th of May 2018. We discuss any potential ethical dilemmas with the External Advisory Board members and the JSI Data Protection officer, who closely collaborate with the project coordinator, the leader of Task T6.5 (on responsible and ethical science and content creation) and the Steering Committee members.

The particular roles of the external ethics advisor and the legal advisor are to help in implementing exemplary ethical and data management procedures (including the issues possibly arising from GDPR) and consult on any IPR issues.

- The role of the EMBEDDIA external ethics and legal advisor was assigned to Urša Chitrakar, an attorney specialized in copyright and intellectual property. She has extensive experience as legal counsellor for creative industries. She also lectures on copyright and intellectual property and is frequently involved in research projects related to intellectual property, new technologies and data protection. Before she became an attorney she spent a year as a Fulbright scholar and visiting researcher at Fordham University, School of Law in New York, NY and worked as an independent legal adviser.
- The JSI Data Protection officer is Luka Virag, who works in the institution's law department, and additionally takes care that GDPR is fully respected.

The external ethics and legal advisor is the external evaluator approving all the relevant deliverables with regard to ethics and appropriate data management and the one responsible for monitoring the compliance to high ethical standards. Deliverable D6.2: "Project's internal ethics policy" was quality checked by Urša Chitrakar. When preparing the ethics procedures described in D6.2: "Project's internal ethics policy", we took useful advice from Luka Virag, JSI lawyer and GDPR officer, who further quality checked this deliverable.

GDPR defines personal data as "any information relating to an identified or identifiable natural person". An identifiable natural person can be identified directly or indirectly by a "name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person," as described in Article 4 of the regulation[1].

This section presents and explains the general ethics framework of EMBEDDIA, outlining the main ethical measures taken and providing further clarification on the points where privacy of users could still present a possible concern, examining these in turn for our user comment analysis in WP3, news analysis in WP4, and news generation in WP5. We also address the potential legal issues and open questions regarding user comments, news articles, their aggregation and the implications of the new EU Copyright Directive. The main points still open for discussion are related to ethics and data management are listed and some measures and conclusions to the dilemmas are presented.

2.1 Data management

The work in WP3, WP4 and WP5 all depends on datasets obtained from news media providers. These datasets do not contain any personal information of the users nor any other identifiable information. For the textual datasets owned by the media providers or gathered by the EMBEDDIA researchers, clear procedures are being established and the data management plan has been proposed (see Deliverable D8.3: Data Management Plan). The information for which the individual parties are responsible for is being shared only in a manner clearly defined by the Consortium Agreement. Note that unethical data management is described also as a potential risk for WP3, WP5 and WP8 in Deliverable D8.4: "Risk monitoring and quality assurance guidelines", where the appropriate risk mitigation measures have been proposed. All data acquisition processes are in compliance with the GDPR regulations. Moreover, the project does not involve activities or results raising any potential security issues, as the project does not involve activities or results raising security issues "EU-classified information" as background or results.

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[1] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0679&from=EN

2.2 User comment analysis

In WP3 the objective is to analyse user-generated comments, to produce tools for topic modelling, conversation structure and context modelling, sentiment, stance and opinion detection, and detection of hate speech,political trolling and attempts to elicit extreme reactions and influence others' opinions. We are also developing and implementing methods for generating human-readable reports in multiple languages. Through advanced cross-lingual context and opinion analysis, developing cross-lingual comment filtering and techniques for report generation from multilingual comments we try to devise the means to understand the reactions of multilingual news audiences to help news media companies better serve their audiences.

User-generated comments are in some cases anonymous in origin (no information about the identity of users is ever collected), and in other cases comments are published using some username registered on the media partner's publishing platform. In both cases, the default policy (see below for more detail) is that EMBEDDIA researchers never get access to user identifier information: author usernames will be removed before distribution by the EMBEDDIA media partners, leaving no direct way that individuals can be identified by researchers or anybody else (however, by searching comments text on the web, the public can discover the public username; but this cannot be prevented, does not reveal any personal data beyond the user's comments themselves, and does not constitute personal data processing).

Nevertheless, there are open issues regarding the distribution of comments, for example when the datasets are to be released publicly, concerning a potential need for additional comment anonymisation. There are no such issues with anonymous comments, as the researchers never access the users' personal data. Even with non-anonymous comments, usernames already have public status as they are available on the original publicly accessible news site. However, to assure maximum ethical standards and security, the advice to the media partners is to remove usernames (and, if possible, mentions to original usernames in the text) and replace them with randomly assigned identifiers. This will prevent any chance of later identification from the data, even in cases where usernames may be associated with some external information (e.g., Facebook authentication data, where used), ensuring that there is no direct way for future dataset users to trace the comments back to the original authors.[2]

For maximum security, our default policy is therefore that the anonymisation process should happen even before the non-media EMBEDDIA project partners see the data: if the consortium partners never receive personal data, this removes the risk of any member of the team accidentally releasing a non-anonymised version. However, in some cases this makes certain kinds of analysis impossible: for example, the use of usernames in the body of comments can be key to understanding to whom a comment is addressed, and therefore what opinion it expresses. In these cases, versions of the datasets with the original user identifiers may be released internally for use by other non-media EMBEDDIA partners, as long as

- the data is reviewed and confirmed not to allow direct individual identification (e.g., it should use system user IDs, rather than real names); and
- any subsequent public release of any portion of these datasets will then be reviewed to decide on the level of anonymisation required.

Possible issues could also arise in the case of occurrences of someone identifying him/herself as an author of a comment that was labelled as an example of hate speech. Potential appearance of personal names within news articles and/or comments is not problematic as regards the protection of personal data, as personal data legislation applies only to structured sets of personal data, which is not the case in the situation at hand (within articles/comments, we mostly see only incidental appearances of personal data, while the repository of such articles does not amount to a structured set of personal data).

Additionally, the personal information contained in an article may not be definite enough for the rules on personal data protection to apply – merely a name and surname are not necessarily enough for the general public to fully (and without additional effort) identify the individual in question. Nevertheless, according to our policy, articles containing personal data are excluded from the database upon request

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[2] Indirect methods, for example estimating a user's identity on the basis of their opinions and the topics they talk about, may be available in some cases, but are impossible to fully prevent and are possible even with strictly anonymous comments.

of the individual such data relates to. In practice, the concerned EMBEDDIA media partners handle this issue as follows:

- The Finnish media partner STT makes sure that the unsuitable or unlawful content is pre-filtered from the comment sections. STT moderators can also ban commenters, if the publisher of the moderated comment section has authorized them to do so, though these kinds of decisions are often left for the publisher.
- The main approach of our Estonian media partner Ekspress and our Croatian media partner Styria is to delete the comments and (in case of repeated offenses) to block the commenters.

Another possible ethical concern is in the handling and distribution of comments that were blocked by the moderators.

- STT moderators delete for example: content that breaks the law, defamatory allegations, sensitive privacy information, threats to an individual or group, discriminatory or racist content, incitement to commit illegal activities, personal data of victims of crime and accidents and their relatives, other personal and contact information, inappropriate links or link lists, bad or disruptive behavior, trolling, external online surveys, competitions or similar and content that violates copyrights.
- For Ekspress, those cases mostly include defamation, threats, insults, comments that stimulate hatred or violence or other unlawful actions, including false information.

In some cases these may have content, which should not be re-published, and possibly prevented by legislation (e.g., in cases where content is potentially harmful). In these cases, public distribution may not be possible, except for limited distribution for scientific research purposes. We are further investigating these questions before any public data release.

2.3 News analysis

In WP4 the focus is news articles, where the main potential issue involves copyright. As regards the new EU Copyright Directive, the exception enacted in Article 3 allows text and data mining without obtaining copyrights from their respective holders. This however brings up the question of the legal basis for such conduct in a system where any exceptions are not yet implemented. In the case articles/comments are reproduced/copied for the purpose of implementing the project tasks, even though they are not published in any manner, corresponding permissions need to be acquired.

The right of publishers on the publication they released, is a novelty, which does not apply to non-commercial use carried out by individuals and use of individual words or very short extracts. None of these exceptions is however applicable in the case of reproduction/re-publishing of entire articles by an institution. An additional right will therefore have to be acquired by the press publishers (and for a possible additional remuneration), along with the copyright. EU member states have until 7th of June 2021 to implement the provisions of the directive into national legislation - until then the new rules do not apply.

In addition to EU regulation, there is only national law. According to Article 48 of the Slovenian Copyright and Related Rights Act, it is allowed to prepare and reproduce abstracts of published articles in the form of press reviews without obtaining any permissions, this goes also for electronic publications. The exemption applies only to reproductions made with an intent of "informing the public" and only, if the source and authorship of the work are duly indicated.

Considering intellectual property rights: we advise to add a licence under which the dataset can be used, when media partners release this dataset. This opens the question of the type of licence, which ideally will ensure that the data can be further used for research purposes. Our default policy is to use the CC-BY-SA license for text data, which allows distribution and re-use for research, while ensuring that data sources and creators are appropriately attributed. If there is no licence and the researchers wanted to further disseminate the datasets with our code, it is legally advised that the respective media partner signs an agreement with the partner that wants to disseminate the data.

2.4 News generation

WP5 focuses on generation of news articles. During EMBEDDIA, news automation systems that are transferable across languages, domains, and transparent in the natural language generation (NLG)

process are being developed with a self-explainable, flexible and accurate NLG system architecture that can be transferred to new domains and languages with minimal human effort, tools for creation of dynamically evolving content, incorporating narrative structure and user knowledge and tools for creation of figurative language and headlines.

Precautions are being taken for information on activity or interests of data subjects to be completely anonymised and for individuals not to be identifiable by the researchers or external actors. Anonymisation is taking into account the relevant GDPR articles 25(1) and 25(2), which state "the controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, implement appropriate technical and organisational measures, such as pseudonymisation, which are designed to implement data-protection principles, such as data minimisation, in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of this Regulation and protect the rights of data subjects and shall implement appropriate technical and organisational measures for ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed. That obligation applies to the amount of personal data collected, the extent of their processing, the period of their storage and their accessibility. In particular, such measures shall ensure that by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons." The use of anonymised data and information is strictly limited to the research purpose and is only processed in unidentifiable ways in order to improve the functionality of our tools. The information processed for the needs of our research and analysis shall not be revealed, sent or transferred to any third party.

3 Overview of EU legislation concerning ethics

On a regular basis, we are monitoring legislative developments and ethical discussions in different international settings, including European institutions and national bodies. In this section, we provide an overview of legislative developments and recommendations in the European Union, including those by media and professional institutions and organisations, and review the use of AI in news media.

Besides that, our media partners are following GDPR and all related national regulations, including their own codes of ethics. Our Finnish partner STT has a separate moderating service for media houses and other organisations and their moderators work solely for the moderating service separate from the agency's newsroom. While using various technological/AI solutions to help them screen comments and detect hate speech and other inappropriate content, STT moderators follow Finnish legislation and STT's moderating code with main principles[3] as well as the moderating policy of each individual media/organization client. Our Estonian partners from Ekspress firstly follow the common legislation like The Constitution of Estonia (põhiseadus) and Law of Obligations Act (võlaõigusseadus), that regulate laws in case of defamation or other personality rights, plus the compensations for such violations. Then they also follow the more specific code self-regulation guidelines that they have created for their commentators for commenting and their moderators for moderating the comments section.

On April 8th 2019, the EU High-Level Expert Group on AI presented Ethics Guidelines for Trustworthy Artificial Intelligence[4]. According to the guidelines, trustworthy AI should be lawful (respecting all applicable laws and regulations), ethical (respecting ethical principles and values) and robust (both from a technical perspective while taking into account its social environment). The guidelines put forward a set of seven key requirements that AI systems should meet in order to be deemed trustworthy. A specific assessment list aims to help verify the application of each of the key requirements:
-    Human agency and oversight: AI systems should empower human beings, allowing them to make informed decisions and fostering their fundamental rights. At the same time, proper oversight mechanisms need to be ensured, which can be achieved through human-in-the-loop, human-on-the-loop, and human-in-command approaches.
-    Technical robustness and safety: AI systems need to be resilient and secure. They need to be safe, ensuring a fall back plan in case something goes wrong, as well as being accurate, reliable and reproducible. That is the only way to ensure that also unintentional harm can be minimized and prevented.

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[3] https://stt.fi/tyylikirja/moderointi/moderointiperiaatteet/
[4] https://ec.europa.eu/futurium/en/ai-alliance-consultation

- Privacy and data governance: besides ensuring full respect for privacy and data protection, adequate data governance mechanisms must also be ensured, taking into account the quality and integrity of the data, and ensuring legitimised access to data.
- Transparency: the data, system and AI business models should be transparent. Traceability mechanisms can help to achieve this. Moreover, AI systems and their decisions should be explained in a manner adapted to the stakeholder concerned. Humans need to be aware that they are interacting with an AI system, and must be informed of the system's capabilities and limitations.
- Diversity, non-discrimination and fairness: Unfair bias must be avoided, as it could have multiple negative implications, from the marginalization of vulnerable groups, to the exacerbation of prejudice and discrimination. Fostering diversity, AI systems should be accessible to all, regardless of any disability, and involve relevant stakeholders throughout their entire life circle.
- Societal and environmental well-being: AI systems should benefit all human beings, including future generations. It must hence be ensured that they are sustainable and environmentally friendly. Moreover, they should take into account the environment, including other living beings, and their social and societal impact should be carefully considered.
- Accountability: Mechanisms should be put in place to ensure responsibility and accountability for AI systems and their outcomes. Auditability, which enables the assessment of algorithms, data and design processes plays a key role therein, especially in critical applications. Moreover, adequate and accessible redress should be ensured.

The European Commission presented its strategies for data and artificial intelligence[5] in February 2020. Strategies are focused on the digital environment and development of trustworthy technology and presented in two main documents, the European data strategy for policy measures and investments to enable the data economy for the coming five years[6] and the White Paper on Artificial Intelligence - A European approach to excellence and trust[7]. The latest is setting out a policy framework/policy options following two objectives: to promote the uptake of AI and to address the risks associated with certain uses of this new technology. At the same time, the European Commission and OECD announced a joint global monitoring and analysis of the development of Artificial Intelligence[8], with a focus on "making AI Watch reports and other EC publications available on the OECD AI Policy Observatory, sharing data more extensively and collaborating more closely on the design of improved methodologies for data collection."

In Finland, the Council for Mass Media issued a statement on October 30, 2019 on the use of algorithmic tools as part of journalistic work and to assure the public that media outlets act responsibly and transparently while using algorithms.This initiative will be extended to a pan-European level as The Alliance of Independent Press Councils of Europe will adopt similar guidelines in the autumn of 2020[9].

The Council of Europe urged EU member states to "promote experimentation with, and investment in AI-driven tools" in their report titled "Implications of AI-driven tools in the media for freedom of expression[10]", published in February 2020. The report questions a number of aspects of AI tools in the newsroom and includes recommendations for ethical and responsible use of AI-driven tools in relation to news media, society and users, stating "the media have a responsibility to use AI-driven tools in a way that is conducive to the fundamental freedoms and values that characterise European media markets and policies." Before that, the council already published a study[11] on responsibility and AI in September 2019 regarding "the implications of advanced digital technologies (including AI systems) for the concept of responsibility within a human rights framework." It highlighted four main findings:
- the importance of ensuring effective and legitimate mechanisms to prevent and forestall human rights violations,
- the responsibility of the state to ensure policy choices are made in a transparent, democratic manner which effectively safeguard human rights,

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[5] https://ec.europa.eu/commission/presscorner/detail/en/ip_20_273

[6] https://ec.europa.eu/info/files/communication-european-strategy-data_en

[7] https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf

[8] https://ec.europa.eu/digital-single-market/en/news/european-commission-and-oecd-collaborate-global-monitoring-and-analysis-artificial-intelligence

[9] https://www.presscouncils.eu/How-self-regulation-has-responded-to-news-automation

[10] https://rm.coe.int/cyprus-2020-ai-and-freedom-of-expression/168097fa82

[11] https://edoc.coe.int/fr/intelligence-artificielle/8026-responsibility-and-ai.html

- the need for interdisciplinary engagement between the technical community and those from law, the humanities and the social sciences, in order to fully elaborate human rights norms into technical mechanisms of protection,
- the need for effective and legitimate governance mechanisms, instruments and institutions.

In February 2020, the Pontifical Academy for Life, Microsoft, IBM, FAO and the Italian Government signed the Rome Call for AI Ethics[12] - a document "developed to support an ethical approach to Artificial Intelligence and promote a sense of responsibility among organizations, governments and institutions". It is focused on three principles: ethics, education and rights. Regarding ethics they state that "AI-based technology must never be used to exploit people in any way, especially those who are most vulnerable. Instead, it must be used to help people develop their abilities (empowerment/enablement) and to support the planet. It must be mindful of the complex reality of our ecosystem and be characterised by the way in which it cares for and protects the planet (our "common and shared home") with a highly sustainable approach, which also includes the use of artificial intelligence in ensuring sustainable food systems in the future." Their first appointments should begin in 2021.

In March 2020, representatives of UNESCO and the Slovenian Ministry of education signed an agreement[13] to establish the International Research Centre on Artificial Intelligence (IRCAI) in Ljubljana, Slovenia. As written in Forbes in April 2020, "IRCAI's number one objective is to help UNESCO Member States to accelerate their respective missions in satisfying the United Nations Sustainable Development Goals through the development of artificial intelligence technologies. Moreover, IRCAI's guiding principles of open AI solutions to promulgate research and adoption, policy innovation, a focus on AI for social good, AI advocacy engagement, and above all, an approach that exemplifies human-driven purpose, has led the institute to usher in a new wave of unique AI value propositions unlike anything the world has ever witnessed[14]."

In March 2020, the Organization for Security and Co-operation in Europe (OSCE) published a "Non-paper on the impact of Artificial Intelligence on Freedom of Expression"[15], discussing the use of AI within content moderation and curation, content ranking on social media platforms based on commercial interests, challenges posed to media pluralism and content diversity and possible risks to freedom of expression. They are excessively promoting these topics also on social media under the hashtags SAIFE and AIFreeSpeech. The non-paper pinpoints crucial areas to focus on in the future, including promoting a better understanding of AI practices (by state and non-state actors), initiating a dialogue with industry and states, developing recommendations to mitigate the negative impacts of automated tools and prevent the infringement of free speech and media freedom, measuring the impact of legislation and mapping out the current use of machine-learning technologies.

The Reuters Institute for the Study of Journalism's annual study (published in January 2020) titled "Journalism, Media, and Technology Trends and Predictions 2020[16]" showed most newsrooms see value in using AI for creating more effective recommendations (53 percent saying very important), followed by using AI to target potential subscribers and optimise paywalls (47 percent) and using AI to assist subbing or improve the consistency of tagging (39 percent). The survey involved 233 digital leaders from 32 countries. 12 percent of them felt that automated journalism is important to explore and 16 percent felt like that about newsgathering. The survey also showed some publishers make a clear distinction between editorial and non-editorial use of AI tools. While AI is creating opportunities for a number of media companies, the survey showed that smaller publishers share significant concerns about being left behind in the fast-changing, complex and expensive automation world. As to what to expect in 2020, the study points out AI-driven fake news and better reporting on AI itself.

The journalism think-tank Polis (of the London School of Economics) published a report in November 2019 titled "New powers, new responsibilities: A global survey of journalism and artificial intelligence[17]."

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[12] https://romecall.org/

[13] https://en.unesco.org/news/agreement-establish-international-research-centre-artificial-intelligence-ljubljana-signed

[14] https://www.forbes.com/sites/markminevich/2020/04/13/heres-how-slovenia-is-shaping-the-new-human-centric-society-and-pioneering-the-world-in-ai/#3a658e3d4860

[15] https://www.osce.org/representative-on-freedom-of-media/447829

[16] https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2020-01/Newman_Journalism_and_Media_Predictions_2020_Final.pdf

[17] https://blogs.lse.ac.uk/polis/2019/11/18/new-powers-new-responsibilities/

The survey, which gathered 71 news organizations from 32 countries, showed that AI is a big part of journalism already, however it is unevenly distributed and not yet transformational - even the most developed media companies would regard their use of AI-driven tools as more supplementary and additional.

