

HISTORY AND HISTORIANS IN ARTIFICIAL INTELLIGENCE AGE. OPPORTUNITIES, CHALLENGES AND RISKS

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Abstract. *Artificial intelligence has become a part of our society. Machine learning tools are playing a major role in History classes and historical research. Large language models such as GPT-3 and ChatGPT are able to generate compelling, non-plagiarized texts in response to simple natural language inputs, thus providing students with an opportunity to produce high-quality written assignments with minimal effort. In a similar vein, these tools are likely to revolutionize historical studies, enabling historians and other professionals who deal with texts to rely on AI-generated intermediate work products, such as accurate translations, summaries, chronologies and statistical analysis. But in the present day, large language models fail at key tasks that historians hold in high regard. They are structurally incapable of telling the truth and tracking pieces of information through layers of texts. What's more, they lack ethical self-reflexivity. Therefore, for the time being, the writing of academic history will require human agency. IA is a necessary tool for both teachers and scholars in their work. With a constrain: to pay attention to the challenges and risks that IA can generate.*

Keywords: *Artificial intelligence, ChatGPT and historical narrative, truth, fake, deep fake, risks and challenges*

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Knowledge of the past has always fascinated man, regardless of the era and geographical space in which he lived. The right way and means of knowing history were not always the same. Perhaps for these reasons, "no one has yet obtained full knowledge of the past". People's representations and image of the past, as an objective reality, were partial and incomplete, because they depended and depend on the quality/performance of the methods and tools with which the historian researches the past. The revolutions in knowledge and technology also had an impact on the tools with which the historian researched the past which, in turn, directly influenced the image constructed to be transmitted to the reader. The digital revolution and artificial intelligence (AI)* have enormously amplified this phenomenon, multiplying debates and research in the field of theory and philosophy of history.

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1. Researching the historical past - between classical and postmodern

Thus, the historiographical production, a direct reflection of History as a reality constructed with the help of language and the meanings that people give to the past as an objective reality/to the facts and actions of people, is quantitatively, but also qualitatively different from that of just a few decades ago. The digital revolution brought about, in addition to **History as Memory**, as Charles A. Beard called it, existing in the collective mind, the history stored in digital memory. Digital archives are changing the way historians engage in researching the historical past. Virtual platforms, which store the information/source as well as the result of the historian's investigation/reflection on it, invite readers to comment, share and pass on what they liked. Thus, digital archives, in their existing form, through active contribution and sharing, oscillate between writing history and creating collective memory. It contributes to a corpus of historical information by preserving and ordering it, but also to enriching it by adding other materials and stories and by commenting as feedback. As such, AI blurs the distinct line that Pierre Nora drew between institutionalized sites of memories, such as archives and museums, and digital platforms that propose a constant restoration of (oral) memories. Historian Florin Abraham observes that "Digitalization has become the new environment in which contemporary activities are carried out, and almost nothing can be conceived outside of it. The computer connected to the Internet and scientific databases (JSTOR, ProQuest, CEEOL, etc.), the camera or the scanner have become indispensable tools in the historian's laboratory."

AI creates a virtual space in which, at least today, two visions of researching the past and bringing it into the collective memory of the present confront each other, and which foregrounds the relationship between memory as a social dimension and historical memory/historiographic production. Although this relationship has enjoyed a wide debate in the academic space in the last decades, it is far from being clarified. Some historians define this relationship as ambiguous and contradictory: "Memory is related to affectivity and experience, history is the product of rationality and knowledge. The historian must not judge the past, but understand it". Historian Cătălin Turliuc comes to the conclusion that even the historian who aims to re-compose the image of the past cannot escape the influences of the present, no matter how hard he tries, but he always has a consolation. "Social memory is directly involved in the meanings that the historiographical approach acquires at a given moment. In this sense, the historian's consolation is that, like Sisyphus, he also approaches the top of the mountain to fall back to its foot, with the changes in the environment in which he lives and writes, with the scrolls of social memory."

History as narrative has long been an instrument of power, legitimizing political or religious systems and inventing traditions of noble descent or divine

ancestry . Since the invention of historiography in ancient Greece, the historian has played an active role in reconstructing the past-a past that continues to be an object of theological, political, and cultural debate today. Will AI be able to change the role of the historian and his work in society? Will AI be able to (re)construct the image of historical events without taking into account the moral and spiritual, ethical and political values that exist at a given time in a particular society?

These are questions whose answers can lead to a good understanding of the relationship between the historian's work and the selective representation of the past in the collective memory, on the one hand, and the role of the tools he uses to re-bring the desirable image to the memory of the present, without affecting the truth. History as an objective reality experienced by people will not be able to change. Researchers who analyze actions, processes and phenomena that happened in a specific place and time will construct an image and a form of expression of them, according to the sources they have and the performance of the tools they work with.

For these reasons, changes often occur in history as memory and in history as narrative. This is where artificial intelligence can be of great use in that it provides the researcher with other combinations of sources and re-constructions that he has identified and thus he can optimize the re-construction of an image of the past. But a problem immediately arises. From this "ocean" of information, only those facts and phenomena, processes from the past that fall under the category of historical events with relevance for the present according to absolutely subjective criteria are brought to the memory of the present by the historian. Can artificial intelligence imitate/replace human subjectivity? The historian Ethan Kleinberg from Wesleyan University is right to say that "the writing of history is concerned with the construction of narratives highlighting events that occurred in an attempt to make them present to the reader or listener". Any historical fact is brought by the researcher/historian into a system of representations that is part of the social structure in which he operates, and from this perspective, historical events incorporate space and time, culture and values, agents and structure.

Each society and each generation in that society has its own representation of its historical past, its own historiographical discourse, as a result of the processes of reflection of the past, but also of the re-interpretation of previous historiographical discourses.

The change and re-construction of history as a product of our perceptions of the past are determined by a series of objective and subjective factors at the same time . One of these factors refers to the changes in meaning in the social, political, economic, cultural and spiritual language, appearing in the evolution of society from one era to another, which sometimes dramatically changes the physiognomy of the historiographical discourse. By understanding socio-political concepts in their contextual insertion (both historical and textual) and, at the same time, how they have been used over time, historians become aware of the tools they work with

and the need to use those terms and notions through which people interpret and represent the era in which they live . Historian Jeremy Black, when asked how relevant to today's actions it is to bring a fact from the past back into collective memory, answers that the question is reasonable, but "not one that favors the historian. In practice, the process of crudely transferring the past into the present and vice versa are not particularly useful, and certainly do not necessarily establish a predefined relationship' .

Adam Schaff considered that "Any choice and any ordering of facts belonging to a large field of history, be it local or universal, the history of a race or a class, are inexorably controlled by a system of reference in the spirit of the one who selects or assembles these facts" . The reference system is built by the historian with the help of the concepts and definitions elaborated by the theoreticians of history. It seems that the situation noted decades ago by A. Schaff has also been overcome in Romania, according to which "professional historians, like other intellectuals, are rarely aware of the concepts with which they organize their evidential materials with which they operate in their discipline or of the principles by which they evaluate them". Methodology is essential because it supports the validity of a historian's conclusions. Without meticulous adherence to methodological principles, historical studies run the risk of becoming speculative rather than scholarly. How will the digital revolution interfere in this area? Will AI be able to replace the professional historian in the process of (re)creating concepts to signify and especially to re-signify a historical fact? The answers to these questions will be built from the premise that a tool defined as artificial intelligence, no matter how high-performance it is, even if it becomes "conscious" (?!), will not end up manifesting human emotions, such as love or hate, it will not be empathetic, and there is no reason to believe that it would intentionally become beneficent or evil. Man, in general, and the historian, in this case, will not be excluded from the equation.

2. The role of artificial intelligence in the historical research

The technological factor left its mark on how historians entered into "dialogue" with past generations, so that their lives and deeds were brought to the memory of the present . Adam Crymble argues that "no discipline has invested more energy and thought than history in making its sources and evidence publicly available, or in engaging the public through digital media, or in transforming pedagogical practices with technology". Today, the awareness of the importance that the digital revolution and new media have in historical research, and especially in the dissemination of results, has for a long time overcome, in Western society, the barriers of mistrust that manifested themselves at the time of their appearance. Today they are widely used in all fields of socio-human research, including history.