News organization representatives mentioned their top three future uses of AI tools were for newsgathering (more automatic tagging/entity extraction), news production (better machine-generated content) and news distribution (better personalisation/recommendation engines) with the key motive to use AI tools being to make journalists' work more efficient (68 percent), to deliver more relevant content (45 percent) and to improve business efficiency (18 percent). Majority of respondents stated financial resources as the biggest challenge to adopting new AI-driven tools, followed by knowledge or skills and cultural resistance (including the fear of losing jobs, fear of changing work habits or a general doubt towards new technology).

4 Associated outputs

Parts of this work are also described in detail in the following publications, which are attached to this deliverable as appendices.

Citation	Status	Appendix
Milosavljević, M., Vobič, I. (2019). "Our task is to demystify fears": analysing news-room management of automation in journalism. *Journalism.*	Published	Appendix A
Milosavljević, M., Poler Kovačič, M., & Čeferin, R. (2020). In the name of the right to be forgotten: new legal and policy issues and practices regarding unpublishing requests in Slovenian online news media. *Digital journalism.*	Published	Appendix B
Vobič, I., Robnik Šikonja, M., & Kalin Golob, M. (2019). Back to the Future: Automation and the Transformation of Journalism Epistemology. *Javnost.*	Published	Appendix C

5 Conclusions and further work

This deliverable outlines the measures taken to assure ethical and secure development of the EMBEDDIA project and outlines the mechanisms for internal ethics management in EMBEDDIA to assure responsible and ethical science in news media content analysis and creation. It provides clarification on the points, where the privacy of users could present a potential concern, i.e. user comments analysis, news analysis and news generation, and presents the remaining open questions and areas where possible issues could arise. Moreover, it outlines the legislation providing some of the answers to these open challenges. To this end, the report presents an overview of the legal developments regarding artificial intelligence tools in media and journalism and key reports describing the current use of AI-driven tools in news media today, providing an extensive insight into discussions and developments regarding regulation and ethical issues involving AI and the news media by various significant international stakeholders that define or influence current and potential future ethical framework.

As the field of ethical use of automation in journalism is very dynamic, besides legislative developments and proposals there are many developments also in the scientific field with researchers focusing on the transformative power of big technological firms, which are challenging the traditional conceptions of journalism (Wu et al., 2019) and the introduction of algorithms to the newsrooms in terms of rationalisation of the work process (Vobič et al., 2019), and many more crucial aspects.

In further work, we will continue to address the news media environment and digital news production in contextual matters, the processes of innovation in online journalism, changes in journalistic practice, professional and occupational matters, the role of the audience and user-created content and democratic processes and quality news content as a prevention of inflammatory and dangerous speech. The final deliverable D6.12: "Final report on ethics and responsible science and journalism (T6.5)" is due at M36.

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Appendix A: "Our task is to demystify fears": analysing news-room management of automation in journalism

"Our task is to demystify fears": analysing newsroom management of automation in journalism

Short title: Our task is to demystify fears

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Abstract

The study explores uses of algorithmic techniques in journalists' working environments and investigates newsroom managers' negotiations of automation as innovation process aimed at ensuring partial or full replacement of human labour with technology. Drawing from 15 qualitative interviews with representatives of newsroom management from legacy news institutions in the United Kingdom, Germany and the United States of America, the study analyses their (cl)aims to maintain the newsroom as a stable, but dynamic working environment and reveals three dualist propositions when negotiating automation novelties – human journalistic agency stands in contrast to technology, skills are separated from newsworkers, and the creation of news contrasts with its presentation. The results show the interviewees re-articulate the dominance of human agency over technology, re-establish technological innovations as liberating newsworkers rather than subordinating them, and standardise news by re-evaluating the concept as both a civic bond and a commodity. Such considerations are detached from recent concerns about automation of human labour and closer to what we call algorithmic sublime, maintaining the newsroom management's loyalty to both the professional values of journalism and the corporate goals of management.

Keywords
Journalism; technology; automation; newsroom management; qualitative interviews

Introduction

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The work of those who (are) manage(d) in the newsroom of today appears to be more complex than ever. Automation is becoming present in newsrooms, particularly in more tech-savvy ones, but its development and utilisation remains a matter of continuous experimentation, even controversy. Historically, the technological innovation in the newsroom is not linear, but a diverse and sporadic process – although institutionally managed new technologies have not only shaped how news is produced, but also how journalism is understood (Hardt, 1998; Örnebring, 2010). In recent journalistic pieces fears and hopes about automation are reflected, for instance "The robot journalist: an apocalypse for the news industry?" (Guardian, 2012), "How algorithms and human journalists will need to work together" (The Conversation, 2017), or "When robots write the editorials, all will benefit" (Financial Times, 2018). Rather than the continuity of the utopian rhetoric of the "electrical" (Carey, 1970) and "digital sublime" (Mosco, 2004) these discussions appear as a follow-up to concerns about the automation made in the 1950s, such as by Norbert Wiener (1950/1989) or Friedrich Pollock (1957). The former saw revolutionary implications of automation as a "two-edged sword" that might "if left wholly in the control of short-sighted, profit-maximizing industrialists" result in mass unemployment to an extent that the depression of the 1930s would seem a "pleasant joke" (Wiener, 1950/1989: 162). The latter does not share, as he argued, Wiener's "gloomy forebodings" (Pollock, 1957: 247) arguing that a long term view and plan for the future is needed to integrate automation (as a "blessing") in a "free and democratic society" in order to alleviate utilizations of technological innovations (as a "curse") in the established social relations (ibid.: 253). Contemporary discussions address similar complex social consequences as a larger transformation of work due to automation is expected, including in stagnant sectors (McKinsey Global Institute 2018) as numbers of also 'white-collar' workers face displacement by machines (Pew Research Center, 2014; Ford, 2015; Davenport and Kirby, 2016). Within journalism and with the state of technology in global newsrooms being a main concern, a survey by the International Center for Journalists (2017) concluded that "journalists are not keeping pace with the digital revolution". Whether understood as self-criticism or powerlessness, this calls for attention in the wake of the automation novelties already shaking up the newsroom.

To explore these alterations, we approach automation not just as algorithmic techniques of fully or partially replacing human labour with technology beyond initial engineering, but as institutionally managed innovation process for dealing with issues that journalists face when gathering, assembling, creating and delivering news. We see automation as being part of larger and longer epistemological transformation within journalism, known as the "quantitative turn" (Coddington 2015), re-articulating values and practices of grasping and representing social reality and making journalism's rationales increasingly reliant on quantification and computation. With the emerging "new knowledge logic" (Gillespie 2014, 192) on the horizon, the question is how procedural choices of an algorithm constructed by a human to proxy or enhance newswork converge with or diverge from subjective character of rationalisation in the newsroom. There is no simple answer as social implications are grave and complex.

The introduction of automation has spurred debates on the affordances and constraints of various human–automation modes, such as 'data', 'computational' and 'automated' journalism (van Dalen, 2012; Anderson, 2013; Karlsen and Stavelin, 2014; Napoli, 2014; Cohen, 2015; Coddington, 2015; Splendore, 2016; Splichal and Dahlgren, 2016; Carlson, 2017). It should not come as a surprise that scholarship provides a variety of assessments of

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these complexities – also conflicting. In this light, some assessments state that automation brings the potential to augment journalism by freeing journalists up from routine tasks and saving time for creative work, by aiding newsrooms to find relevant stories in large data that might be overlooked by human agency, and by tailoring news to be of interest and relevance to the public. There are also concerned voices exemplifying the deskilling and increased layoffs, unprecedented legal and ethical problems, further commodification of news through mass personalisation, and greater degradation of professional journalism with respect to non-journalistic digital modes. These problems suggest that further studies should not solely concentrate on the mere implementation of automation, but examine the strategies of technological innovation and the ways it is perceived.

In scholarship on automation in journalism investigations of newswork-management dynamics have been only marginally explored (Cohen, 2015; Bucher, 2017; Slaček Brlek, Smrke and Vobič, 2017). However, scholarship provides insights into practices and perceptions (van Dalen, 2012; Young and Hermida, 2015; Thurman et al., 2017), profoundly discusses epistemological implications (Splendore, 2016; Coddington, 2015; Carlson, 2017) and reconsiders legal and ethical issues of recent human–automation modes of journalism (Dörr and Hollbuchner, 2017; Diakopoulos and Koliska, 2017; Montal and Reich, 2017). To add to these discussions, we explore automation through the negotiations of newsroom management – a 'breed' of editors that has affirmed itself in the last three decades, manoeuvring between news and business ideals and interests (Underwood, 1993/1995: x) – and its role in dynamics of the "appropriation of journalists" (Hardt, 1998: 194). This process of incorporating journalists into news production re-articulates technological innovation, newswork and news forms as well as re-establishes the values of journalism and the boundaries of its (cl)aims. The overriding goal is to analyse how automation is being utilised in the newsrooms of legacy news institutions and, primarily, how newsroom management negotiates automation novelties in the larger contexts of journalist–technology interplay, newswork, and forms of news.

The first part reconsiders management of the newsroom by historicising its role and contextualising its dilemmas in the wake of emerging automation. The empirical part draws from a qualitative analysis of semi-structured interviews with a particular breed of editors – here referred to as the newsroom managers – from the United Kingdom, Germany and the United States of America, which include public and commercial news institutions with regional, national and/or international relevance. By mapping the human–automation modes and revealing newsroom management propositions, the study discusses the journalist–technology interplay, newsroom relations, and people's engagement through news in the context of larger issues of journalism.

Newsroom management in the automation age

Throughout its modern history news institutions perform as hybrid organisations trying to reconcile the corporate motives of media managers and the professional values of journalists. Although the hybridity in question is approached distinctly – for instance, in media management studies as an integral factor of strategic innovation (Altmeppen et al., 2007; Aris and Bughin, 2009) or in critical journalism scholarship as a contained conflict reflecting deeper social struggles in the newsroom and beyond (Underwood, 1993/1995; McManus,

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1994; Hardt, 1998) – it is a fact that news institutions have jointly nurtured journalism's public mandate as well as profit-seeking business expertise – not by blending, but by separating them. Although the news-business dynamics appear as being in opposition, a much more complex contradictory connection is at hand, or as Carl Bücher (1901: 243) would put it, they reflect the "intellectual and economic intercourse". Through a continuous negotiation of the news–business divide, often referred to as the "Chinese Wall" – "between the business people and the creators" (Aris and Bughin, 2009: 346) – journalism gradually developed standards and reaffirmed itself as publicly valid authority (Coddington, 2015: 67). While journalists have maintained this barrier to safeguard autonomy, publishers have reproduced it as "fiction" (Underwood, 1993/1995: 124), nurturing it as a principle for shaping editorial policies and culture, containing potential newswork-management tensions, and for retaining an influence over innovation strategies.

The newsroom has evolved as "a laboratory for technological innovation" and "a battleground of economic and social interests" (Hardt, 1998: 173), while its social relations and processes have not been static. In the last three decades, creativity and criticality have been subordinated to the reciprocity of coercion and consent, reaffirming newsroom conformism to editorial policies, employment arrangements, and technological innovations. These dynamics have been identified in the seminal newsroom studies which indicate that conflicts between different sets of norms and values have been 'normalised', emerging as ordinary, routine and reasonable, reconstituting social relations and concepts of innovation (Bantz, 1985/1997). Recent scholarship also shows strategic aims to re-establish the newsroom as a stable, yet dynamic environment of innovation by incentivising journalists to change their priorities (Bunce, 2017) or by making the production appear as a game (Ferrer-Conill, 2017). To keep the newsroom as an environment for the appropriation of journalists, the lines between 'workers' and 'managers' is strategically blurred through the professionalisation (cl)aims. This convergence is best embodied in "in-between" positions (Örnebring, 2010: 62), most notably the newsroom management.

Since the 1990s, the heyday of "MBA journalism" (Underwood, 1993/1995), "a new breed of editor" has started to dominate the news industry, whose "loyalty to corporate profit and marketing goals" infuses all newsroom decision-making (ibid., x). Recent evidence suggests that strengthened "managerialism" among the newsroom leadership (Andersson and Wiik, 2013) is accompanied by a transcending of the news–business boundary, but has also legitimised intensified workloads, precarity, and layoffs (Paulussen, 2012). In the wake of these developments, research on human–automation modes of journalism shows the emancipatory potential of automation indeed provides opportunities to save labour and to augment journalism's civic substance (Anderson, 2013; Coddington, 2015; Splendore, 2016), although there are also strong tendencies to erode them by making newswork more productive and efficient (Cohen, 2015; Splichal and Dahlgren, 2016; Carlson, 2017).

As various human-automation modes with different levels of human involvement emerge in the newsroom, the relevant questions are not only *how* automation is being implemented as algorithmic techniques and what the larger implications are, but also *why* automation is introduced and *how* it is perceived as innovation process by strategic decision-makers. These questions concern the work of those who (are) manage(d) in the newsroom from at least three perspectives – (1) the interplay between journalists and technology, (2) newswork and the

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dynamics of skill, and (3) the concept of news. The next three sections discuss automation from these perspectives and elaborate on its implications for the newsroom.

Journalist–technology interplay: maintaining distinctiveness

Technologies are not mere tools in human agency, but point to entrenched social relations, processes and imaginaries in the newsroom (Carlson, 2017: 228). The journalist–technology interplay significantly reflects the newsroom as a specific environment of knowledge production, where meaning creation takes place through human–machine communication (Lewis et al., forthcoming). Journalism emerges as technologically-specific, where new technologies are distinctly articulated as "exemplars of continuity", "threats to be subordinated", and "possibilities for reinvention" (Powers, 2012: 24).

Studies (van Dalen, 2012; Carlson, 2015; Bucher, 2017; Linden, 2017; Thurman et al., 2017) indicate that automation is becoming a more common feature of journalism, bringing complex implications, but not threatening it. Among journalists, a traditional technological scepticism towards automation is not prevalent, as a "strong capacity for adaptation and mitigation of new technology" can be observed (Linden, 2017: 136). Scholarship also acknowledges discursive strategies of maintaining distinctiveness in the journalist–technology interplay. In some cases, technology is seen as a tool without "instincts" (Bucher, 2017: 1) or a "nose for the news" (Thurman et al., 2017: 1240) that brings opportunities to continue the need for human journalists and possibilities for reinvention. Other studies indicate a "technological drama" (Carlson, 2015: 416) over potentials to advance journalism, professional norms, and the social status of newswork.

Newsroom management's manoeuvring between corporate interests and journalistic values not only runs into ontological, ethical and social dilemmas of the 'post-human future' of journalism (Carlson, 2017), but also show the realities of the "new knowledge logic" (Gillespie, 2014: 192). As subjective and intuitive choices in the newsroom – authorised through professional socialisation and validated by the public – meet algorithmic choices that are programmed to automate proxy human judgement or enhance it, newsroom management has become increasingly complex in its aim to keep the newsroom stable and viable.

Newswork: reskilling, upskilling or deskilling?

Changes in newswork are linked to management's needs for rationalisation and production stability, where technology is used to make production and distribution more effective and controlled (Örnebring, 2010: 65). The conflict between corporate motives and journalistic values is most radically reflected in sweeping visions of utilising automation for cost-savings and the extensive replacement of the human labour of some media executives (Hollander, 2013). The dynamics of skill change are complex, reflecting different modes of "dependence" on technology and various respective facets of journalism (Lewis and Westlund, 2016: 346–347) – from those that are not dependent on technology, through facets where human-led practices are supported by or reliant on technology, to "technology-oriented journalism" where technology has more power and sophistication.

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Recent technological innovations have required a change in the skills (van Dalen, 2012; Karlsen and Stavelin, 2014; Carlson, 2015; Thurman et al., 2017) and the introduction of new workers in the newsroom, often labelled 'technologists' (Coddington, 2015; Cohen, 2015; Dörr and Hollnbuchner, 2016; Linden, 2017). These studies discuss journalism-specific skills and their change through technological innovation, signalling degrading as well as upgrading affects. The intertwined processes, such as 'reskilling', 'upskilling' and 'deskilling', that affect various parts of the newsroom differently, are defined by varying degrees of autonomy and security of employment, as well as larger factors like gender, race and age. Automation is introduced through a combination of promises and opportunities to augment the "very human skills that good journalists embody – news judgement, curiosity, and scepticism" (Thurman et al., 2017: 1240), and risks and fears to reduce newsworkers "to machine operators that increasingly experience a motion of meaninglessness" (Linden, 2017: 135).

In this changing mix of skills and statuses, newsroom management faces asymmetries and tensions brought by human–automation modes of journalism that interrogate the established strategies to maintain the manifold conflicts within controllable boundaries – not only between 'humans' and 'robots', but also between and among different groups of newsworkers.

News: between public relevance and personalisation

At its heart, news as a concept is paradoxical: the value of 'doing it for the public' reflects the "depth appeal" of information as a tool to comprehend social life and engage in it, while its market-drive indicates the "surface appeal" of a commodity (Underwood, 1993: 76). While one can identify the rise of 'contextual journalism' (Fink and Schudson, 2014), there is also the negative face of the popularisation process ('tabloidisation'), modes of highly routinised information packaging ('churnalism'), and vast non-professional and precarious content creation aimed at click-baiting ('content farming').

Arguments that human–automation modes of journalism can strengthen public capacity for news (Coddington, 2015: 332) are countered by strong 'rationalisation' imperatives that subordinate news to affordances of 'automated' journalism (Cohen, 2015). Through the process of standardisation, forms of news are being emulated through algorithmic processes for data assemblage and text generation with different degrees of human involvement (Carlson, 2015). With automated news creation beyond sports and finance reporting at its outset, initial experiments suggest that readers have trouble discerning algorithm- from human-written texts (Clerwall, 2014; Haim and Graefe, 2017). Further, the combination of audience metrics and automation is changing not only the modus of 'deciding what's news' and the production routines (Anderson, 2011; Cohen, 2015), but also the ways of distributing, presenting and engaging in news. Automated journalism includes not just "the horizontal expansion of the total amount of stories", but also "the creation of multiple – even personalized – of the story to appeal to different audiences" (Carlson, 2017: 231), reviving the ideas of automatically created personalized "Daily Me" (Negroponte, 1995), and niche stories through "the long tail" (Anderson, 2007). Initial research suggests managers, editors and newsroom developers perceive personalisation as problematic because it challenges the basis of what news is or should be in an informed society (Bucher, 2017: 9).

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With the concept of news changing, the newsroom management reconsiders not only the old dynamics between the surface and deeper appeals, but also – empowered by algorithms and audience metrics – new ways of standardising news as a civic bond or commodity by re-evaluating not only *what* news to produce, but also *how* to present and deliver it and *why*.

Methodology

To better understand how news institutions transcend the hybridity of the corporate interests of owners and managers and the public (cl)aims of journalists in the process of technological innovation, we focus our empirical study on newsroom management and the rationales behind automation. We aim to explore the **main research question**:

How does newsroom management negotiate automation in the newsroom?

To address it, we use the method of in-depth interviews with newsroom staffers who hold both editorial and managerial duties at legacy news institutions from Germany, the UK and the USA. Three reasons underlay the interviewee selection (Table 1). First, we aimed to gather and analyse perceptions of newsroom staffers from the inner circle of decision- and opinion-making. Because they have mixed roles of editors and managers, as also seen in their formal titles, they have experience in the utilisation and negotiation of automation novelties. Second, we focused on legacy news institutions since they remain crucial sources of news and the main advocates of public value journalism, despite encountering difficult changes perpetuated by issues of political (ir)relevance, business (un)sustainability, and innovations. Third, we limited ourselves to the three selected countries as their news institutions act as important trendsetters, some with global relevance. These three reasons reflect shared characteristics of the interviewed: first, similar managerial positions in the newsroom; second, legacy tradition of professional roles and organisational structures; and third, working for news institutions within mature media environments with long traditions of modern newsroom organization.