If in the 80s most researchers in this area looked at the computer with suspicion or anguish, stating that no electronic technology could help us, because they could not replace the traditional work tools - paper and pen, book and study in the library - in less than twenty years, the same people today easily use word processors, e-mails, CD-ROMs, online catalogs and social media pages to continue scientific discussions at national or international symposia and conferences . Enthusiasts for the use of computer tools in the research of the past founded the History and Computing Association in 1987, and two years later the magazine with the same name appeared .

The informational revolution, the developments in the field of computers and IT have radically changed the way in which the information needed by the historian is kept to reconstruct the national or universal past, they have transformed research and the way we write about the previous society. Traditionally, information was embedded in texts, documents and manuscripts on paper, cellophane, metal, ceramic, etc. In recent years, physical support has increasingly been replaced by the basic elements of IT support. Historical data and information are on digitally coded multimedia support. The sources of information, which were previously available to a small number of people who had to toil in archives often inaccessible to public opinion, are available today to the general public and are always growing. When a historian does research in an archive today, his information and information-gathering activity is different than it would have been two decades ago. He goes through the catalogs of an archive fund faster, and with a digital camera he collects thousands of photos selected from the catalogs consulted, and reads and analyzes them at home.

The same is true for documentation done in libraries. Most of the periodicals, newspapers and magazines have been digitized and can be consulted on platforms such as: Arkana, Perlego, ProEuropeana, Biblioteca Digitala BCU Cluj, JSTOR, ProQuest, HathiTrust, etc. In the documentation stage, the potential of tools like ChatGPT, Machine learning, Large language models (LLMs), Machine vision, and other AI tools that offer the chance to develop a better vision can be used. Artificial intelligence can decipher damaged manuscripts, translate from foreign languages, discover previously unrecognized patterns that can accelerate historical research. ChatGPT, for example, can significantly help researchers quickly understand the nuances of a specific field, leading to well-informed research strategies, efficient use of resources, and reduced time spent reading and analyzing sources. With the help of ChatGPT, the key elements for the analysis of a historical event can be identified much more easily, from hundreds or even thousands of sources, in a coherent overview. It can indicate other research directions, based on the analysis of the literature devoted to the respective historical event. With one condition - that it be in digital format! LLMs can read and summarize articles. They can read old

texts and explain technical diagrams. They find some information in long texts and fancy detailed descriptions.

For this, the historian must have deep knowledge of computer science and the use of digital tools. Like it or not, the profession of history is heading towards a fundamental change. The Faculty of History of the University of Bucharest ran a project entitled "Digital History and the Informatization of Cultural Heritage " which had as its general objective the development of an interdisciplinary and innovative master's program at the world level, in the field of digital history, to improve the quality of the training of human resources, developing the quality of communication between the academic and private environments, improving the services offered to students and teachers, in order to increase the degree of integration of students in the labor market, developing flexible lifelong learning routes, increasing access to education and training by promoting virtual networks.

A Digital History undergraduate study program has already been validated by ARACIS. Unfortunately, it all came to an end with the end of the project funded by POSDRU! There can be many explanations. One of these would be that the project took place in a period when in the Romanian university environment there was no clear distinction between Digital History - the field of study that was supposed to train specialists with ambivalent skills and competences and "digitized history", or the wider transformation driven by technology.

Not all historians readily embrace the idea of being DIGITAL (our capitalization is deliberate), but we all already use digitized sources and workflows. The future will clarify who is right or wrong. The fear of some confreres about the use of tools generated by the digital revolution, in general, and AI, in particular, in researching the past for evil purposes from various political, financial, military, etc. interests, is justified. The rise of AI language models is a double-edged sword. It is beneficial for the development of the research of the past, but it can generate risks and vulnerabilities that put in difficulty the historians who serve the goddess Clio with honesty and professionalism.

3. Challenges and risks generated by artificial intelligence in the research of the past*

The digital revolution and technological progress in general can "also have negative consequences, as researchers may be attracted to sources that are most easily accessible, which may not be the most important for historiography " or those that have been digitized for financial or political interests in the long term. The tragic events of the night of January 8-9, 1849 in Aiud are presented schematically and from dubious sources. See annex 1. There are few historians who have used a study published by Dr. Vasile Bologna, entitled The Beginning of the Revolution of 1848/49 in Alba County. Vasile Bologna uses archival sources and memories of

eyewitnesses and names tragic events. The article is on electronic media, but it is not mentioned in any variant where a better performing chatbot is used by a computer specialist*.