Table 1: The interviewees

Editorial position, news institution(interview type)	Date	Reference
Associate editor and management editor, *Financial Times*(Skype)	20/09/2016	(intFT1)
Head of interactive news, *Financial Times*(in-person)	18/07/2016	(intFT2)
Technology editor, *Guardian News & Media*(in-person)	19/07/2016	(intGuardian1)
Executive editor of digital, *Guardian News & Media*(in-person)	19/07/2016	(intGuardian2)
Editor-in-charge, *Reuters.co.uk*(in-person)	20/07/2017	(intReuters)
Mobile and new formats editor, *BBC News Online*(Skype)	13/06/2017	(intBBC1)
Digital development editor and video editorial lead, *BBC World Service* and *BBC News*(Skype)	15/12/2017	(intBBC2)
Editor-in-chief of digital media, *Frankfurter Allgemeine Zeitung*(Skype)	05/05/2017	(intFAZ)
Head of innovation projects and new media, *Deutsche Welle*(Skype)	30/03/2017	(intDW)
Head of *Bayerischer Rundfunk* data team, *ARD*(Skype)	15/05/2017	(intARD)
Head of *Taz.de*, *Tages Zeitung Berlin*(Skype)	25/04/2017	(intTAZ)
Head of data journalism, *Spiegel Online*(Skype)	21/04/2017	(intSpiegel)
Editor-in-chief of *SZ.de*, *Süddeutsche Zeitung*(Email)	10/04/2017	(intSZ)[1]
Editorial director for the news desk, *New York Times*(in-person)	04/10/2017	(intNYT)
Director of news partnerships and newsroom lead on the automation	27/06/2018	(intAP)

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strategy group, *Associated Press* (Skype)

The interviewees were senior figures with an average of around 20 years of experience in journalism with a minimum of 10 years. Except for two interviewees who have an educational background (also) in the natural sciences (intSpiegel) and applied sciences (intDW), the others finished university programmes in the social sciences (journalism in particular), arts and humanities, therefore being self-taught in programming, information technologies and artificial intelligence.

The in-depth conversations were conducted as semi-structured interviews in editorial offices in New York and London or via Skype, with the only exception being an 'e-mail interview' (intSZ). The first author performed as the interviewer and approached the conversations as "active interviews" (Holbstein and Gubrium, 1995). Although an interview guide structured them according to the central problem matter, the interviews departed from minimally directive standardised types towards more flexible interview activity with a careful consideration of "what is said in relation to how, where, when, and by whom experiential information is conveyed, and to what end" (ibid.: 158). Each conversation provided answers to demographic questions (background information on newsroom managers), experience and knowledge questions (information about the use of automation in the newsroom), and opinion questions (interrogating automation novelties with regard to the newsroom management–newswork dynamics) (Patton, 1980/1990). Conducting the interviews in person allowed us to gain additional valuable insights from automation novelties being introduced in the newsroom (particularly, at *Financial Times* and *Reuters*). These not only gave us first-hand impressions of technological innovations, but made those interviews more thorough and rich in detail.

The initial 12 interviews focused on the interviewees' understanding of the core ideals of professional journalism and their re-articulation in the automation context, which findings we reported elsewhere (Milosavljević and Vobič, 2019), while they also explored newswork-management dynamics. Additional three semi-structured conversations with interviewees from the UK and the USA specifically dealt with strategies behind the utilisation of automation in the newsroom and how this process is negotiated. Since the interviewees stressed that their answers reflect personal opinions and not official positions of their news institutions, the data are not publicly available as they contain information and interpretation that could compromise participant consent. However, the transcriptions of interviews – they had an average length of about 38 minutes (shortest: 23 minutes; longest: 69 minutes) – are available from the authors upon reasonable request and with subsequent permission of the interviewees. The interviews were analysed using an adaptation of the McCracken's (1988) multi-step process of qualitative interview analysis. By reading the transcriptions we made preliminary descriptive and interpretative categories. Then, by thoroughly examining these, we identified connections and patterns in the narratives and thereby determined basic themes and propositions. We compared them across the data and identified the dominant ones.

Results: Newsroom management's dualist propositions on automation

The analysis shows that the use of automation in the respective news institutions is at its outset, some acknowledging their newsroom is in an "early" or "experimental" stage of

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development (intDW) or practising "tiny" (intARD) or "rudimentary" automation (intNYT). There seems to be an agreement among the interviewees that automation as algorithmic techniques which generally ensure the partial or full replacement of humans with technology in different phases of production are not, as some put it, a "threat" (intGuardian1; intBBC1; intDW) or a "danger" (intARD). On the contrary, the interviewed share an understanding of journalism as a unique public-spirited activity that may be "augmented" (intGuardian2; intFT2) through automation, but should not be stripped of its human character and respective rationales. The analysis indicates that newsroom management is aware of larger debates on automation as innovation process – some explicitly refuting the "robots are coming for us" visions as being "misplaced" (intFT2) – as well as mindful of its complex implications for the newsroom.

"Our task is to demystify fears", stresses the head of innovation projects and new media at *Deutsche Welle*, capturing the predominant reconsideration of the newsroom management's role in maintaining tensions and reaffirming the newsroom as a stable working environment. When the newsroom managers negotiate automation, three dualist propositions can be identified in their discursive maintenance of the newsroom as a space of technological innovation: (1) human journalistic agency stands in contrast to technology; (2) skills are separated from newsworkers; and (3) the creation of news contrasts with its presentation.

Proposition #1: Human agency vs. technology

The analysis indicates a dualist proposition whereby human agency is contrasted with technology, reconsidering automation through an 'us' and 'them' antagonism. Self-reliance of human journalists with particular competencies and capabilities is proclaimed, while the affordances of technology and its role in journalism are reduced.

> I've no ideological problems with a machine writing a text where a machine can write a text, where it makes sense. The robots are not very developed so far, they get better and better, but so far, they can't analyse a political result. [...] [A]t the moment, no software could replace a single person in the editorial team here. (intFAZ)

> [W]e are all well served by letting computers do the things that computers are good at, and letting people do the things that people are good at. And I think a lot of journalism comes under that label of things that people are good at. [...] It requires a certain ear, and a certain eye, and a certain level of judgment that I think would be hard to replicate. That said, if the computer can, you know, fix our spelling mistakes or flag that we got someone's title wrong, then great. (intNYT)

> There is all this reporting about how suddenly journalists are going to go away and it's all going to be replaced by algorithms and this and that's just bullshit. It's just bullshit. It's not going to happen. Period. Because Edward Snowden is never going to trust an algorithm, you know. Edward Snowden is not going to secretly make contact with an algorithm. [...] A computer is never going to be as good as a human being at saying "Oh, that's interesting", because a human being is writing for human beings. (intGuardian2)

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Sharp boundaries are used to self-legitimise conventional journalistic methods and refute visions of a post-human future by representing automation as a tool for continuing 'business as usual'. The interviewee from the BBC talks about "original journalism" which "can only be done by people going out and actually talking to other human beings" (intBBC2). A similar point is made by the editor-in-charge at *Reuters.co.uk,* arguing "you always need the input of a journalist", stating "you can't automate journalism away". Ways of using automation support this proposition. Automation is considered as assisting newsrooms in becoming more efficient. The implemented technologies namely help journalists clean and transform large datasets (*Guardian*), apply automatic translation to videos also by using synthetic multilingual voices (*BBC*), autonomously crop photographs or adapt produced content for delivery across platforms and editions (*New York Times, Guardian, Reuters*), and speed-read press releases (*Reuters*).

Two interviewees indicate these novelties imply a continuation of the logic of knowledge production, while seeing automation – at least for now – as a set of techniques that proxy human judgement in tasks that are not vital for retaining what we know as journalism.

> *If we can write a computer programme to replace the thing that you do every single day, you have to question whether that was journalism in the first place. (intGuardian2)*

> *Anyone who's doing something that a computer can do just as well or better and faster could probably be doing something else with that brain power and that time. (intNYT)*

The interviewees feeding this proposition do not report strategic decision- and opinion-making with respect to automation that would span across editorial, business and development departments. They argue automation does not affect their core journalistic practices and any disruptions are therefore containable, "Unless somebody was able to show a machine way of doing something which was better than the way we can do it with people, it wouldn't even see discussion" (intGuardian1).

Proposition #2: Skills vs. newsworkers

Using another dualist proposition, the interviewees separate skills as abilities to perform certain tasks from newsworkers – not just journalists, but also other workers in the news production. The newsroom managers negotiate automation as a stimulus for the newsroom to do, as one proclaimed, "more and better" (intFT1). The interviewees assess that the mix of skills is being transformed with automation, going beyond the boundaries between journalists and "technologists" (intAP) and "liberating" (intFT2; intAP) newsworkers from tedious routines. According to the representative from *Spiegel Online,* "algorithms" should be used to perform tasks that "are really the same every time" and "journalists should not be doing" them at all. There is a common argument that the transformation of skills is happening outside the process of appropriation – not by making humans obsolete as newsworkers by introducing new technologies, but by allowing them to reskill or even upskill themselves.

The interviewees reconsider automation as an impetus that would "free up" journalists and other newsworkers (intDW, intFT2) by enabling them to leave time-consuming and highly

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routinised tasks to technology and to spend the time saved on strengthening analytical and investigative skills.

> *Some of those jobs will be gone, but they would've been gone eventually anyway, right? [...] Not because we don't want that person to be employed by the FT but we want that person to be spending more time more constructively. [...] So we've not eliminated jobs, we've liberated people from routine work, essentially, that they're overqualified to do. (intFT2)*

> *You can make a case for that being damaging to someone who loses a job because of it, but most of the people I know, who are sort of highly creative and eager to push forward at what they're doing, would gladly give up tasks that they didn't want to be doing in the first place. (intNYT)*

> *[I] think we could convince those who had fears in that direction to not worry that their work will be in danger anytime soon. And on top of that, we could rather demonstrate that anything that's being automated would maybe free up more of their time for some creative writing or for more investigative task. (intDW)*

Besides the automated cropping of photographs that allows the faster re-production of stories across platforms (*New York Times*), the interviewees provided additional examples supporting the reskilling thesis. One is an online verification platform that integrates a variety of tools, such as Google Maps, TinEye, Yandex, Snopes, Pipl and others, to substantiate whether certain digital content is accurate or not (*Deutsche Welle*). Another example is the automation of "hugely time-consuming" and "hugely boring" tasks in chart and graphics creation to save time for "more advance work" (intFT2) (*Financial Times*).

The proposition also encapsulates the upskilling argument, suggesting that automation gives newsworkers additional skills or, in words of the interviewee from the *Associated Press*, to "help journalists do their job by being smarter" (intAP).

> *When people say, 'Oh, isn't automation like, you know, aren't you going to lay off a bunch of journalists?' Well, no. That's not why we're using the technology, we are actually trying to free up our journalists, so they can do better work. (intAP)*

At the *Associated Press*, among other tools and platforms they aim to establish algorithm-based "social listening" as part of the skillset and enable journalists to "tap into all of that swirl of public conversation" on social media and "sift that data better to understand what our audiences care about and what they are thinking about" (intAP). The interviewed also provide other examples as evidence of enhancing the skills of newsworkers. For instance, *Deutsche Welle* used automated prediction and text-generation tools before the US presidential elections in 2016, but "got it wrong like everybody else" (intDW), *Spiegel Online* adopted automated visualisations on the basis of official data streams of football matches in the German *Bundesliga* to enhance analyses written by journalists, while *ARD's* data team in Munich uses "automated bots" to send thousands of emails to a certain group of actors and retrieve relevant big data, exploring, for example, discrimination in the apartment rental market.

With respect to the dynamics between automation, skills and newsworkers, an automation strategy group was set up (*Associated Press*) or its innovation projects required "a lot of convincing work" (intDW) (*Deutsche Welle*), while others report strategic decision-making

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confined to separate teams, such as a data team with "bosses interested in digital innovation" (*ARD*), or separate projects, such as "obvious" speeding up routine tasks in news production stimulated "bottom up" (intFT2) (*Financial Times*) or upskilling football pieces with sports journalists "on board" (*Spiegel*).

Proposition #3: Creation of news vs. presentation of news

This proposition encompasses articulations of forms of news by contrasting their creation and presentation. According to the newsroom managers, the assumption of automated news creation is unworkable for binding public (cl)aims of journalism and corporate interests, while the potential of algorithm- and metrics-based news presentation are regarded as a source for re-evaluating and standardising journalism's relationship with people.

Newsroom managers stress that creating news and opinion by utilising automation with little or no human involvement impoverishes journalism, is inadequate in civic terms and financially unviable. Three arguments are given to reaffirm news creation and news engagement as constituting solely human activities. One presents automated creation as "devaluing" journalistic contents by making them "look and feel the same" (intBBC1) and thus losing relevance for audience members, another displays "in-depth reporting" as an activity where algorithms are "submerged" because they cannot assess the relevance of news outputs (intTAZ), and the third deems an algorithm to "fail" in creating an opinion piece because without the human factor they cannot stimulate a meaningful exchange among people (intFT1).

> *If you go too far down the automation path, where it all becomes so commoditised and everything looks and feels the same that, actually, there is no value in this and, therefore, users abandon you. [...] I'd be very, very concerned about just using a lot of automated content because if, you know, if CNN would do the same, then our content would look exactly the same. . [...] You'd start losing, start devaluing, actually, the content by doing that. (intBBC1)*

> *The human factor is absolutely decisive here. [...] I mean, breaking news, it will be the moment when the algorithm helps me, would help me to be aware that there is breaking news, but that would be exactly the moment where I would switch the machine off and send people to assess the situation. (intTAZ)*

> *It [machine] comes up with an article with a witty tone of voice about pay transparency saying that it's a bad thing, but it seems to me, as an opinion piece, it's still going to fail because the people who are reading it want to know that it's being written by a human with whom they can disagree, and indeed have a further argument in the comments section of the article. [...] [I]f you're arguing with a machine about its opinion, first of all, it doesn't have an opinion as such, it has just been trained to write an opinion. You are having a sterile argument because it's with a machine. (intFT1)*

In contrast, according to the interviewees, algorithm- and metrics-based news presentation should be considered a source for re-evaluating which news to create and how to deliver it – at least to a degree.

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I'm sure you can come up with a mixed model that works. [...] 'These are the five most important things we think you need to search today and the stuff we know you'll like'. And that's fine.. [...] You can't force people to consume the content no one wants to consume. [...] It's up to us to tell that story in a way that appeals to different audiences. (intBBC1)

[I] think it [automation] is going to change the presentation of journalism. [...] I don't imagine that the impact could be more on the consumer side, how we find information, but how does present it to the outside. I mean, it starts with such basic things that you're A/B testing stuff that goes on the webpage or on Facebook or whatever. Just to see how the story that you want to tell is best sold to the audience. It comes more from the business side where automation will be used. (intTAZ)

Most publications including ours are looking at audience engagement, and that is crudely measured sometimes by the number of clicks. [...] You start to build an algorithm of what constitutes engagement, how long does somebody stay in the story? All these things that we're measuring now. [...] The danger of that seems to be that as you're using more databased decisions is that actually people get too wooed by the data and forget that over the long-term people might not want the same story again and again. (intFT1)

While the standardisation of people's relations with the news at best stimulates clicking (in the short run) and at worst deprives meaningful engagement (in the long run), some interviewees make the case for personalisation on the basis of personal interests identified through harvested audience data (*BBC, Financial Times*). Simultaneously, however, they argue for the need for the newsroom – that is, the humans within it – to pursue the public essence of news. For instance, an initial step to personalise the website of the *Financial Times* came with the *myFT* feature which provides every user "a slightly different version" (intFT1).

With respect to the forms of news – as a civic bond and/or commodity – the interviewees generally agree that automatic news creation is not regarded as an option of strategic development due to "the character" (intTAZ) of the institutions considered, while algorithm-based news presentation is considered as a new, "turbo-charged" version of an old dilemma of the newsroom management (intFT1) – how to weigh up business viability against the civic value of news.

Discussion and conclusion

By focusing on the management–newswork relations the study contributes to the scholarship on automation in journalism by providing unique insights into not only how automation is being utilised in newsrooms, but also how newsroom management negotiates these innovations. Although automation as algorithmic techniques is used in all phases of production to partially or fully replace human labour with technology beyond initial engineering, automation as an innovation process is still at the outset in the considered newsrooms from the UK, Germany and the USA. The study indicates that utilising and negotiating automation – with *Associated Press* and *Deutsche Welle* as reported exceptions – remain limited to particular teams in the newsroom, emerge on a project-to-project basis or even *ad hoc*. However, this does not mean that newsroom management takes automation

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lightly. Instead, the interviewees generally agree that automation novelties are more opportunities to 'augment' rather than 'dangers' to deprive journalism. Since the newsroom management's main role is to preserve the newsroom as a stable but dynamic working environment, it is no surprise that in their reconsiderations the interviewees separate rather than blend human and algorithmic agency, refute the asymmetries and tensions brought by human–automation modes of journalism, and argue for the re-standardisation of news through a re-evaluation of their civic and business potential. The study, however, has limitations, particularly in its reliance on a single research method. Although it provides unique insights into how automation is discussed by decisive actors in the inner circles of certain leading news institutions, the qualitative interviews might have reproduced the differences between how the newsroom managers justify automation and how they actually communicate and make decisions. Not only expanding the scope of interviewing to other newsrooms and other actors is needed in further endeavours, but also on-the-ground observations to provide insights into not only discursive, but also material aspects of automation.

Beyond these limitations and findings, the study's main contribution lies in identifying the dualist propositions in newsroom management's negotiations where they rely on sharp divisions between subjects and objects as well as phenomena and processes, simplifying the complexities of technological innovation and neglecting the material aspects of the newsroom. Some considerations, however, appear to rely more on hearsay and hypothetical cases than first-hand experience or profound knowledge about automation as the considered newsrooms are mostly in the 'early' or 'experimental' innovation stages and the interviewees have their educational background mostly in social sciences, arts and humanities. In this context, the identified dualist propositions echo larger historical tensions of news–business divide as well as the contradictions deriving from its erosion. By re-articulating the dominance of human agency over technology, re-establishing technological innovations as liberating newsworkers rather than subordinating them, and re-standardising forms of news by re-evaluating the concept as both a civic bond and a commodity, the propositions discursively maintain the newsroom management's dual loyalty – to the professional values of journalism and the corporate goals of management. Seeing automation as some form of "technologies of freedom" (de Sola Pool, 1983) is detached from the recent visions of work, in which only a few will escape the technological disruption with many jobs facing obsolescence and human labour even being in danger of becoming useless (Ford, 2015; Davenport and Kirby, 2016; Harari, 2017). Furthermore, interviewees' considerations of automation through the newswork–management dynamics come close to what could be called, by borrowing from Carey (1970) and/or Mosco (2004), *algorithmic sublime*. Namely, the interviewed downplay automation's degrading prospects for journalism and elevate the revitalising visions of journalism's public-spirited future by obscuring both corporate realities of newswork evolving through history and news industry's manifold crises of the digital today. In this sense, the three propositions discussed below reflect the divergent 'in-between' position of newsroom management in the process of appropriation of journalists, being in accordance with the hybrid character of news institutions and perpetuating uneasiness in their (cl)aims to maintain the working environment by 'demystifying fears'.

The first dualist proposition contrasts human agency and technology by putting them in an antagonism between 'us' and 'them', bringing in-group–outgroup dynamics into the interplay. It serves to prioritise human journalists with their 'ears' and 'eyes', and to marginalise technology without, as previous research indicates (Thurman et al., 2017: 1240), a "nose for

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the news". Through what resembles the process of in–out homogenisation, automation seems to be considered as mere tools in human hands appearing more as "exemplars of continuity" rather than "possibilities for reinvention" (Powers, 2012), confirming previous similar findings (Bucher, 2017; Thurman et al., 2017). Uncertainty within this proposition has more to do with future human–automation modes of journalism than present articulations where the journalist–technology interplay is discursively arranged through distinctiveness, while material aspects of the newsroom appear natural.

The second dualist proposition – the most salient of them all – separates skills from newsworkers, allowing to neglect the material aspects of technological innovation and discussing automation as an opportunity not only to 'liberate' by excluding the most routinised tasks from the skillset, but also to develop new skills for a more creative newsroom. As similarly acknowledged previously (van Dalen, 2012; Karlsen and Stavelin, 2014; Cohen, 2015; Carlson, 2015; Thurman et al., 2017), the proposition indicates that the newsroom skill mix is undergoing a considerable change while the newsroom management aims to retain stability – by trying to 'free up' production and, at first glance quite paradoxically, by aiming to qualitatively enhance the product. This is done by arguing for "technology-supported" news production (Lewis and Westlung, 2016: 347) whereby journalists do not depend on technology but use automation to enable or enhance work (reskilling); and also by reasoning "technology-infused" journalism (ibid.) where technology is institutionalised as journalists are becoming dependent on its affordances (upskilling). The newsroom managers refute the prospect of newsworkers becoming deskilled through automation, as discussed by critical scholars (Cohen, 2015), by arguing that the tasks or jobs eliminated and now performed by technology cannot be regarded as journalistic. Simultaneously, augmenting potential – making newswork more productive and creative – is stressed by reproducing the public essence of journalism and neglecting relations in the appropriation process.

The third dualist proposition contrasts the creation and presentation of news, re-evaluating both the civic and business potential as grounds for their re-standardisation. The proposition rejects "technology-oriented" journalism based on a sort of symbiotic human–technology relationship (Lewis and Westlung, 2016: 347). Here, the human factor remains – as argued – 'decisive' for sustaining the public essence, re-establishing news – as a civic bond and commodity – 'from people to people', where technology is regarded only as a tool or a medium. At the same time, the proposition accepts the technology-orientation and re-evaluates affordances to stimulate people's engagement with algorithm- and metrics-based news presentation. The interviewees re-standardise the concept of news by presupposing that human news creation by definition contributes to the "depth appeal" (Underwood, 1993/1995: 76), while news presentation based on the combination of human and algorithmic logics enables the newsroom to stop relying on intuitively seeking the "surface appeal" (ibid.) and start reconsidering ways of stimulating people's engagement according to 'the character' of particular news institutions, also via thoughtful customisation and personalisation.

Unlike the narrative of 'technology will change everything' in the rhetoric of the 'sublime', discursive traces of the algorithmic sublime among newsroom management do not portray automation as a sharp break but as an incremental development, evolution of previous technological adaptations particularly through digitization of work in general. Namely, according to the interviewees, automation as algorithmic techniques has not just appeared out

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of thin air, but has emerged as a cumulative innovation process institutionally managed in the newsroom – with its continuities and transformations. By investigating and elaborating not only the difficult journalism–automation nexus, but also larger social relations and their contradictions sobriety in research on technological innovations in journalism beyond naïve utopian as well as dystopian visions should become conventional.

NOTES

[1] Since the editor-in-chief of *SZ.de* acknowledged that their newsroom has "no case for automating journalism in any way that would have fitted our editorial standards and readers' needs" (intSZ), this interview was excluded from the analysis of how newsroom management negotiates automation novelties in the newsroom.

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Funding

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Appendix B: In the name of the right to be forgotten: new legal and policy issues and practices regarding unpublishing requests in Slovenian online news media

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Abstract:

The goal of this study is to explore the implications for digital journalism of new media regulations applying to the right to be forgotten (RTBF). We will address the issue of freedom of expression within digital news media in cases of requests to unpublish news items from online media archives because they contain embarrassing, irrelevant and/or outdated (yet truthful) content. We researched the editorial policies and practices employed at five Slovenian online news media in their responses to unpublishing requests that cited the RTBF, as well as the legal foundations within Slovenian and EU policies. We used the methodological approach of legal analysis, combining semi-structured interviews and document-based legal analysis. Our research showed that there are no clear guidelines or internal policies on the procedures and criteria for dealing with unpublishing requests. Different practices have evolved, leading to inconsistent decisions. News editors are generally opposed to removing news items from online archives, and are prepared to do so only in exceptional circumstances. The legal foundations for unpublishing online news items are non-existent or vague, and this vagueness encourages new requests and opens the door to limiting freedom of expression. To avoid additional potential for the manipulation of media history and the erosion of journalistic authenticity and credibility, both legal and self-regulatory frameworks need to be updated.

Key Words: right to be forgotten; digital journalism; news websites; unpublishing requests; freedom of expression; news editors; media policy; legal analysis

The Right to Erase News Stories in Digital News Media: The Use of the Right to Be Forgotten as a New Legal and Policy Tool for the Suppression of News Items on News Websites

INTRODUCTION

The issue of censorship and freedom of expression in the digital ecosystem has been evolving within the wider framework of "a conceptual reevaluation of a new communication technology" (Bollinger 1990, 103). This is how Bollinger defined the need to re-think the key postulates of media paradigm(s) when faced with disruptive technologies. The development of new policy framework for digital journalism calls for such reevaluation, as the new ICT on which digital journalism is based presents a number of challenges to freedom of expression, a key component of democratic governance (Council of the European Union 2014, 3). In particular, it calls for adequate adaptation of media and ICT regulation, self-regulation and policy, on national and international levels.

The new ICT has nurtured the popular belief that it opens an array of possibilities, including increased citizen control over the political system (Splichal 1995, 5). Some see the Internet as "reinvigorating democracy, enabling active citizenship and forging new connections across old frontiers within news" (Fenton 2010, 14), thus providing new opportunities for the fulfilment of human rights. However, concerns have been expressed that policy makers have yet to seriously grapple with the repressive implications of new technologies (Feldstein 2019, 42). A senior director of PEN America states that "the use of the internet to track individuals is facilitating oppression and paving the way towards authoritarianism" (Rolley 2019). This dual relationship between positive and negative aspects is reflected in Zelizer's definition of digital journalism: it is a practice of newsmaking that "embodies a set of expectations, practices, capabilities and limitations relative to those associated with pre-digital and non-digital forms", while its rhetoric "heralds the hopes and anxieties associated with sustaining the journalistic enterprise as worthwhile" (Zelizer 2019, 349). These anxieties are additionally seen and felt because of new legal issues and pressures, such as requests to delete a journalistic story from digital media.

Within this new environment, new forms of censorship and repression have developed, relating to digital tools utilized by contemporary digital journalists and editors. In this regard, the Right to Be Forgotten (RTBF) represents a crucial policy development. As one "of the key elements of the institute of personal data" (Andryushchenko 2016, 16), the RTBF refers to "the right of an individual to erase, limit, or alter past records that can be misleading, redundant, anachronistic, embarrassing, or contain irrelevant data associated with the person, likely by name, so that those past records do not continue to impede present perceptions of that individual" (Kelly and Satola 2017, 3). With online archives "the fleeting snapshots of our past lives [have turned] into permanent records that may follow us forever" (Lasica 1998), and individuals request the removal of online content for various reasons (Acharya 2015, 88). The Internet has thus become a "site of furious tension between data privacy and freedom of expression" (Post 2018, 983), particularly in the EU where the protection of personal information is highly prized.

One of the challenges related to the RTBF is the issue of unpublishing error-free news items from online media archives upon an individual's request. When deciding whether to grant such requests, news editors are faced with an ethical dilemma arising from the clash of free expression, historical integrity and accountability on one side, and harm reduction, privacy and redemption on the other (Shapiro and Rogers 2017, 1101). Online media face important decisions about how they should respond to such requests while still upholding journalistic principles and best practices (Acharya 2015, 89), as removing truthful information from digital news archives involves a "conflict between the traditional ethical values of reporting the truth while at the same time not causing harm" (McNealy and Alexander 2018, 401).

The goal of this study is to explore the implications of new media regulations applying to the RTBF for digital journalism (particularly those involving freedom of expression within digital media) in cases of RTBF requests by individuals to unpublish truthful information. The current editorial policies and practices at five Slovenian online news media outlets will be analyzed, along with the legal foundations within Slovenian and EU framework and policy. We will use the methodological approach of legal analysis, combining semi-structured interviews and document-based legal analysis.

ERASING MEDIA CONTENT – ANALYSIS OF LEGAL AND RELATED MEDIA THEORY AND RESPONSES

The foundation of the RTBF in Europe was laid in 1995, in Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data, and on the free movement of such data (the so-called Data Protection Directive) (Andryushchenko 2016, 16). The RTBF was established by the Court of Justice of the European Union (CJEU) in the 2014 case of *Google Spain SL v. Agencia Española de Protección de Datos* (*Google Spain* judgement)[1] (for more information, see Alessi 2017, 145–146), as the right of individuals to request search engine providers to remove links to personal information about them. According to the CJEU ruling, de-linking of search results can be granted when the data "appear to be inadequate, irrelevant or no longer relevant, or excessive in relation to those purposes and in the light of the time that has elapsed". The introduction of the General Data Protection Regulation (GDPR), applicable throughout the EU from May 2018, represented the first time European legislation recognized the existence of the RTBF, which had until then been rooted in case law (Di Ciommo 2017, 623–624).

The complainant in the *Google Spain* case also requested a newspaper to withdraw published news, yet this part of his request was not granted. According to the CJEU judgment, "the processing of personal data carried out in the context of the activity of a search engine can be distinguished from and is additional to that carried out by publishers of websites". Nevertheless, the *Google Spain* judgement led to "wide-reaching implications for freedom of expression on the Internet" (Youm and Park 2016, 284) by empowering individuals and states to censor content (Oghia 2018). Since then, there have been signs of the RTBF being applied directly to news websites (e.g. Matthews 2016).

In 2016, the highest court in Italy upheld a ruling that after a period of two years an article in an online news archive had expired; thus, the RTBF became "the right to remove inconvenient

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[1] Judgment of the Court of Justice of the European Union (Grand Chamber) in Case C-131/12, *Google Spain SL, Google Inc. v Agencia Española de Protección de Datos (AEPD), Mario Costeja González*, 13 May 2014.

journalism from archives after two years" (Matthews 2016). In Belgium, the Court of Cassation found in 2016 that *Le Soir* had been properly ordered to anonymize an article containing information about the applicant, who had been convicted of a drink-driving offense that led to a fatal road traffic accident. Since the conviction had been spent the court argued that twenty years later continued publication of this offense was likely to cause him disproportionate damage, outweighing the strict respect for freedom of expression (Agate 2018; Tomlinson 2016).

As news organizations have been receiving more and more requests from individuals asking that their names be removed from news stories (Santín 2017, 305), they have gradually become increasingly willing to grant unpublishing requests (Shapiro and MacLeod Rogers 2017, 1101). However, while some news media comply with these requests, others openly oppose the practice. For instance, according to *The Independent's* executive editor Will Gore (2018), "it is important to note the right to be forgotten applies specifically to search engines, not to individual publishers". *The Independent* considers removing content from public view only rarely, in exceptional cases, to protect the integrity of its archive. Opponents of unpublishing often argue that a generalized RTBF "would lead to the rewriting of history in ways that impoverish our insights" (De Baets 2016, 64). However, journalistic responsibilities continue after publication, which means that journalistic work is subject to subsequent addition or correction (for more, see Shapiro and MacLeod Rogers 2019, 330–331).

The *Google Spain* judgement has prompted diverse reactions and discussions (for an overview see Villaronga et al. 2018, 307), mostly related to removing links on search engines. While previous studies have focused mainly on theoretical foundations, legal frameworks and controversies regarding the RTBF and search engines (e.g. Andryushchenko 2016; Alessi 2017; Kelly and Satola 2017; Post 2018; Villaronga et al. 2018), the application of the RTBF in digital journalism and its understanding in news media policy have received less attention. Research on the issue of unpublishing, including individuals' reasons for filing requests, as well as the media policies and procedures for resolving them, has been scarce, particularly in the EU-context and related to EU personal data protection policies. In 2009, English conducted a survey of editors from North American news organizations and found "little news industry consensus on how to handle and respond to public requests to unpublish news content from

online news sources" (English 2009, 4). The Canadian Association of Journalists (English 2010) recommended ten best practices for handling requests to unpublish digital content, but internal media guidelines have been rare. The BBC, for example, adopted specific guidelines for the removal of its online content, emphasizing that it "should only be done in exceptional circumstances".

McNealy and Alexander (2018) provided a theoretical framework for news organizations to make unpublishing decisions, weighing the sensitivity of information against its news value. To reconcile conflicting principles in this dilemma, Shapiro and MacLeod Rogers (2017) suggested distinguishing between truthfulness and relevance, and between the availability of information and the ease of its searchability. English's study (2009; 2010) identified various reasons for unpublishing requests; however, as it was not conducted within the EU's legal framework, policies and practices, its results are unrelated to the European concept of the RTBF.

METHODOLOGY

Recent developments in the news media in Slovenia – a member of the EU and thus part of the EU legal framework – demonstrate a shift in the application of RTBF affecting digital journalism, thus representing a significant research issue. In 2018, the Journalistic Honorary Arbitration Court adopted recommendations regarding unpublishing news articles in online media (NČR 2018). These stated that as a rule media outlets should not remove news items, but are permitted to do so in exceptional circumstances. In such cases, the reasons for removal should be explained to the public. To this end, media outlets should prepare, and make publically available, clear unpublishing guidelines.

To research how Slovenian online news media outlets respond to unpublishing requests implying the RTBF, we used the methodological approach of legal analysis, combining semi-structured interviews and document-based legal analysis to provide a complex investigation of the research issue (Milosavljević and Poler 2019). We adopted the following definition of an unpublishing request implying an individual's right to be forgotten: An unpublishing request is a request to unpublish a news item from an online media archive because of

embarrassing, irrelevant and/or outdated (yet truthful) content about an individual, regardless of whether the applicant explicitly refers to the right to be forgotten. Requests referring to allegedly false, incomplete, misleading or offensive information are thus excluded from our study.

The research questions are:

RQ 1: *What are the policies and practices of online news media for dealing with unpublishing requests implying an individual's right to be forgotten?*

We will examine the decision-making process for resolving unpublishing requests, in particular: whether any written or informal procedures have evolved within newsrooms; who in a news organization is involved in the process of deciding whether to grant a request; who makes the final decision; what arguments applicants make for unpublishing; what criteria decision makers use; and which particular circumstances of a case justify unpublishing.

RQ 2: *What are the legal foundations within Slovenian and EU frameworks and policies for unpublishing online news items that result from requests implying an individual's right to be forgotten?*

We will establish whether unpublishing requests that fit our definition, and the media practices for handling them, are in compliance with Slovenian and EU legal frameworks and policies.

To answer RQ 1, we conducted semi-structured interviews with editors of five Slovenian online news media outlets: Kaja Jakopič from *rtvslo.si*, the news website of the Slovenian public service broadcaster (*Editor A*); Jure Tepina from *24ur.com*, the news website of Slovenia's biggest commercial broadcaster (*Editor B*); Robert Schmitzer from *slovenskenovice.si*, the news website of Slovenia's biggest daily tabloid newspaper (*Editor C*); Uroš Urbas from *delo.si*, the news website of Slovenia's biggest daily broadsheet newspaper (*Editor D*); and Jurij Šimac from *finance.si*, the news website of Slovenia's biggest daily business newspaper (*Editor E*). We interviewed these editors as key gatekeepers, responsible for both publishing media content and erasing it. All editors were interviewed in person, in

their offices, and all interviews were recorded and then transcribed.[2] When we first approached the editors, we asked them whether anyone else in or outside their newsrooms had a relevant role in the process of resolving unpublishing requests, and could therefore give us additional information about the procedure. Based on their answers, we performed one more interview with Tanja Picek, a data protection officer (DPO) at *Pro Plus*, the media company that publishes *24ur.com* (*DPO A*).

The qualitative method of semi-structured interviews was considered appropriate because it is "sufficiently structured to address specific topics related to the phenomenon of study, while leaving space for participants to offer new meanings to the study focus" (Galletta 2013, 24). Although we prepared an interview guide it was the flow of the interview that determined when and how the questions were asked, rather than the order specified in the guide (Bailey 2007, 100).

Before conducting the interviews, we asked interviewees to provide documentation on their media outlet's unpublishing cases. This information was to be as complete as possible, including individual requests, the news items in question, decisions made by the media outlet, and all other correspondence related to the case. Since unpublishing cases are not systematically archived, the interviewees had to search their correspondences, which resulted in a relatively random sample of cases, some of which contained incomplete documentation. Altogether, we acquired documentation on over 30 cases that corresponded to our definition of unpublishing requests, which did not allow us to make any general statements on the issue. Nonetheless, the material that we gathered was useful, as it provided valuable insights and helped us prepare an interview guide.

To answer RQ 2, we performed a legal analysis of documents from Slovenian and EU legal frameworks and policies.

RESULTS

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[2] The interviews were conducted by Marko Milosavljević in February and March 2019.

Online News Media Policies and Practices for Dealing with Unpublishing Requests

The decision-making procedure for the unpublishing of a particular news item begins upon an individual's request: the applicant contacts the newsroom independently or through a lawyer, either by e-mail or phone. *Editor B* stated that he is sometimes contacted through a common acquaintance asking for a favor. Some of these requests are genuine, polite and reasonable ("These are above all attempts; they just try and send them, they don't make threats" – *Editor A*), while others are sharper, and threaten legal action in case of noncompliance ("high-profile people, usually assisted by their law firms, warn us that if their requests are not granted, we will be confronted with legal procedures" – *Editor F*).

Requests often lack a legal grounding, proceeding rather from a place of common sense and a strong belief that it is the applicant's right to get the news item in question removed. Some requests refer explicitly to the RTBF, as the *Google Spain* case applying to search engines has made it well known, while others state that deleting a news item containing their personal data is their right according to the GDPR: "They have heard about the GDPR and then everything is mixed-up … They even think that court reporting falls under the GDPR …" (*Editor C*). Some applicants do not mention a specific legal source, but just request deletion: "One lady did not refer to any articles or directives … she just said that she had been acquitted in court and asked if we could remove [the articles]." (*Editor A*)

Whether they use legal argumentation or not, all applicants claim that the continued publication of the offending news item is damaging to them. Yet their reasoning is often modest and superficial: "They request and explain. They don't give a lot of detail, they just write that it's harmful to them now, when they're looking for a job." (*Editor A*). Applicants usually find the news items embarrassing, and detrimental to their professional career and/or personal life. As *Editor A* established, "they mainly plead that in their present lives [continued publication] damages them, mostly when they're looking for a job". In some cases, they do not even try to present a cogent argument of presumed harm, they just ask that the publication be removed without specifying a reason for their request: "Occasionally we have cases involving photographs, when, for instance, people don't like how they look" (*Editor A*).

In some cases, the applicant's appearance in a news item they now want removed was consensual, even helpful to them at the time. This request was from an individual who appeared in a news article ten years ago: "There was a column 'this is my work, this is my education, this is my profile, I am looking for a job, and I am ready to do any job'. He claims that he has changed his job twice in the meantime, that he is now successful, but this article prevents him from progressing in his career, as people see him as a loser because he was looking for a job in 2009" (*Editor D*). Another situation involves giving consent once, but now wanting to withdraw it: "The most typical case that I have at *Novice*, at least once or twice a month, is a girl who at the age of 18 to 20 agreed to be photographed in a bikini, /…/ and it was written that she was a hot Taurus, who liked to go to the cinema and was in love with Leonardo DiCaprio. Now this Taurus is all grown up, she got a job, became a mother, but this publication is still among the top hits under her name. I have several requests to withdraw such publications." (*Editor C*)

In other cases, the applicants' past media appearances were not voluntary. They became objects of reporting based on their newsworthiness and the public interest recognized by journalists. These include court reports, particularly when an applicant has either been found innocent or has already finished serving his/her sentence. The applicants cite not being convicted in court, and assert that the publication "is irrelevant today or not in the public interest" (*Editor B*).

There are no written guidelines or clear internal policies on procedures and criteria for dealing with unpublishing requests within the media outlets analyzed. The decisions are usually made by the editor or the editorial team, based on professional opinions prepared by their legal advisers and/or data protection officers. However, the procedure is not precisely defined and leaves space for editors to decide using their conscience, friendship, or other personal or subjective criteria, rather than official proceedings within the media company. Different practices have thus evolved, without definite criteria for granting or rejecting a request, which leads to somewhat inconsistent decisions. The interviewees shared a general opposition to the removal of news items from online archives, and were prepared to do so only in exceptional circumstances, although some were more indulgent than others. *Editor D*, for example, said: "Our standpoint is that we interfere with the digital archive only when /…/ a

court decides that an article must be removed. But certain life situations can fall into a grey area."

The main argument for refusing an unpublishing request is public interest. For example: "They [an Austrian agency] wanted us to remove some articles from *24ur.com*, about a gentleman from Styria who has been somewhat misleading his workers. We said that it is in the public interest ..." (*DPO A*). However, finding an adequate solution when balancing the public interest on one side and the RTBF on the other is not always easy or without doubt. *Editor C* cited cases involving rehabilitation: "We have many convicted killers or more serious criminals who were in jail /.../ and then they write, for instance, that in 2010 he cut someone's throat, but now he is a rehabilitated member of society and he demands that [the old articles about his crime] are removed. Here we have a very big dilemma, and we don't yet know how to deal with such cases."