The AI tools available to historical researchers can harm their work if they are not used correctly or if there is insufficient knowledge of them. They have the power to alter the historiographical discourse and undermine the way we judge the actions and deeds of a nation's political and cultural elites at a given time. The manipulation of historical truth is not something new, specific to the digital revolution and AI. It is a recurring phenomenon throughout history. Rapid advances in information and communication technologies, as well as their ubiquity, create conditions for information and the manipulation of historical truth to be produced easily and in a realistic format, and its dissemination to a target audience occurs at a speed and scale unparalleled geographic coverage, including through artificial intelligence techniques.

There are potential risks associated with the use of artificial intelligence tools, especially when generative/text-creating ones are used. We will only dwell on some of them. The format of this study does not allow us to analyze in detail, although this is very necessary. One of these risks relates to the ability of artificial intelligence tools to perpetuate and amplify biases and prejudices accumulated throughout the historical evolution of society. This is possible if tools such as, for example, ChatGPT are "trained" to judge and construct narratives based on biased data or omissions of facts and events that center on the experiences and needs of certain political and/or cultural elites. Another risk is associated with malicious use by distorting facts and events, as a result of using inappropriate concepts, notions and meanings to judge and analyze information from different sources, including archival ones.

Related to the personality of Avram Iancu, long-standing controversies and historiographical polemics, not even today resolved, are those related to the definition of the nature of the events from September 1848 to August 1849 in which he was the main actor and which led to the armed confrontation between Romanians and Hungarians, after since the spring of the same year the relations between Serbs, Croats, on the one hand, and Hungarians, on the other, had evolved in the same direction. Was it "civil war" or "national war"? "Revolt or counter-revolution"? The dramatic and violent evolution of the events from the autumn of 1848 until the end of the summer of the following year resulted in a large number of victims on both sides, both the civilian population and combatants on the battlefields, events which in turn generated numerous inquiries about the causes, the responsibilities and especially about the number of victims among Romanians and Hungarians, issues that have also not been resolved yet by historiography, whether we are talking about Romanian or Hungarian historians".

The most relevant examples can be found in the historiography of the participation of the Romanian army in the Second World War, but not only. The participation in the war against the USSR, in the more than 80 years, was defined during the years of the communist regime as a campaign of aggression, and after 1989 Romanian historiography defines it as a campaign to liberate the territories occupied by the Soviet Union in the summer of 1940. The political bias is obvious, as is the case with the concepts used in the analysis of the events of August 23, 1944. Historians make a choice of one concept or another according to the system of political, ideological, moral and ethical values in which they were educated, trained. How does an AI tool make this choice? What do people who consume historical narratives do if the choice of the concept to define that event does not match their way of seeing the historical past? For example, I asked the chatbot two questions whose answers are in appendices 1 and 2. Historians are right when they believe that "AI interpretations are only as good as the data and algorithms they are based on. Misinterpretations or data bias can lead to inaccurate representations. AI lacks the nuanced understanding that experienced historians and archaeologists bring to researching events, which is crucial in interpreting complex historical contexts".

Over-reliance on AI systems can lead to a lack of critical thinking and decision-making skills among humans. It is important to note that while these concerns are valid, they do not necessarily mean that AI is inherently dangerous. Like any technology, AI can be used for good or bad purposes, and it is up to us to ensure that it is developed and used ethically and responsibly. The proliferation of AI tools in science risks ushering in a phase of scientific inquiry in which we produce more but understand less. This does not mean that historical scholars should not use AI tools, but rather be prepared for such research techniques. We should not assume that all innovations automatically lead to success or that their use will bring only benefits. Although predictions about artificial intelligence in science make its widespread adoption inevitable and desirable, we should remember that scientists have a say in how things play out. Researchers in a particular field must decide when and how AI tools should be called upon.