The dilemma of whether the public interest outweighs an individual's RTBF also appears in cases where individuals have undergone one or several investigative or legal procedures, yet have never been found guilty in court. *Editor E* explains: "We have a banker, for instance, who has been involved in a series of weird businesses /.../ legal procedures were taken against him, including in court, but they later failed, or were stopped for different reasons. This man is legally completely clean. /.../ And then this person contacted us through his lawyer, saying 'you mentioned me in 30 news articles, in a negative context, and I demand that you erase them' /.../, and we decided not to erase the articles, as we will also not go to the national university library to burn old copies of *Finance*. The most we can offer is some kind of compromise: that is, we send a request to Google to remove the articles from their index."

In situations where the continued publication of a news item cannot, in the editor's opinion, be justified by the public interest (i.e. when information is deemed irrelevant and/or outdated) it is usually removed. As *Editor B* explains: "If someone was involved in an investigation five, four or ten years ago, if his house was searched and the police still did not charge him, I think it is not correct that this person can still be found by search engines. There is no public interest there." *Editor C* tries to be empathetic in situations where a news item is outdated and irrelevant to the public: "If it is a completely human request, such as 'they tease

my children because three years ago there was an article about us needing help, and now my children are upset', this we absolutely grant."

Unpublishing Requests from the Standpoint of Slovenian and EU Frameworks and Policies

Individuals who request Slovenian media outlets to erase news items from their online archives often cite the *Google Spain* judgment (Zakonjšek 2019, 35) to support their claims. However, this judgment is not relevant to the subject in question, as it applies only to the obligations of search engines, and not to online media. In Slovenian legislation, this issue is regulated by two normative acts: the GDPR and the Personal Data Protection Act (ZVOP-1).

The GDPR in Article 17(1) specifies that the data subject has the right to obtain from the controller the erasure of personal data concerning him or herself without undue delay, and the controller is obliged to erase personal data without undue delay where one of the grounds applies, including, *inter alia*, in the event that "the personal data are no longer necessary in relation to the purposes for which they were collected or otherwise processed" (Article 17(1)(a) of the GDPR). Article 17(3)(a) provides that erasure within the context of paragraphs 1 and 2 of the same article shall not apply to the extent that processing is necessary for "exercising the right of freedom of expression and information".

In its decision, the Slovenian Information Commissioner (2019) stated that the GDPR provision could also be applied to requests to erase journalistic contributions from online archives. The Commissioner took the view that, on the basis of Article 17(1)(a) of the GDPR, a person who participated in an interview nine years ago could request its removal from the company owning the website on which it was published if the information it contained ceased to be relevant or essential due to time elapsed. At the same time, the Commissioner warned that the data controller can reject such a request if, for example, it can prove that by posting the content it is exercising its right to freedom of expression and information: "[t]he media enjoy a special status by law because they act in the public interest, and informing the public is part of their freedom of expression."

ZVOP-1 contains a similar provision in Article 32(1), which stipulates: "upon the request of the data subject, the personal data controller shall supplement, correct, block, or erase personal data which the individual proves to be incomplete, inaccurate or not up to date". This is a rather vague formulation, and it is thus questionable whether the provision can be applied to cases in which interested individuals require the media to erase news from their respective online archives. However, we can conclude that the Slovenian legislature, which states that it is possible to request the erasure of the controversial data if they are "not up to date", wanted to resolve the issue in a similar manner to that stipulated by Article 17 of the GDPR.

Therefore, on the basis of the GDPR and ZVOP-1, interested parties could in principle require a media outlet to erase journalistic contributions from their online archives if these contributions encroach on their personal rights, and if they are no longer current. However, due to the protection of the right to freedom of expression and the public's right to information, such requests can be justified only exceptionally. It is specified neither in the GDPR nor ZVOP-1 when such exceptions occur. These criteria, however, were established by the European Court of Human Rights (ECtHR) in its (scant) case law on the subject. To date, the ECtHR has adjudicated on the right to erase journalistic contributions from online archives in *Wegrzynowaki and Smolczewski v. Poland* [3] and *ML and WL v. Germany* [4].

In *Wegrzynowski and Smolczewski v. Poland*, the ECtHR decided on an application by two Polish lawyers who won their action for compensation and an apology from the media for untruthful statements in a journalistic article before the Polish court, but lost the subsequent action demanding the erasure of published articles from the newspaper's online archive. The ECtHR upheld the findings of the Polish courts and dismissed the application. It is clear from the reasoning of the ECtHR judgment that online media archives are protected within the context of freedom of expression. According to the ECtHR, it is not the task of the judicial authorities to rewrite history by removing published articles from online archives.

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[3] Judgment of the ECtHR in the case of *Wegrzynowaki and Smolczewski v. Poland*, Application no. 33846/07, 16 July 2013.

[4] Judgment of the ECtHR in the case of *M.L. and W.L. v. Germany, Application* nos. 60798/10 and 65599/10.

In *M.L. and W.W. v. Germany*, the ECtHR adjudicated on a case in which the applicants were convicted in 1993 of the murder of a famous actor. In 2007, they filed an action against several media outlets with a request for the anonymization of personal data. The court in the first instance and the court of appeal both upheld their claims, on the grounds that their interest in not being confronted with their past convictions prevailed over the public's interest in being informed of the applicants' criminal offences. However, the federal court reversed this decision on the grounds that the previous courts did not adequately protect the right to freedom of expression.

The applicants lodged an appeal with the ECtHR against these judgments, which the ECtHR subsequently rejected. It concurred with the findings of the German federal court, stating that the media is tasked with participating in the creation of a democratic opinion by providing the public with old news items stored in their archives. A decision to ban the publication of information about individuals could have a detrimental effect on the media's freedom of expression. Regarding the request for the renewal of criminal proceedings, both applicants contacted the media themselves, and gave them information for publication. This is another reason the court did not find their application admissible.

In this case, the ECtHR did not deviate from its established position that the protection of the right to freedom of expression is an essential human right that can only be limited in exceptional cases (Harris et al. 2009, 443). As is clear from *Wegrzynowaki and Smolczewski v. Poland*, the ECtHR upholds that media can also keep journalistic articles that constitute an abuse of press freedom in their online archives. This includes, for example, contributions that contain untruthful references to individuals, and thus constitute an unlawful interference with their human rights.[5] The limits of freedom of expression must be set considering two factors: whether the journalist was reporting on a topic in the public interest;[6] and the status of the

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[5] From this, it can be concluded that requests for the erasure of contributions containing genuine data, or of material published with the consent of persons who requested an erasure over time, are manifestly unfounded.

[6] See e.g. ECtHR *Giniewski v. France*, Application no. 64016/00, 31 January 2006 and

person reported on by the journalist.[7] These criteria were supplemented by the ECtHR in *Wegrzynowaki and Smolczewski v. Poland* and *M.L. and W.W. v. Germany* in view of the changed social circumstances brought about by the development of digital media technology.

DISCUSSION AND CONCLUSION

Our interviews with five news editors and one DPO showed a lack of consistent procedure for handling unpublishing requests, and a large maneuvering space for editors to use their discretionary powers when deciding whether to remove certain content. Procedures are not defined in internal documents, and there is no way for the public to know who is making decisions, on what criteria they are based, and what the options for further action or complaints are. It is not clear whether an editor decides alone or with advice from a media company's legal office. Nor are the criteria explicitly set, particularly regarding the balance of public interest (informing the audience) and private interest, whereby an individual wants to restore her/his reputation, advance his/her professional career, or address a personal issue.

These blank spaces within the editorial decision-making process (including informing the public about such cases) increase news editors' influence and power, as well as the potential for abuse and manipulation of information through the non-transparent erasure of potentially controversial or negative (yet truthful) news items about themselves.

As with many other aspects of digitalization, the (attempts to achieve) unpublishing of news items in digital media confirm the "dual-use" approach to new digital technologies, and to digital journalism: the schism in the perception of the potential and role of digital media and digital journalism. This schism has existed since the early 1990s, when some argued that "computer-mediated communication will lead to a flowering of a new Athenian democracy" (Splichal 1995, 5), while others, such as Roszak (1994, xvi) concurred with techno-scepticism

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Thorgeirson v. Iceland, Application no. 13778/88, 25 June 1992.

[7] See e.g. the ECtHR judgments in *Lingens v. Austria*, Application no. 9815/82, 8 July 1986 and *Von Hannover v. Germany*, Application no. 59320/00, 24 June 2004.

and neo-luddism: "Information technology has the obvious capacity /.../ to create new forms of social obfuscation and domination."

Twenty-five years later, these digital technologies have created new legal and self-regulatory issues for journalists and the media, and for the legal system a whole. This has led to updated concerns regarding freedom of expression when digital media face attempts by various stakeholders to delete unpleasant news stories. While digital tools enable news media to enhance their key journalistic aspects (collection, production, distribution), they also pose new threats to its authenticity and credibility, while potentially decreasing public trust and endangering public interest as a general principle of journalistic work. This confirms the old schism and presents new examples of dual use of new technologies, not only by showing their empowering potential within newsrooms, but also by confirming claims that they can "be deployed for beneficial purposes as well as exploited for /.../ repressive ends" (Feldstein 2019, 50).

The legal foundations within Slovenian and EU frameworks and policies for unpublishing online news items upon requests implying an individual's RTBF are vague at best, and often non-existent. This is dangerous, because any vagueness (or perceived vagueness, seen in attempts to apply the RTBF not only to search engines, but also to news media) makes room for new requests, and opens the door to potential limits on freedom of expression. This could have a chilling effect on digital media and digital journalism.

This paper shows that according to the ECtHR, the storage of journalistic contributions that are made accessible to the public for an extended period – one of the key features of digital journalism – is not affected by the relationship between freedom of expression and colliding rights.[8] In this context, the ECtHR draws attention to the negative effect on the media of judgments requiring the erasure of articles from online archives and the risk of rewriting history, which could have occurred if the courts had ordered the press to erase data from their online archives.

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[8] The ECtHR's problems in adapting to the changes brought about by the introduction of digital technology are highlighted by, e.g. Szeghalmi (2018, 255).

In order to avoid the possibility of manipulating media history and eroding journalistic authenticity and credibility, both legal and self-regulatory frameworks need to be updated. Given the modest ECtHR case law on the issue, it is likely that the ECtHR will further define the content and scope of the right of the media to keep news items in its archives as part of the right to freedom of expression. A new, more precise framework is required that will sufficiently and efficiently support journalistic autonomy and editorial independence, and prevent further non-transparent digital manipulation of the past. Clear criteria for the eventual removal of news content need to be defined and made available to the public. In addition, related procedures and stakeholders/decision-makers also need to be adequately defined, to make the public aware of these (potential) erasures, and of the circumstances that might warrant them. This is needed to ensure media transparency and responsibility, as well as to prevent arbitrary interventions by either the state or individuals, through their networks and through their personal (economic, political) influence. If not, freedom of expression in the digital eco-system will be under threat, and the potential for new forms and shapes of digital manipulation will continue to develop.

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Appendix C: Back to the Future: Automation and the Transformation of Journalism Epistemology

NAZAJ V PRIHODNOST: VPRAŠANJE AVTOMATIZACIJE IN PREOBRAZBA NOVINARSKE EPISTEMOLOGIJE

Igor Vobič, Marko Robnik Šikonja, Monika Kalin Golob

POVZETEK

Članek izhaja iz zgodovinskih obravnav podrejanja novinarstva kapitalistični nujnosti »racionalizacije« delovnega procesa skozi tehnološke inovacije. Nadaljevanje teh teženj je postopno uveljavljanje algoritmov, ki se uporabljajo za razreševanje novinarskih problemov na podlagi podatkov, s čimer se novinarsko delo dopolnjuje, razširja ali zamenjuje s tehnologijo. Apoteoza tega procesa je avtomatizirano novinarstvo, ki se z omejeno vključenostjo človeka ali brez nje onkraj razvoja algoritmov uveljavlja v produkciji novic, ki nastajajo in se prilagajajo na podlagi podrobno strukturiranih baz neprestano osveženih podatkov. Čeprav avtomatizacija novic predvsem dopolnjuje uveljavljeni delovni proces, zgodovinske težnje tehnoloških inovacij v uredništvih, kontinuirani razvoj sistemov tvorjenja naravnega jezika in tehnološka drama okoli avtomatizacije odpirajo zahtevna vprašanja, kaj in kako vemo z novinarstvom ter kako je ta vednost utemeljena. V avtomatiziranem novinarstvu sta konstrukcija »objektivnih« dejstev in njena jezikovna igra pogojeni ne le z združevanjem tehnologije in človeške dejavnosti, temveč tudi z razdruževanjem tehnološke objektivnosti in človeške subjektivnosti. Avtomatizirani proces upodatkovljenja dejstvenosti novic namreč veljavo črpa iz avtoritete algoritemske presoje, ki je skoncentrirana v podatkovni avri objektivnosti in principu legitimacije skozi hipno, neposredno in merodajno izvedbo. Zgodovinska načela »objektivnega« novinarskega dela so v tem smislu podvržena kvalitativni spremembi. Medtem ko novinarji s tehnološkimi inovacijami skozi zgodovino postopoma izgubljajo nadzor nad lastnim delom, se z avtomatizacijo potencialno začenja izničevanje novinarske presoje, ki je institucionalizirana v vzorcih, odnosih in praksah modernega uredništva.

Ključne besede: avtomatizirano novinarstvo, novinarska epistemologija, novinarsko delo, algoritmizacija, tvorjenje naravnega jezika

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BACK TO THE FUTURE: THE QUESTION OF AUTOMATION AND THE TRANSFORMATION OF JOURNALISM EPISTEMOLOGY

Igor Vobič, Marko Robnik Šikonja, Monika Kalin Golob

SUMMARY

The article stems from the historical discussions on subjugating journalism to the capitalist necessity of "rationalisation" of the labour process through technological innovations. As the continuation of these tendencies, the gradual implementation of algorithms to solve journalistic problems based on data, thereby supplements, extends, or replaces journalistic work with technology. The apotheosis of this process is automated journalism, which, with or without human involvement beyond the development of algorithms, asserts itself in the production of news that is generated and adapted on the basis of always updated highly structured databases. Although news automation primarily complements the established labour process, the historical tendencies of technological innovations in the newsroom, the continuous development of natural language generation systems, and the technological drama surrounding automation raise challenging questions about what and how we know via journalism and how that knowledge is substantiated. In automated journalism, the construction of "objective" facts and its language game are conditioned not only by the combination of technology and human activity, but also by the separation of technological objectivity and human subjectivity. The automated process of datafication of facticity of news, in fact, draws from the authority of algorithmic judgment, which is concentrated in the aura of objectivity of data and the principle of legitimation through instantaneous, direct and authoritative performance. In this respect, the historical principles of "objective" journalistic work are subjected to qualitative change. While technological innovations throughout history have caused that journalists have gradually lost control of their own work, automation potentially eradicates journalistic judgment that is institutionalized in the patterns, attitudes, and practices of the modern newsroom.

Keywords: automated journalism, journalism epistemology, journalistic work, algorithmisation, natural language generation

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Uvod

Kaj naj zdaj, ko moj računalnik piše namesto mene, jaz počnem s preostankom svojega življenja.

S tem vprašanjem se sooča pisatelj Abram Ivanov v kratki zgodbi *Fault-Intolerant* popularnega ameriškega avtorja znanstvene fantastike Issaca Asimova (1990/2003, 107). Njegov samoučeči računalnik je sprva odpravlja pravopisne napake, nato začenjal posegati v skladnjo in končno pisati v Ivanovovem stilu, le hitreje in »mnogo bolje«. Skoraj tri desetletja po objavi Asimovove kratke zgodbe podobno nelagodje pred neznanim izžareva sporočilo kalifornijskega podjetja OpenAI (2019). Drobovja nevronskega sistema GPT-2 sprva niso razkrili javnosti, saj naj bi predstavljalo visoko tveganje zlorab za avtomatizirano tvorjenje »lažnih novic« in nezaželene pošte. Novico o »skrivanju« sistema umetne inteligence (UI), ki so ga »naučili«, da s pomočjo 1,5 milijarde parametrov in 40 GB tekstovne baze predvidi naslednjo besedo glede na vse predhodne besede znotraj besedila, so v znanstveno-strokovnih krogih sprejeli s posmehom, češ da gre za pridobivanje pozornosti za že znano tehnologijo (Kurenkov in Arora 2019). Mediji po svetu so novico nekritično povzemali: *Raziskovalci ustvarili »hudobno« pišočo UI* (BBC, 15. februar 2019)*, UI lahko piše natanko tako kot jaz. Pripravite se na robotsko apokalipso* (The Guardian, 15. februar 2019) in *Ali lahko UI nadomesti človeške pisatelje?* (Financial Times, 22. marec 2019). Kljub dramatičnim naslovom ti prispevki postavljajo pomembna epistemološka vprašanja ter odpirajo socialno-ekonomske, politične in kulturne probleme algoritmizirane sedanjosti in prihodnosti – tudi novinarstva.

V zadnjem desetletju je novinarstvo podvrženo počasnemu, a vztrajnemu procesu uveljavljanja različno kompleksnih algoritemskih sistemov, ki se uporabljajo za razreševanje novinarskih problemov na podlagi (ne)namensko zbranih podatkov, s čimer se človeško delo v novinarski produkciji in distribuciji dopolnjuje, razširja ali zamenjuje s tehnologijo. Proces algoritmizacije novinarskega dela spremljajo polemike o tehnologiji in njenih družbenih izrazih, pri čemer se raziskovalci ukvarjajo z implikacijami za ideologijo in identiteto novinarstva (npr. Carlson 2015; Thurman, Dörr in Kunert 2017; Milosavljević in Vobič 2019a), oblikovanje in razumevanje avtomatiziranih novic (npr. van Dalen 2012; Clerwall 2014), odnos z občinstvom in personalizacijo novic (npr. Carlson 2017; Ford in Hutchinston 2019; Diakopolous 2019), avtorstvo ter njegovo pravno in etično odgovornost (npr. Diakopoulos in Koliska 2017; Dörr in Hollnbuchner 2017; Lewis, Sanders in Carmody 2019) ter nenazadnje novinarski delovni proces in poklic (npr. Cohen 2015; Splichal in Dahlgren 2016; Milosavljević in Vobič 2019b). Kljub različnim teoretskim pristopom je tem razpravam skupno, da v algoritmizaciji novinarskega dela prepoznavajo spreminjanje dinamik med novinarstvom in tehnologijo: oženje vloge človeka, ki postaja omejena ali je celo ni onkraj vnaprej sprogramiranih možnosti, in razširjanje vloge tehnologije, ki z različnimi stopnjami samostojnosti za določene naloge deluje enako ali bolj produktivno, učinkovito in zanesljivo kot človek.

Zgodovino razvoja modernega uredništva je zaznamoval proces podrejanja novinarstva tehnološkim inovacijam po principu »več novic hitreje« (Örnebring 2010, 63–66). Zaradi zastajajočega značaja novinarskega dela v ožjem smislu se produktivnosti (i)zbiranja informacij, njihove obdelave ter upovedovanja novic ni dalo (bistveno) povečevati (zgolj) s

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tehnološkimi inovacijami (Splichal in Dahlgren 2016, 8–9). Uredništvo se je postopoma preoblikovalo v »tovarno novic« (Bantz in drugi 1980) z zniževanjem skupnih stroškov in diferenciacijo dela po tehnoloških linijah, pri čemer so inovacije zadevale predvsem »podporno osebje«, kot so fotografi, grafiki, snemalci, montažerji in tehniki, in pospeševalo produkcijo novic. Novinarji so medtem ostajali bolj kot ne izvzeti iz teh procesov, tehnološke inovacije so predstavljale nova orodja novinarskega dela (Örnebring 2010, 64) in omogočale opravljanje dodatnih nalog, ki so jih pred tem opravljali specializirani delavci v uredništvu (McKercher 2002, 12–14). S procesi komercializacije medijev in teženj k deprofesionalizaciji novinarstva se intenzivnost dela novinarjev in urednikov z digitalizacijo tako ni zmanjševala, temveč se je z razširjanjem zahtev celo povečevala (Vobič 2013). V zgodnjem 21. stoletju algoritmizacija te procese poglablja. Njene učinke prepoznavamo v postopnem odpravljanju opolnomočenih in socialno varnih novinarjev, ki lahko s tehnološkimi inovacijami svoje delo opravljajo kreativno in odgovorno, in razširjanju periferije, kjer algoritmizacija socialno ogrožene novinarje z malo avtonomije podreja hitrosti novinarskega delovnega procesa, (po)ustvarjanju novic iz druge roke in poblagovljenju občinstev (Cohen 2015, 116). Medtem ko algoritmi postopoma dopolnjujejo, zamenjujejo ali razširjajo sposobnosti novinarjev, se nadzor nad delovnim procesom postopoma seli k tistim, ki vodijo razvoj in implementacijo tehnoloških inovacij v medijskih hišah ali izven njih (Slaček Brlek, Smrke in Vobič 2017). Z algoritmizacijo lahko opazujemo nadaljevanje procesa podrejanja novinarstva tehnologiji ne zaradi »tehnološke«, temveč »kapitalistične nujnosti« nadzorovanja delovnega procesa in njegovih rezultatov (Örnebring 2010, 63–65). Poleg novinarskega dela algoritmizacija pretresa tudi epistemološke temelje novinarstva.

Apoteoza tega procesa je avtomatizacija. Ker se institucionalizirane vloge, norme in prakse različno artikulirajo in utemeljujejo v novinarstvu kot ustvarjanje vednosti (Ekström in Westlund 2019), se tudi avtomatizacija kot proces tehnološke inovacije različno odraža v novinarskem delovnem procesu ter ne zadeva vseh novinarjev, uredništev in medijskih hiš enako. Z algoritemskimi sistemi novinarska uredništva iščejo skrite vzorce v obsežnih podatkovnih bazah, del opravil in postopkov v delovnem procesu prepuščajo algoritmom in njihovi analizi svežih podatkovnih baz, svoje odločanje v razširjanju novic članom občinstva utemeljujejo na algoritemski analizi metričnega sledenja njihovim digitalnim aktivnostim, komunicirajo s člani občinstva ter nenazadnje z njihovo pomočjo avtomatizirajo tvorjenje novic in njihovo prilagajanje občinstvom.

Glavni cilj besedila je skozi proces algoritmizacije novinarskega dela razčleniti zgodovinske kompleksnosti odnosa med tehnologijo in novinarstvom ter razložiti implikacije avtomatizacije za osmišljanje družbenega življenja s pomočjo novinarstva in njegovo utemeljevanje. Avtomatizirano novinarstvo, ki velja za »najbolj vznemirjajočo« pojavno obliko sodobnega novinarstva (Dörr 2016, 711), se trenutno uveljavlja za najbolj rutinske športne, finančne in vremenske novice ter črno kroniko, ki nastajajo in se prilagajajo na podlagi obsežnih in podrobno strukturiranih baz podatkov (Linden in Tuulonen 2019). Ta pojavna oblika, znana tudi kot *algoritemsko, robotsko* in *strojno novinarstvo*, tako prej dopolnjuje delovni proces na obrobjih sodobnih novinarskih uredništev, kot ga spreminja (Carlson 2018). Zgodovina podrejanja novinarstva tehnologiji s težnjami »racionalizacije« delovnega procesa (Örnebring 2010), uveljavljanje različnih sistemov v osrednjih tiskovnih agencijah in uveljavljenih

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medijskih hišah po svetu (Dörr 2016; Graefe 2016; Fanta 2017) ter stalni tehnološki razvoj modelov avtomatiziranega tvorjenja besedil (Leppänen in drugi 2017) nakazujejo, da je avtomatizacija novinarstva več kot le bežen pojav.

Materialni in diskurzivni vidiki avtomatizacije novinarstva

Sistemi avtomatiziranega tvorjenja besedil pod vplivom poklicnih, ekonomskih in tehnoloških dejavnikov postopoma postajajo novinarski vsakdan. Tehnološko je avtomatizacija novinarstva pogojena z razvojem »tvorjenja naravnega jezika« (TNJ), ki se kot posebno področje računalniškega jezikoslovja ukvarja s konstrukcijo sistemov za ustvarjaje razumljivih besedil v človeških jezikih na podlagi različnih predstavitev nelingvističnih informacij (Reiter 2010). To živahno področje, v katerega so vpeti tudi globalni digitalni giganti, kot so Google, Facebook, Microsoft in Apple, kontinuirano prestavlja tehnološke omejitve avtomatiziranega tvorjenja besedil. Avtomatizirano novinarstvo se tako nenehno artikulira, in sicer med tehnološko pogojenimi pristopi TNJ, institucionalizirano novinarsko produkcijo in napetostmi tehnoloških inovacij v novinarstvu.

Zahteve in težnje avtomatiziranega tvorjenja novic

Sistemi TNJ utelešajo »novinarsko ideologijo« in »uredniško logiko« (Young in Hermida 2015, 384) in so usmerjeni v avtomatizacijo tvorjenja novic v skladu z uveljavljenimi shemami in stilom (Dörr 2016, 710). Medijske hiše in tiskovne agencije se redko lotevajo razvoja sistemov TNJ, še redkeje novinarji (Fanta 2017, 15). Ker se uredništva obračajo na zasebna podjetja, ki sisteme razvijajo ne le za novinarstvo, temveč tudi za medicino, finančno poslovanje ter tržno komuniciranje (Dörr 2016), prevladujoča »izključenost« medijev iz razvoja TNJ zadeva predpostavke, vtkane v algoritme (Linden in Tuulonen 2019, 44). Na presečišču teženj v ozadju novinarskega delovnega procesa, razvoja algoritmov in njihove implementacije v uredništvu Leppänen s kolegi (2017) prepoznava zahteve TNJ v novinarstvu.

Zahteva TNJ je *točnost* ne le v smislu vnaprej določenih algoritemskih procesov, temveč tudi z zanesljivostjo podatkovnih baz, na podlagi katerih ti delujejo (Leppänen in drugi 2017, 189). *Razpoložljivosti podatkov* je zahteva za implementacijo sistemov TNJ, ki potrebujejo stalno tvorjenje oziroma dosegljivost zanesljivih podatkov, da se medijska hiša poda v razvoj TNJ (prav tam, 190). Uredniški nadzor nad kontinuiranim tvorjenjem novic s TNJ otežujejo ovire in predpostavke vladnih, javnih ali komercialnih podatkovnih baz (Fanta 2017, 13–14; Linden in Tuulonen 2019, 35–37). Podobno kot pri razvoju algoritmov mediji podatkovne baze za avtomatizacijo ustvarjajo in urejajo le izjemoma, na primer Bloomberg in Reuters, katerih primarna dejavnost ni novinarstvo.

Prilagodljivost in prenosljivost sta zahtevi TNJ, saj je enostavno nadgrajevanje z novimi znanji in tehnologijami ključno za učinkovito uporabo sistemov za različna tematska področja in namene (Leppänen in drugi 2017, 189–190). Zahtevi TNJ v novinarstvu sta tudi *tekočnost in pestrost* tvorjenih besedil, ki morajo delovati »naravno«, torej brez (pre)pogostega ponavljanja besednih zvez ter stavčnih in besedilnih struktur (prav tam, 190). Te zahteve TNJ

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odražajo težnje procesne konvergence sodobnega uredništva, v katerih tematska specializacija in kreativnost novinarskega dela slabita v prid kontinuirane in shematizirane (re)produkcije digitalnih novic brez rokov oddaje (Vobič 2015, 34).

Transparentnost, ki se v novinarstvu nanaša na omogočanje preverjanja, kritike in posegov občinstva v novinarski delovni proces, je zahteva TNJ, ki omogoča vpogled v procesiranje podatkov, programsko kodo, modele sklepanja, uporabljeno programsko opreme in vire podatkov (Leppänen in drugi 2017, 189). »Algoritemska transparentnost« v novinarstvu je pogosto v nasprotju s poslovnimi interesi razvijalcev algoritmov oziroma njihovih lastnikov, ki želijo ohranjati zaprtost sistemov (Diakopoulos in Koliska 2016), ali je celo nedosegljiva v primerih težko razložljivega samoučečega TNJ (Leppänen in drugi 2017, 189).

Zahteva TNJ, ki je tudi povezana z občinstvom, je *aktualnost* (prav tam, 190). Povezana je z izkoriščanjem podatkov, ki jih uredništva dobijo pri članih občinstva. Po eni strani ti v svojih (mikro)lokalnih okoljih, v katerih živijo, namensko ustvarjajo podatke in jih posredujejo uredništvom, ki jih ta izkoriščajo zaavtomatiziranoemu tvorjenje nišnih novic (Cohen 2015, 111). Po drugi strani člani občinstva pogosto nenamerno puščajo podatke o svojih geolokacijah in interesih, internetnih aktivnostih in socialnih mrežah, kar krepi težnje po personalizaciji oziroma prilagajanju katerekoli novice ciljnim občinstvom in posameznim članom (Carlson 2017; Diakopolous 2019).

Razvoj TNJ med predlogami, pravili in nevronskimi mrežami

Zahteve TNJ se v avtomatiziranem tvorjenju novic tako izražajo različno skozi »zgodnjo fazo« razvoja, v kateri se razvijajo in implementirajo sistemi, ki »niso nesofisticirani, toda tudi pametni ne« (Linden in Tuulonen 2019, 44–45). Proces avtomatizacije novinarstva namreč po eni strani odraža težnje v ozadju tehnoloških inovacij in po drugi tehnološke zmožnosti oziroma omejitve TNJ. Odpiranje drobovij sistemov TNJ razkriva tri tehnološko pogojene pristope – najbolj enostavni pristopi temeljijo na *predlogah*, bolj kompleksna avtomatizacija na *pravilih*, umetnointeligentni sistemi pa na *globokih nevronskih mrežah*.

S prvim pristopom, ki temelji na predlogah, se z naborom vnaprej definiranih okvirov tvorijo najbolj shematske novice, ki temeljijo na primer na športnih statistikah, vremenskih podatkih in gibanju borznih indeksov. Kot ugotavlja Broussard (2017, 315), gre v teh primerih za različice »zapolnjevanja praznine«, saj je za tvorjenje novic treba v »skelet« le vstavljati ustrezne sveže podatke. Prednost tega pristopa sta preprosto omogočanje transparentnosti in utemeljevanje točnosti algoritemskih procesov, slabost pa je nizka stopnja pestrosti »naravnih« besedil. Sistemi, ki temeljijo na predlogah, so le bolj sistematična izboljšava ročnih »sistemov« po načelu »kopiraj-in-prilepi«.

Sistemi, ki temeljijo na *pravilih*, so nekoliko bolj kompleksni (Dörr 2016). Za vsako tematiko vsebujejo sistemi TNJ nabor več dinamičnih predlog, ki se pri generiranju uporabljajo glede na dane podatke in pravila, ki jih ti podatki sprožajo. Tovrstni sistemi tako »vlečejo zaključke«, prepoznavajo »skrita dejstva« v podatkih in odločajo, ali naj jih vključijo v »naravno« besedilo ali ne (prav tam, 703–704). Na primer pri novicah o izidih volitev v lokalnem okolju pravila

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upoštevajo število glasov, delež volivcev, razliko do ostalih kandidatov in strank, relativno spremembo glede na prejšnje volitve, največje razlike glede na pretekla glasovanja, razlike do drugih sosednjih lokalnih skupnosti in državne ravni. Tako lahko sistemi dosegajo višjo stopnjo pestrosti v primerjavi s predlogami in hkrati omogočajo transparentnost ter zagotavljajo točnost tvorjenih besedil. Ti sistemi so po začetnem razvoju pravil lahko prenosljivi v druge jezike, nekoliko manj pa med različnimi tematskimi področji.

Da bi pospešili dolgotrajni proces ročne priprave pravil, se razvijajo sistemi, ki temeljijo na strojnem učenju in ki lahko iz dovolj velike baze obstoječih novic izluščijo zakonitosti danega tematskega področja ter nato sami neposredno tvorijo »naravne« novice. Tovrstni sistemi temeljijo na *nevronskih mrežah* in tako poskušajo zgraditi model razumevanja »naravnega« jezika, ki posnema ljudi (Goodfellow, Bengio in Courville 2016). Čeprav so teoretične osnove sedanjih nevronskih mrež stare že več kot 30 let, se je njihov praktičen vzpon začel v zadnjem desetletju, ko je zaradi grafičnih procesorjev z več tisoč računskimi enotami, ki so potrebne za igranje računalniških iger, njihovo izvajanje postalo dovolj hitro. Posamezen nevron v umetni mreži posnema delovanje nevronov v možganih: informacijo na svojih vhodih sešteje, in če vsota preseže neki prag, pošlje izhodni signal, kar ustreza vzdraženosti posameznega nevrona in proženju električnega impulza na aksonu. Da se umetna nevronska omrežja česa naučijo, je treba zbrati in urediti veliko množico primerov nekega problema.

Za sodobne sisteme TNJ se pretežno uporabljajo nevronske mreže, ki so znane kot »nevronski jezikovni modeli« (Leppänen in drugi 2017). Te nevronske mreže kot svoj učni problem vidijo napovedovanje naslednje besede v zaporedju na podlagi predhodnih besed. Taki jezikovni modeli se učijo iz velikih zbirk besedil, ki so jih napisali ljudje. Neko zaporedje besed iz zbirke razvijalci pošljejo skozi mrežo, da izračuna verjetnost naslednje besede. Nato izračunajo razliko med napovedjo in dejansko naslednjo besedo ter popravijo uteži povezav med nevroni tako, da bi mreža naslednjo besedo vračala pravilno. Proces popravljanja uteži mnogokrat ponovijo za vsa možna zaporedja besed v učni zbirki besedil, dokler mreža pravilno ne napove večine naslednjih besed. Naučene umetne nevronske mreže lahko zdaj tvorijo tudi nova besedila, tako da vzorčijo besede izmed možnih nadaljevanj danega stavka oziroma povedi. Nevronski sistemi TNJ lahko zato zagotavljajo tekočnost in pestrost tvorjenih besedil, hkrati so ob dovolj velikih besedilnih bazah enostavno prilagodljivi različnim tematskim področjem in človeškim jezikom. Umetne nevronske mreže, kot je model GPT-2, hranijo naučeno znanje v obliki uteži med povezavami v njej, a shranjenega znanja ni enostavno razložiti, zato so znani tudi kot modeli »črne skrinjice« (Leppänen in drugi 2017, 189). Njihova omejitev je zato zagotavljanje točnosti in transparentnosti. Tehnološko je transparentnost nevronskih sistemov namreč mnogo težje zagotoviti kot pri sistemih, ki temeljijo na predlogah in pravilih. Pravila načeloma omogočajo vpogled in razumevanje procesa, ki je pripeljal do danega besedila, medtem ko za nevronske mreže sicer obstajajo poskusi razlage, a zaenkrat še niso dovolj zanesljivi in človeku razumljivi.

Čeprav se nevronski sistemi TNJ vse pogosteje kombinirajo z drugimi tehnološko pogojenimi pristopi, da bi pridobili večjo tekočnost in pestrost, v novinarstvu (za zdaj) prevladujejo sistemi za avtomatizirano tvorjenje novic, ki temeljijo na kombinaciji predlog in pravil (Linden in Tuulonen 2019). Ti omogočajo (pol)avtomatizirani proces TNJ, v katerem poteka (i)zbiranje

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podatkov iz javnih ali zasebnih baz (dovod – *input*), pripisovanje ustreznih značilnosti podatkom in obdelovanje ustreznih podatkovnih nizov v semantično strukturo (pretok – *throughput*) in objava končnega besedila na digitalni (ali analogni) platformi s ciljnim dosegom (izpis – *output*) (Dörr 2016, 702). Tovrstni sistemi se rutinsko uporabljajo za dobro strukturirane domene, kjer je njihova zanesljivost danes že tako visoka, da tako tvorjenih novic več ne preverjajo človeški novinarji, ampak gredo neposredno v objavo, kot je to v primeru določenih finančnih novic agencije Associated Press (Graefe 2016). Eksperimenti, v katerih bralce izpostavijo besedilom, ki so jih napisali človeški novinarji, in prispevkom o istih novicah, ki so je tvorili sodobni sistemi TNJ, kažejo, da imajo bralci težave z razlikovanjem teh novic z vidikov kakovosti in verodostojnosti (Clerwall 2014). Pri tem avtomatizirano tvorjene prispevke sprejemajo kot »deskriptivne« in »dolgočasne«, toda hkrati kot »objektivne«, »informativne« in »zaupanja vredne« (prav tam). O podobnih ugotovitvah poročajo tudi kasnejši eksperimenti, ki izpostavljajo primerljive stopnje zaupanja med »algoritemskimi« in »človeškimi« novicami, v nekaterih primerih so uporabniki celo izkazovali večje zaupanje v tehnologijo kot ljudi (Linden in Tuulonen 2019, 30–31).

Z razvojem sistemov TNJ se utegnejo avtomatizirane novice nadalje prilagajati pričakovanjem in interesom članov občinstva (Carlson 2017, 231; Diakopoulos 2019, 2). V primerih tvorjenja daljših in kompleksnejših prispevkov se lahko podatkovne baze, v katerih so odgovori na vprašanja, na katera odgovarjajo, podrobneje strukturirajo in napolnijo. Pred tvorjenjem besedil se tako lahko na podlagi uporabniških profilov ter drugih podatkov analitičnega in metričnega sledenja članov občinstva izvaja več postopkov, ki preverjajo *zanimivost* dejstev (npr. odstopanja od običajnih vrednosti) in njihovo *pomembnost* (npr. glede na tip dejstev, vpletene entitete, lokacijo in vrsto dogodka). »Dejstva« se razvrščajo glede na njihovo pomembnost in zanimivost, najvišje uvrščena pa tvorijo jedro tvorjenih besedil in določajo izbor mikro predlog za posamezne dele prispevka. Avtomatizacija tvorjenja novic se tako lahko prilagaja ciljnemu občinstvu ali celo posameznemu uporabniku.

Premislek o tehnološko pogojenih pristopih v razvoju avtomatiziranega novinarstva razkrivajo drobovja sistemov TNJ, ki nakazujejo težnje nadaljnjega razvoja avtomatiziranega novinarstva – ne le nadčloveške hitrosti, učinkovitosti in poglobljenosti, temveč tudi prenosljivosti algoritmov in personalizacijo vedno bolj »naravnih« novic. Čeprav o industrijskem razmahu avtomatiziranega novinarstva ne moremo govoriti (Dörr 2016; Wu, Tandoc in Salmon 2019), se v obrisih institucionalizacije te pojavne oblike zrcali nadaljevanje digitalizacije, s katero se nove tehnologije v novinarstvo vključujejo zaradi zmanjševanja stroškov produkcije in lajšanja akumulacije skozi poblagovljanje občinstva, kar poglablja in širi razlike med novinarji, drugimi delavci v novinarstvu in načrtovalci tehnoloških inovacij (Cohen 2015; Brlek Slaček, Smrke in Vobič 2017). To potrjuje predvsem razvoj na obrobju novinarstva, kjer se uveljavljajo digitalni modeli, ki se zanašajo na hitro (pol)avtomatizirano tvorjenje novic na podlagi dvomljivih podatkovnih baz, metrično sledenje občinstev in različnih načinov monetizacije novic (Bakker 2012). Čeprav ne gre za prevladujoče modele v novinarstvu, je logika v ozadju združljiva z značajem zgodovinskega razvoja modernega uredništva – kot laboratorija tehnoloških inovacij ter bojišča za ekonomske in socialne interese (Hardt 1998, 173–190). V kontekstu dolge krize politične veljave poklicnega novinarstva in finančne vzdržnosti njegovih poslovnih modelov (Blumler 2010) ni presenetljivo, da avtomatizacija novinarstva sproža napetosti.

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O tehnološki drami avtomatizacije novinarstva

Avtomatizirano novinarstvo se kaže kot »tehnološka drama«, ki poteka v javnih premislekih o TNJ v novinarstvu (Carlson 2015). Napetosti se odražajo v prepletanju »trditev« in »nasprotnih trditev« o avtomatizaciji, ki ga utrjujejo različne strategije legitimacije skozi konstrukcijo mitov, kontekstov in ritualov ter nakazujejo normalizacijo algoritmov, tehnološko prilagajanje družbenih vzorcev in odnosov ali njihovo preoblikovanje. V diskurzu razvijalcev, ki algoritme razvijajo za medijske hiše, se avtomatizacija kaže kot »osvobajajoča«, saj naj bi omogočala varčevanje časa za bolj kreativno in analitično novinarsko delo, in hkrati kot priložnost za prenovo sposobnosti uredništva v skladu s sodobnim družbenim komuniciranjem (Carlson 2015, 8). Novinarji medtem izražajo »zaskrbljenost« pred nadaljnjo degradacijo svojega dela in lažjim nadomeščanjem novinarjev s tehnologijo (prav tam, 7). Tehnološka drama se kaže tudi pri utemeljevanju novinarske avtoritete, pri čemer novinarji izpostavljajo »človeške lastnosti« kot inherentne novinarstvu, medtem ko razvijalci poudarjajo, da avtomatizirano tvorjena besedila resda nimajo sposobnosti tvoriti stilno dovršena besedila, toda to pomanjkljivost algoritmi lahko nadomeščajo z dejanskim uresničevanjem »zaveze dejstvom« zato, ker niso ljudje (prav tam, 12–13).