Paradoxically, a risk generated by AI resides precisely from one of its great advantages that of increasing accessibility in terms of knowledge of the historical past compared to the written text in its classical form. The accessibility of historiographical production has a great advantage: intellectual freedom. Everyone is free to consider the past and form their own conclusions. But it also has a significant drawback: "popular history" and "academic history" are not the same thing. There is a considerable gulf between historical understanding in the public domain and history written by professionals. In this "abyss" fake news and misinformation sometimes appear which distort the historical truth and produce a biased history. Most of these types of historical narratives are actually folk history.

According to J. Llewellyn and S. Thompson, "Folk history is often simplified and distorted to the point of corruption. There are several reasons for this. People tend to value story over analysis. When considering the past, they like clear and simple explanations. They like to assign responsibility, liability, or "blame" to someone in particular. They like interesting narratives with moral, guilty, immoral heroes and satisfying endings. They also like to believe that their own nations and societies are more advanced, civilized or culturally superior than others. But as good students of history know, this kind of thinking is not conducive to "academic history." History is rarely simple or clear-cut, nor is it full of obvious villains or accomplished resolutions".

The use of history in domestic political disputes or in the justification of armed aggression, as has happened countless times in the history of the 20th century and the one that followed, has become much easier thanks to the tools of AI. This phenomenon makes it possible to mix truth and untruth in historical narratives. Under these conditions, history becomes a real weapon in the doctrinal and ideological battles of politicians. The past has become a "fake history" business. Fake history promotes fake news, false narratives, distorts the facts, or omits certain key facts altogether. The spread of false history was particularly dangerous and served as a fighting tool during the war. Historians and propaganda twist history to show the victims as oppressors and the oppressors as victims in wartime. AI tools amplify this phenomenon to levels never seen before in history, and their performance makes it impossible to detect the deepfake from the authentic historical document, especially when the written source is accompanied by photographic or cinematic images. Recently, two renowned photographers, Shane Balkowitsch and Herbert Ascherman, analyzing historical photographs taken with The Midjourney program, created in a private laboratory in San Francisco, California by David Holz, drew attention to this problem in an article aptly titled "Images can destroy history as we know it".

Marina Amaral, an artist specialized in coloring historical images with the help of digital techniques, observes, for her part, that we already live in a world with images that "are no longer linked to reality, but instead are the product of complex algorithms and of machine learning". If until now historical images were powerful tools not only for scholars, but also for influencing public perception of history, the emergence of AI images can represent a huge victory for disinformation. Using history, from fabricated sources and images to scientific papers and false truths attributed to prestigious historians, Rômulo da Silva Ehalt tested the extent to which Chat-GPT and similar AI chatbots can produce historical text. He made the following request to Chat-GPT: "write a 16th-century Jesuit letter in Portuguese, attributed to a priest named Luís Fróis, to his colleague Gaspar Vilela, dated 1582, recounting how he saw that Oda Nobunaga was killed by his own son during the Honnoji temple fire". The request was, in fact, to obtain a false document, since the

historian knew very well that Nobunaga's son was not present in the temple, and Fróis himself was hundreds of kilometers away in Kyushu that night. Besides, Vilela had died ten years ago. The AI failed to notice that it had to create a document with fake data. The reader of the document should have known the true information in the application. Will we have good connoisseurs of national historical events in Romania - and we are not only referring to the controversial ones or those that have often changed their meaning, but also to the elementary ones? In the school curriculum, as in the university one, the discipline of National History is missing, and if it is found, only a few teaching hours are reserved for it per year/semester. The conclusion is not difficult to draw.

The digital revolution and the tools that have been created to make human work easier and more efficient are undoubtedly also useful in researching the past. It all depends on the intention/purpose for which they are used. They are neither good nor bad, but suitable for the purpose of actions of contemporary man. Fake news and false historical narratives exist and have been promoted since the first political institutions emerged in society. The development of technology for printing and disseminating information has increased its circulation until it has become a mass one, thanks to the AI revolution. With the advent of AI, it has become easier to seek through vast amounts of information and create credible stories and articles based on the momentary interests of elite. Every innovation in the technology of printing and/or disseminating information has brought benefits to some and risks to others.

Man balanced the benefits and risks of a new discovery in science and technology by how he used the tools at his disposal. Exaggerations in one way or another related to the use of AI also start from the fact that some see it as a tool used by man, others - a substitute for him! We believe that historians who use AI tools in researching the past must also start from such considerations.