Nadaljnji pregled literature (van Dalen 2012; Bucher 2017; Linden 2017; Thurman, Dörr in Kunert 2017) razkriva, da se avtomatizacija artikulira kot drama tudi znotraj uredništev, kjer so novinarji razpeti med vznesenostjo in odklanjanjem. Novinarji ne izražajo le skrbi in odpora do algoritmov, temveč tudi močno sposobnost prilagajanja in ublaževanja implikacij novih tehnologij (Linden 2017). Hkrati diskurzivno ohranjajo ostro ločnico med človekom in tehnologijo, da bi utemeljili veljavo novinarstva kot posebnega ustvarjanja vednosti. Tako v razpravah o avtomatiziranem tvorjenju novic novinarji izpostavljajo pomembnost analize, kreativnosti in kompleksnosti pisanja, medtem ko manj pomena pripisujejo objektivnosti in hitrosti (van Dalen 2012), čeprav gre za osrednja gradnika novinarske poklicne ideologije (Deuze 2005). Podobno tudi v drugih kontekstih novinarji algoritme opredeljujejo brez »nagonov« (Bucher 2017, 1) ali »nosu za novice« (Thurman, Dörr in Kunert 2017, 1240), kar da krepi priložnosti za povpraševanje po človeških lastnostih novinarjev ter revitalizacijo novinarstva kot kreativnega in analitičnega dela.

Hibridi med uredniki in menedžerji, ki so pomembno vpeti v razvoj in implementacijo tehnoloških inovacij (Milosavljević in Vobič 2019b), pa tehnološko dramo utelešajo. Ta poseben profil, ki gre onkraj tradicionalnih delitev med poslovnim in uredniškim delom medijskih hiš, po eni strani poudarja prevlado človeškega delovanja nad tehnologijo v novinarstvu, kjer je avtomatizacija predvsem priložnost za »razširjanje« dela. Po drugi strani pa so uredniki menedžerji usmerjeni v blaženje notranjih napetosti in konfliktov, ki jih prinašajo algoritemske inovacije, in utrjevanje razumevanja novic kot blaga. V njihovi protislovni zavezi korporativnim ciljem medijskih lastnikov in hkrati javnim ciljem novinarstva se odraža retorika »algoritemske vznesenosti«, v kateri avtomatizacija ne predstavlja ostrega preloma, temveč novo poglavje dolgega procesa kumulativne inovacije, ki strateško blaži konflikte, da bi ohranjala stabilnosti tvorbe in razširjanja novic (prav tam, 15–16).

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Avtomatizacija in preobrazba novinarske epistemologije

Preplet materialnih in diskurzivnih vidikov avtomatizacije novinarstva nakazuje, da je razvoj modernega novinarstva kot ustvarjanja vednosti na razmejišču. Za novinarstvo kot eno od osrednjih družbenih institucij je epistemologija osrednjega pomena, saj zadeva vprašanja, kaj in kako vemo z novinarstvom ter kako je ta vednost utemeljena (Ekström in Westlund 2019). Veljava novinarstva kot specifičnega ustvarjanja vednosti je neločljivo povezana z institucionaliziranimi vzorci, praksami in odnosi konstrukcije dejstvenosti proizvedene vednosti v tehnološko spreminjajočem se družbenem komuniciranju (prav tam). Zgodovina reartikulacij epistemologije modernega novinarstva je utemeljena v sodobnem pojmu *objektivnosti*, ki ne združuje, temveč prepleta konceptualno različne sestavne dele, ki so se razvijali ločeno (Daston in Galison 1992, 82). V novinarstvu ta konceptualni konglomerat povezuje kolektivna zgodovina poklica, v kateri je objektivnost uveljavila kot transnacionalni ideal skozi prevlado zahodnega modela novinarstva (Nerone 2012, 446–447). Heterogenost koncepta je objektivnosti prinašala fleksibilnost, ki ji je omogočala reartikulacije skozi moderno zgodovino novinarstva tako ob občutnih družbenih spremembah kot tehnoloških inovacijah (Maras 2013, 201–229). Stoletno prilagajanje novinarske objektivnosti in s tem njeno ohranjanje v jedru novinarske epistemologije je spremljalo materialno združevanje tehnologije in novinarstva v delovnem procesu ter hkrati diskurzivno razdruževanje v procesu institucionalizacije strokovne *novinarske presoje*. Z algoritmizacijo novinarskega dela, predvsem z njegovo avtomatizacijo, smo namreč na pragu kvalitativne spremembe.

Novinarska objektivnost in konstrukcija dejstvenosti

Čeprav je objektivnost v novinarstvu prve obrise dobivala v prvi polovici 19. stoletja, se kot ideal ni jasno artikulirala vse do dvajsetih let 20. stoletja, ko se je v prepletu poklicnih, političnih, komercialnih, tehnoloških in organizacijskih dejavnikov začel transnacionalni projekt novinarske profesionalizacije (Maras 2013, 22–57; glej tudi Schiller 1981; Schudson 1981). Moderna norma novinarske objektivnosti, ki je skovana s kombinacijo zdravorazumskih, naturalističnih in psiholoških predpostavk, izhaja iz dvojne zaveze novinarjev: na eni strani z medijskimi lastniki s ciljem standardizirati novice kot blago in na drugi z javnostjo z obljubo dnevnega servisa »objektivnih« novic (Nerone 2012, 450). Za razliko od prevladujočih modelov političnega novinarstva so se novi poklicni novinarji »postavili nad politične bitke« (Hallin 1994/2005, 22) ter objektivnost začeli sprejemati kot »pogled, da se lahko in hkrati mora ločevati dejstva od mnenj« (Hanitzsch 2007, 376). Ta »dvojni značaj objektivnosti« – kot zmožnosti in hkrati norme (Carlson 2019, 3) – je (bil) ključen v zamišljanju in uveljavljanju novinarstva kot družbeno veljavnega ustvarjanja vednosti. V zgodnjem 20. stoletju je omogočal reartikulacijo objektivnosti in premik od *naivnega empiricizma* k prepoznavanju subjektivnosti kot dejavnika novinarskega dela. »Subjektivizacija dejstev« (Schudson 1981, 144–145) je utemeljila *naivni realizem* »objektivnega« novinarstva, ki izhaja iz ideje, da se s čuti lahko povsem zavedamo sveta »tam zunaj« in realnost doživljamo »táko,

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kot dejansko je«, s čimer se predpostavlja korelacija med »trditvami, neodvisnimi od vrednot«, in »realnostjo, neodvisno od razuma« (Ettema in Glasser 1998, 152).

Osrednji proces, s katerim se utrjuje naivni realizem, je *konstrukcija dejstvenosti*. S tem procesom se informacije z mešanico institucionaliziranega delovnega procesa in veljavnih načinov upovedovanja pretvarjajo v »objektivna« dejstva (Maras 2013, 95). K razumevanju ustaljenih dinamik, kako v novinarstvu nastajajo »dejstva« in kako se njihova »dejstvenost« oplaja, je s kritičnimi študijami pomembno prispevala Gaye Tuchman (1978a; 1978b). »Red in koherenco v družbenem svetu« uredništvo ustvarja s pomočjo »poročevalske mreže«, katere struktura – tvorijo jo nenehna pogajanja znotraj birokratske hierarhije odgovornosti in prepoznavanja uredniških prioritet v dnevni tvorbi »svežih« novic – zbrane podatke in informacije prepušča ali zadržuje v procesu presojanja njihove »objavne vrednosti« (Tuchman 1978a). Notranjo tkanino poročevalske mreže tvori »splet dejstvenosti« (Tuchman 1978b, 82–103), v katerem posamezne informacije pridobivajo »pomen« skozi institucionalizirane novinarske prakse, kot so sklicevanje na vire informacij, uporaba dobesednih navedkov, pridobivanje dodatnih dokazov in navajanje nasprotujočih si trditev. Novinarsko pričanje o dogodku tako samo po sebi ne prinaša dejstvenosti, temveč je ta v primeru objave novice o tem dogodku »politični in poklicni dosežek« (prav tam, 82–83). Tuchman (1972) prepoznava novinarsko objektivnost kot »strateški ritual«, za katerega je značilna zabrisana diskrepanca med cilji (tj. zagotavljati objektivnost novic) in sredstvi (tj. institucionaliziranimi vzorci in praksami). Ritual objektivnosti zato ne prinaša objektivnosti kot take, temveč služi kot strategija zaščite uredniške in novinarske strokovne presoje pred (ne)utemeljenimi kritikami in pritiski znotraj industrije in izven nje (prav tam).

Institucionalizirani procesi in odnosi konstrukcije dejstvenosti, ki se vsakodnevno potrjujejo skozi uredniško in novinarsko presojo, dopolnjuje *jezikovna igra* novinarske objektivnosti, ki poteka z uporabo svojstvenih »strategij reprezentiranja« (Maras 2013, 9). V tem kontekstu Tuchman (1978b, 106) piše o »poročevalski govorici«, ki s posebnimi besedilotvornimi mehanizmi »nakazuje« dejstvenost: »Je percepcija in hkrati vodi percepcijo; z njo se preustvarja vsakodnevni svet« (prav tam, 107). Jezikovno igro razumemo kot razmerje med navidezno jezikovnostilno nevključenostjo avtorja v »poročevalnih« besedilih in njegovo vključenostjo v »presojevalnih«, kar se na površinski rabi jezikovnih izbir najbolj izrazito kaže v stilni napetosti med avtomatizacijo in aktualizacijo jezikovnih prvin (Korošec 1998, 13–33). Ker gre za hoteno izbiro, se v jezikoslovju namesto objektivna in subjektivna besedila, uporabljata zvezi »objektivizirana« in »subjektivizirana« besedila (Vidovič Muha 1971). Gre namreč za hoteno izbiro takih jezikovnih sredstev, ki dajejo vtis objektivnosti ali subjektivnosti. Na eni strani je torej sporočanjski cilj izraziti subjektivni odnos do tega, kar se posreduje, in izbrati izraze, ki posreduje mnenjsko in/ali čustveno dejavnost, na drugi pa je cilj posredovati kar se da »objektivno«, zato novinarji težijo k transparentnosti, logičnosti in smiselnosti, ki jim je treba najti ustrezen izraz.

Novinarstvo tako »objektivizira« družbene pojave in dogodke ter odnose med njimi, pri čemer novinarji ohranjajo obstransko vlogo: »Tak položaj predstavlja monolog, ki nagovarja z navidezno dejstvenim glasom dejanskega sveta.« (Soffer 2008, 473) Instrumentalna apatija se odraža tudi skozi »shematske formule«, ki sterilizirajo večglasnost v novinarskem sporočanju

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in ga uniformizirajo (prav tam, 479–480). Podobne okoliščine, ki jih novinarji upovedujejo, se ne odražajo le v ustaljenih besednih zvezah in stavčnih konstrukcijah, temveč tudi v »avtomatiziranih obrazcih« novinarskih besedil v specifičnih družbenih in organizacijskih kontekstih (Kalin Golob 2003, 142). Podobno ugotavlja tudi Fowler (1991, 47), ki pravi, da novinarsko delo zaznamuje tako stilistični kot tudi ideološki proces, ki je usmerjen v zmanjševanje razkoraka med »birokratskim« in »osebnim« diskurzom ter oblikovanje nekakšnega »nevtralnega« jezika, ki uteleša »normalne« vrednote. Medtem ko je poudarjen »enoten osrednji glas«, so novinarji kot družbeni akterji »utišani« (Soffer 2008, 488).

Novinarska objektivnost z institucionalizirano konstrukcija dejstvenosti in njeno jezikovno igro deluje kot »nevidni okvir« (Schiller 1981, 2). Novice »zaobjema« kot posebno obliko javne vednosti ter prikriva ustaljene vzorce, procese in odnose medijev kot »ogledal« družbene realnosti (prav tam). Zato se zdi, da novinarji dogodke posredujejo »brez vdora vrednostnih sodb ali simbolov«, novice pa niso »zgodbe«, temveč »gola dejstva« (prav tam). Subjektivnost novinarjev je v nevidnem okviru tesno vpeta v institucionalizirane vzorce, prakse in odnose novinarske objektivnosti in se navzven artikulira kot strokovna novinarska presoja v (i)zbiranju in obdelavi informacij ter upovedovanju in posredovanju »objektivnih« novic v informativnem poročevalnem stilu objektiviziranega besedila (vesti in poročila). Normativno novinarska objektivnost novinarjem ne omogoča obrambe svoje presoje kot »subjektivnega akta« (Carlson 2018, 1760), šele njena institucionalizacija v strateškem ritualu tej »objektivnemu« novinarstvu prinaša stabilnost in hkrati fleksibilnost – tako znotraj poklica kot navzven.

Nevidni okvir se je reproduciral s sprejemanjem objektivnosti kot poklicnega ideala in norme in tudi z njenim prevpraševanjem in zavračanjem (Deuze 2005, 448). Tako je gibanje za *natančno novinarstvo* skozi različne izpeljave od sedemdesetih let naprej kritiziralo »nevidnost« okvira novinarske objektivnosti, kot bi dejal Schiller, ter zagovarjalo idejo združevanja novinarstva z znanstvenimi »orodji za zbiranje in analizo podatkov ter disciplino v iskanju preverljive resnice« (Meyer 2002, 4). Objektivnost kot metoda je proces konstrukcije dejstvenosti »kvantitativnega novinarstva« sicer utemeljeval v zanesljivosti statističnih analiz zbranih podatkov, a je njegova »natančnost« ostala vpeta institucionalizirani splet dejstvenosti poročevalske mreže in (ob)veljala zgolj kot »dodatno orodje« modernih novinarskih uredništev (glej Coddington 2015; Anderson 2015). Hkrati so tudi drugi kritični glasovi in pobude pozivali k odpravi objektivnosti in razvoju kreativnega dela s poudarjanjem subjektivnosti (*novi žurnalizem* v šestdesetih in sedemdesetih letih) (Soffer 2008), participativnih in deliberativnih novinarskih praks (*javno novinarstvo* v devetdesetih letih) (Merritt 1995) ter poglobljene kritično-diskurzivne novinarske analize (*počasno novinarstvo* v zadnjem desetletju) (Le Masurier 2015).

Te kritike so se sicer zajedale v epistemološke temelje modernega novinarstva, a dominantnega procesa konstrukcije dejstvenosti in njegove jezikovne igre niso bistveno prizadele. Ta je ostal prevladujoč tudi z vzponom različnih oblik »infozabave« v drugi polovici 20. stoletja, ko se je novinarska objektivnost protislovno popularizirala z uveljavljenjem narativizacije in estetizacije kot standardnih načinov konstrukcije dejstvenosti (Luthar 1997, 54–56). V širšem procesu popularizacije družbenega komuniciranja so novinarji postopoma postajali »ujetniki razvoja kot razvedrila za množice« (Splichal 2000, 51–52). Bledenje razlik

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med novicami, zabavo, politično-ekonomsko propagando in različnimi digitalnimi oblikami samopromocije v zgodnjem 21. stoletju je simptom vzpona »multiepistemičnega reda« (Dahlgren 2009). Čeprav je objektivnost kot sidrišče utemeljevanja veljave v družbenem komuniciranju (o)slabela in se v novinarskem besednjaku preimenovala v *resnicoljubnost*, *pravičnost* in/ali *uravnoteženost*, se je naivni realizem skozi institucionalizirane vzorce, prakse in odnose ohranjal v prevladujočem modelu novinarstva.

Ideja mehanske objektivnost: (ra)združevanje novinarstva in tehnologije

(Re)artikulacije novinarske objektivnosti so neločljivo povezane s tehnološkimi inovacijami novinarskega dela. Nove tehnologije se zgodovinsko prilagajajo institucionaliziranemu vsakdanu novinarskih uredništev in se hkrati artikulirajo skozi naturalizirano podrejanje novinarstva tehnologiji (Örnebring 2010). Večino 20. stoletja se produktivnost novinarskega dela v ožjem smislu – tj. (i)zbiranje in obdelava informacij ter upovedovanje novic – s tehnološkimi inovacijami ni povečevala (prav tam, 64), toda uredniki in novinarji so dobivali vse več nalog, ki so jih tradicionalno opravljali drugi delavci, kot je postavljanje časopisne strani s pomočjo računalnika (Underwood, Giffard in Stamm 1994). S tehnološko konvergenco se brišejo meje med različnimi stopnjami produkcije in distribucije, povečuje nadzor nad delovnim procesom ter hkrati poglabljajo razlike in napetosti med novinarji in uredniki ter drugimi delavci v uredništvu (McKercher 2002, 12–14). Tehnično delo ima v novinarskih uredništvih nižjo veljavo v primerjavi s strokovno novinarsko presojo, zbiranjem informacij s pomočjo mreže virov in kreativnim pisanjem (Örnebring 2010, 64), zato se ga v imenu »racionalizacije« delovnega procesa preprosto nalaga urednikom in novinarjem, medtem ko se specializirane delavce v novinarstvu »razsposablja« do te mere, da so nepotrebni (McKercher 2002, 14). Z digitalizacijo se (je) ta proces (o)krepi(l). Razen vedno ožjega središča najbolj avtonomnih novinarjev, ki imajo čas konstruirati »dejstva« v skladu z institucionaliziranimi vlogami, normami in praksami ter razvijati in gojiti dodatne sposobnosti osmišljanja družbenega življenja s pomočjo podatkov, statističnih metod in računalnikov kot orodij (Coddington 2015; Anderson 2015), se večina sooča s stalnim časovnim pritiskom, usklajevanjem sposobnosti povezovanja različnih znakovnih sistemov, kot so besedilo, fotografija, avdio, video in grafika, ter kontinuiranim delom za primarni medij, digitalne različice in družbena omrežja (Cohen 2015; Vobič 2015). Gre torej za nadaljevanje zgodovinskega procesa »racionalizacije« novinarskega uredništva, s katero se pospešuje in nadzoruje delo ter zmanjšujejo stroški, hkrati pa delavci v novinarskem uredništvu izgubljajo nadzor nad svojim delom in njegovimi rezultati. S tem, ko se s pomočjo tehnologije drobi delovni proces, plošči razgibanost konstrukcije dejstvenosti in nadalje shematizira jezikovno igro novinarske objektivnosti, postajajo lažje zamenljivi ne le »modri«, temveč tudi »beli ovratniki« novinarske industrije. Te spremembe novinarskega dela zaradi tehnoloških inovacij spremljajo reartikulacije njegove epistemologije, ki so osredinjene v ideji *mehanske objektivnosti* (Carlson 2019).

»Pustimo naravo, da govori sama po sebi,« je v drugi polovici 19. stoletja postalo geslo ideje mehanske objektivnosti, ki ni zadevala le vprašanj »točnosti« znanosti, temveč tudi »moralnosti« znanstvenikov (Daston in Galison 1992, 81): »Kjer bo človeška samodisciplina

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popustila, bo vajeti prevzel stroj.« (prav tam) Daston in Galison (1992, 82–83) z zgodovinsko analizo prepoznavata utemeljevanje objektivnosti znanosti skozi ustvarjanje podob (npr. v anatomiji, botaniki, astronomiji in paleontologiji), v čemer se po njuno kaže dvojni smisel ideje mehanske objektivnosti. Po eni strani se s tehnologijo odpravlja »posredniška prisotnost« znanstvenika, po drugi strani pa tehnologija zahteva njegovo skrb, natančnost in vztrajnost (prav tam). Ideja mehanske objektivnosti, ki ustvarja nasprotje med nepredvidljivostjo človeka in predvidljivostjo stroja ter hkrati prepleta strokovno presojo ter mehansko reprodukcijo, se je uveljavljala tudi na drugih področjih ustvarjanja vednosti. Med drugim jo Carlson (2019) prepoznava tudi v novinarstvu, in sicer v procesu konstrukcije dejstvenosti s poklicno standardizacijo tehnologije v novinarskem uredništvu.

Novinarska objektivnost kot robusten strateški ritual omogoča ne le obrambo pred kritiko in pritiski, temveč s prepletom institucionaliziranih vzorcev, procesov in odnosov konstrukcije dejstvenosti in njene jezikovne igre tudi prilagajanje tehnološkim inovacijam delovnega procesa v uredništvu. Čeprav so tehnološke inovacije v razširjanju novic prinašale nove zahteve v delo novinarjev – od upovedovanja z glasom pred radijskim mikrofonom, neverbalnega komuniciranja v televizijskem studiu, postavljanja časopisnih strani z računalnikom, so se nove tehnologije normalizirale kot *orodja*, s čimer je v jedru novinarske objektivnosti ostajala strokovna novinarska presoja. Tako je novinarsko pretvarjanje informacij v »objektivna« dejstva zgodovinsko pogojeno ne le z materialnim združevanjem tehnologije in človeške dejavnosti, temveč tudi z idejo razdruževanja tehnološke objektivnosti in človeške subjektivnosti. Zato strokovna presoja kot institucionalizacija subjektivnega odločanja protislovno utrjuje idejo objektivnost tehnologije.

To protislovje, vtkano v idejo mehanske objektivnosti, se odraža tako v analognih kot digitalnih načinih skrajno standardiziranega novinarskega dela in shematiziranih oblik novic. Tako so konec 19. stoletja »ljudje škarij in lepila«, ki časopisnega uredništva niso zapuščali, na podlagi strokovne presoje mehansko poustvarjali že objavljene novice, poročila javnih institucij in uradne statistike za objavo naslednji dan (Jarlbrink 2015). Metoda »reži-in-lepi« se je ohranjala v prevladujočem modelu novinarstva še daleč v 20. stoletje, ko se je konstrukcija dejstvenosti protislovno konstruirala skozi standardiziran »arterijski proces« (glej Breed 1955). Z uveljavljanjem digitalnega novinarstva na začetku 21. stoletja so železne škarje nadomestili z računalniškimi miškami. Novi »namizni« novinarji so tako časopisne novice preprosto premetavali na spletno mesto ali (po)ustvarjali že objavljene novice agencij in drugih medijev, v nekaterih okoliščinah tudi z digitalizirano različico metode reži-in-lepi (glej Vobič 2013). Novinarska objektivnost se v teh skrajno standardiziranih načinih novinarstva iz druge roke reproducira skozi »novost« novic, ki zastira družbeno pogojene omejitve novinarske presoje s sploščenim procesom konstrukcije dejstev in njegovo shematizirano jezikovno igro. Mehansko objektivnost potrjuje ne le zmanjševanje nadzora novinarjev nad delovnim procesom in osredinjenje tehnologije v delovnem procesu, temveč tudi kulturna in socialna obrobnost obeh skupin delavcev, ki so novice (po)ustvarjali s pomočjo tehnoloških orodij. Tisti z železnimi škarjami so v uredništvu veljali za »nič več kot orodje v rokah glavnih urednikov« (Jarlbrink 2015, 284), tisti z digitalnimi škarjami pa za neprave novinarje, »reciklatorje« ali celo »robote« (Vobič 2013, 100–101).

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Procesa digitalizacije družbenega komuniciranja in deprofesionalizacije novinarstva se napajata s povzdigovanjem tehnoloških idej, kot so hipertekst, interaktivnost in multimedijskost (Steensen 2011), s čimer se utrjuje prepričanje, da je lahko novinar vsakdo (Splichal in Dahlgren 2016, 10–11). Toda v teh procesi se ne kaže revitalizacija novinarstva kot komunikacijskega tkiva družbenega življenja, temveč krepljenje teženj preoblikovanja novinarstva s tehnološkimi inovacijami vse do njegove nerazpoznavnosti. Novi načini izkoriščanja prostovoljnega digitalnega dela v okvirih *potrošniškega novinarstva* (glej Vobič 2015, 35–36) dopolnjujejo različne oblike »pinjarstva«, ki pomenijo nadaljevanje preobražanja novinarskih uredništev v tekoče trakove novic, degradiranja novinarstva v hitro (re)produkcijo novic kot cenenega blaga iz druge roke (Johnstone in Forde 2017). Novinarji in uredniki postajajo lažje zamenljivi – s tehnološko veščimi prostovoljci ali celo stroji. Ko algoritmi in podatki, na podlagi katerih ti delujejo, pridobivajo pomen v sodobnem novinarstvu, se novinarsko delo lažje dopolnjuje, razširja ali zamenjuje s tehnologijo, a se hkrati omejuje ali izničuje strokovna presojo v konstrukciji »objektivnih« dejstev in njeni jezikovni igri.

Algoritemska objektivnost, upodatkovljenje dejstvenosti in množična personalizacija

Algoritmi, ki ustvarjajo, povezujejo in analizirajo obsežne baze podatkov ter v njih prepoznavajo skrite vzorce za sprejemanje odločitev, pridobivajo osrednjo vlogo v sodobnem družbenem komuniciranju (boyd in Crawford 2012; Gillespie 2014; Roberge in Syfert 2016). V zgodovini novinarstva lahko prepoznavamo dolgoletne polemike o vprašanjih novinarskega ustvarjanja vednosti s podatki in legitimaciji tovrstnih načinov (Anderson 2015; Coddington 2015), toda z »algoritemskim obratom« (Napoli 2014), ki naj bi dopolnil, razširil ali zamenjal človeško delo s tehnologijo, se začenja kvalitativna preobrazba novinarske epistemologije.

Četudi se algoritmi neprestano spreminjajo – s človeškim programiranjem ali strojnim učenjem – je »obljuba algoritemske objektivnosti«, kot ugotavlja Gillespie (2014, 180), ključna v utrjevanju njihove veljave. Ta »pazljivo ustvarjena fikcija« (prav tam, 179) pravi, da so vse algoritemske operacije »oddaljene od človeških rok« in da so »vdelane v hladno delovanje stroja« (prav tam, 181). Algoritemsko objektivnost pomembno utrjuje »mitologija velikih podatkov« (boyd in Crawford 2012, 663). V kompleksnih načinih sistematičnega zbiranja, hranjenja, osveževanja, analiziranja in vizualiziranja obsežnih in raznolikih baz podatkov lahko prepoznavamo »avro objektivnosti«, zaradi katere je splošno sprejeto, da so obsežne podatkovne baze višja oblika vednosti in da lahko ponujajo ugotovitve, ki »konvencionalno« niso mogoče. Uveljavljanje algoritmov in (velikih) podatkov v osmišljanju družbenega sveta in povezovanju znotraj njega je tako prekrito s *tančico objektivnosti*. Ta zastira politične in ekonomske težnje, vtkane v notranjo logiko razvoja algoritmov in ustvarjanja podatkovnih baz, s čimer daje vtis hipnosti, neposrednosti in merodajnosti izvedbe računalniških operacij in njihovih rezultatov.

Algoritmi in podatki, ki jih žanjejo in s katerimi se hranijo, v tem smislu posegajo v bistvo konstrukcije dejstvenosti v novih pojavnih oblikah novinarstva. Algoritmizirano pretvarjanje podatkov v »objektivna« dejstva je tako kot pri ideji mehanske objektivnosti določeno ne le z materialnim združevanjem tehnologije in človeške dejavnosti, temveč tudi z razdruževanjem

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tehnološke objektivnosti in človeške subjektivnosti, toda s pomembno razliko. Medtem ko mehansko objektivnost protislovno utemeljuje strokovna novinarska presoja, je algoritemska objektivnost utemeljena na njeni zamenjavi ali vsaj dopolnitvi z »algoritemsko presojo« (Carlson 2018). Medtem ko novinarsko presojo utemeljuje institucionalizacija subjektivnosti skozi uveljavljene vzorce, procese in odnose konstrukcije »dejstev« v novinarskem uredništvu, je avtoriteta algoritemske presoje skoncentrirana v načelu »legitimacije skozi izvedbo«, s čimer legitimacija ni več ločena od tistega, kar se legitimira, temveč je »avtomatizirana« (Lash 2007, 67; glej tudi Roberge in Syfert 2016, 8). Moč algoritmov je v njihovi sposobnosti, da objektivnost s pomočjo podatkov preslikavajo na svet »tam zunaj«, medtem ko jo hkrati kopičijo »znotraj« samih sebe (Roberge in Syfert 2017, 8). Podobno ugotavlja tudi Gillespie (2014, 179): »Več kot le orodja, algoritmi so tudi stabilizatorji zaupanja; praktično in simbolno zagotavljajo, da so njihove ocene poštene in točne ter brez subjektivnosti, napak in poskusov vplivanja.« V tem smislu se naivni realizem objektivnosti modernega novinarstva prepleta s *strojno hevristiko* (Carlson 2019, 8–9). Za razliko od različnih oblik *kvantitativnega novinarstva*, kot je natančno novinarstvo, *računalniško podprto novinarstvo* in zgodnji načini *podatkovnega novinarstva* (glej Coddington 2015), je algoritmizirani proces *upodatkovljenja dejstvenosti* utemeljen v ideji, da se sveta »tam zunaj« zavedamo in doživljamo realnost »táko, kot dejansko je«, a hitreje, točneje in celoviteje z algoritmi ter podatki kot s človeškimi čuti in novinarsko presojo.

Avtomatizirano novinarstvo poveličuje algoritemsko objektivnost. Sistemi za avtomatizirano tvorjenje »objektivnih« novic veljave ne črpajo iz novinarske presoje, ki je institucionalizirana v vzorcih, odnosih in praksah modernega uredništva, temveč iz algoritemske presoje, katere avtoriteta je skoncentrirana v podatkovni avri objektivnosti in načelu legitimacije skozi hipno, neposredno in merodajno izvedbo računalniških operacij. Z razvojem avtomatiziranega novinarstva lahko prepoznavamo prve obrise *algoritmizirane poročevalske mreže*, s katero uredništva, kot bi zapisala Tuchman, »red in koherenco v družbenem svetu« vzpostavljajo z vključevanjem algoritemske presoje tako v (i)zbiranju in obdelavi informacij in podatkov kot v upovedovanju in posredovanju občinstvom prilagojenih, potencialno personaliziranih novic. Avtomatizirano upodatkovljenje dejstvenosti reproducira družbeno pogojena razmerja, ki so vdelana v razvoj algoritmov in ustvarjanje podatkovnih baz, njegova jezikovna igra pa omejena na avtomatizme »objektivnih« novic, določene v predlogah in pravilih TNJ ali skrite v črnih skrinjicah nevronskih modelov. »Splet dejstvenosti«, notranja tkanina poročevalske mreže, se kvalitativno spreminja, saj tehnologija ni več le orodje v rokah novinarjev in urednikov, ki delujejo v skladu z institucionaliziranimi vzorci, odnosi in praksami, temveč postaja vse težje razdružljiva od novinarskih sposobnosti, procesov odločanja in načinov utemeljevanja »pomena« novic. S potencialom avtomatiziranega prilagajanja posamezne novice posameznim članom občinstva se v jedru spreminja tudi koncept novic, ki je zgodovinsko definiran z zastajajočim značajem človeškega novinarskega dela in novinarskim privilegijem osmišljanja sveta. S potencialno *množično personalizacijo* se utegne nadalje rahljati družbeno vezivo novic kot javne oblike vednosti, ki ljudem omogoča razpravljanje o skupnih zadevah, in novice postopoma sprevrača v atomizirano percepcijo družbenega življenja.

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Zaključek: S kreativno destrukcijo v smeri počloveškega novinarstva

Prihodnost je zagotovo svetla, vendar je treba opraviti veliko dela, in sicer najprej z osnovami. Prihodnost avtomatizacije je v dekonstrukciji temeljnih načel novinarstva. To pomeni razčlenitev novinarskega dela na dejanska informacijska artefakte in mikro procese, da bi lahko ugotavljali, kaj je mogoče avtomatizirati in kaj so inherentno človeške naloge.

Svetovno združenje časopisov in založnikov WAN-IFRA v poročilu o avtomatizaciji novic zagovarja »dekonstrukcijo« temeljnih načel novinarstva kot pogoj za oblikovanje »hibridnih sistemov«, ki bodo povezovali avtomatske in človeške načine za »večjo produktivnost in nižje stroške« ter hkrati »ohranjanje kakovosti in kljubovanje poblagovljenju« (Linden in Tuulonen 2019, 46). Ne gre za nov proces, razčlenjevanje produkcijske verige na drobne delce s pomočjo tehnoloških inovacij namreč zgodovinsko omogoča »racionalizacijo« delovnega procesa, standardizacijo novic ter lažje nadzorovanje in zamenjevanje delavcev v uredništvih, tudi novinarjev in urednikov (Hardt 1998; Örnebring 2010). Ta proces je neločljivo povezan z dolgim procesom »siromašenja novinarstva« (Vobič 2015). V sodobnem novinarstvu se tako postopoma oži poklicna avtonomija in slabi transformativni značaj novinarstva, individualizacija delovnih odnosov in razmer spodjeda kolektivnost uredništev, kreativni in intelektualni značaj novinarskega dela se tako lahko sprevrža v neizvirno informacijsko delo (Vobič 2015). Inherentni konflikt med idealiziranimi novinarskimi cilji, ki stremijo k povezovanju državljanov z družbenim življenjem na podlagi pravice do komuniciranja, in poslovnimi cilji, ki so skozi poblagovljenje usmerjeni v krepitev vpliva in bogastva lastnikov, se odraža v *kreativni destrukciji novinarstva* (Splichal in Dahlgren 2016, 9). Z njo se nenehno uničuje »staro« in hkrati ustvarja »novo«, pri čemer je avtomatizirano novinarstvo, ki je v viziji WAN-IFRA podvrženo načelu »avtomatizirati vse, kar se avtomatizirati da«, še eden od korakov v tem procesu.

Tehnološke inovacije uredništvom omogočajo delo z obsežnimi podatkovnimi zbirkami in informacijskimi viri, ki so za človeka težko obvladljivi, ter razvoj pojavnih oblik novinarstva, ki z algoritmi in podatki zmorejo ne le »več novic hitreje«, temveč omogočajo poročanje o »novostih«, ki so človeku nevidne in prilagojene posamezniku. Ujeto v krizi politične relevantnosti in poslovne vzdržnosti (Blumler 2010) poskuša novinarstvo z algoritmizacijo in upodatkovljenjem kljubovati svoji podrejeni vlogi v sodobnem družbenem komuniciranju, v katerem prevladujejo digitalni giganti, kot sta Google in Facebook. Medtem ko se mediji po odgovore na politične, kulturne in ekonomske probleme zatekajo v informacijsko in podatkovno industrijo (Wu, Tandoc in Salmon 2019), se v uredništvih krepi »inženiring pristanka«, ki s pomočjo tehnoloških inovacij zakriva menedžerske vplive v discipliniranju novinarjev (Petre 2018). S hibridizacijo človeške in algoritemske presoje v delovnem procesu uredništva razširjajo nabor zahtevanih sposobnosti in znanj modernega »objektivnega« novinarja. Medtem ko je kompjuterizacija prinesla vzpon »tehno novinarja«, ki je v časopisnih uredništvih prevzemal tudi številne manj ugledne tehnične naloge in pomenil »razsposabljanje« nekaterih profilov delavcev (McKercher 2002, 12–13), algoritmizacija napoveduje tudi nov profil »metanovinarja«, ki bo skrbel za razvoj, prenavljanje in uporabo

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algoritmov za podatkovno rudarjenje in personalizirano avtomatizacijo novic (Carlson 2015, 8), ter s tem pomembne materialne in diskurzivne implikacije za novinarsko uredništvo.

Opazujemo lahko konec cikla razvoja modernega novinarstva, ki se je začel z uveljavljanjem tiska kot kapitalistične industrije in preobražanjem kreativnosti »osebnega« novinarstva v rutine »objektivnega« novinarstva (Hardt 1998, 206). Z algoritmizacijo in avtomatizacijo kot njeno apoteozo se krepijo težnje po nadaljnji standardizaciji konstrukcije »objektivnih« dejstev in shematizaciji njene jezikovne igre. Z razvojem te igre utegne slabeti vloga »objektivnega« novinarja, ki v lovljenju rokov oddaje svojo kreativnost podreja shematiziranim vzorcem poročevalnih besedil, in krepiti pomen »kreativnosti« razvoja in delovanja algoritemskih sistemov. »Manj predvidljiva« institucionalizirana *subjektivnost* v novinarski presoji se z avtomatizacijo prepleta z »bolj predvidljivo« institucionalizirano *objektivnostjo* algoritemske presoje. Gre za razvoj v smeri *počloveškega novinarstva*, ki se začenja z brisanjem zgodovinskih ločnic med človekom in strojem v uveljavljenih vzorcih, odnosih in procesih novinarskega dela. Veljava počloveškega novinarstva kot produkcije vednosti sloni na algoritemskih sistemih, v katerih sta združeni »človeška namernost« in »materialna neomajnost« (Anderson 2013, 1016), ter legitimaciji skozi hipno, neposredno in merodajno izvedbo. S hibridizacijo novinarske in algoritemske presoje je tehnologija vdelana v epistemologijo sodobnega novinarstva. Razvoj samoučečih algoritmov, kot je GPT-2, in številnih drugih težko razumljivih nevronskih sistemov, namreč močno zapleta implikacije za novinarsko delo, osmišljanje družbenega življenja skozi novinarstvo in njegovo utemeljevanje kot veljavnega ustvarjanja vednosti. S tem, ko postajajo algoritemski sistemi vse bolj sposobni in hkrati vse težje razumljivi, tehnologija v poročevalski mreži in njenem spletu dejstvenosti postaja *prevladujoča*, in hkrati *nevidna*. »Stara« načela »objektivnega« novinarskega dela se kvalitativno spreminjajo. Z nenehnim tehnološkim razvojem avtomatizacije novinarstva se ustvarjajo »novi« načini »objektivne« tvorbe in poblagovljenja novic – ne le kot novinarskih »naravnih« besedil, temveč tudi kot (gibljivih) podob vizualnega novinarstva (Carlson 2019) ali podatkovno strukturiranih »artefaktov« ali »atomov« (Casswell 2019).

Načelo »avtomatizirati vse, kar se avtomatizirati da«, bo tako z razvojem algoritmov nadalje preobražal ne le epistemologijo novinarstva, temveč tudi materialne vidike novinarskega dela in novic. Delavci v novinarstvu algoritmizirane prihodnosti bodo v tem smislu bržčas prispevali k postopnem zatonu »objektivnega« novinarja, kot se je razvijal v preteklem stoletju, toda preteklost bo tudi te profile pomembno zadevala. Podobno kot delo njihovih »prednikov« iz modernega novinarskega uredništva, bo tudi njihovo delo vpeto v zgodovinski proces podrejanja novinarstva kapitalistični nujnosti »racionalizacije« delovnega procesa s pomočjo tehnoloških inovacij. Še tako revolucionarna tehnologija, ki ima emancipacijski in transformativni potencial, sama po sebi ne more odpraviti temeljnega protislovja razvoja družbenega komuniciranja: demokratični potencial komunikacijskih tehnologij po meri državljanov se sprevrača v nedemokratični značaj po meri nosilcev moči in bogastva (Splichal 2015, 29). »Ohranjanje kakovosti in kljubovanje poblagovljenju«, ki ju kot izhod avtomatizacije na podlagi njegove »dekonstrukcije« prepoznava WAN-IFRA, sta v tem smislu težko predstavljiva. Z brisanjem mej med novicami, zabavo, politično-ekonomsko propagando in različnimi digitalnimi oblikami samopromocije kreativna destruktivnost avtomatizacije prinaša vse več »novic« in vse manj novinarstva. Z utrjevanjem tovrstne logike razvoja avtomatizacije

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postaja novinarstvo hitrejše in produktivnejše, a hkrati vse bolj v navzkrižju z institucionaliziranimi vlogami, normami in praksami poklica, novinarji postopoma, a zanesljivo izgubljajo nadzor nad lastnim delom in privilegij v osmišljanju sveta (Splichal in Dahlgren 2016). Pisateljeva dilema iz uvoda je v tem smislu tudi novinarjeva.

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