



Rethinking Research Ethics in the Humanities: A Critical Examination of AI-Assisted Research

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Abstract ;

This article highlights the importance of AI scientific research ethics in human science. It explores the potential benefits and challenges of AI in human science and discusses the ethical considerations that researchers must address to ensure that AI research is conducted in a responsible and socially beneficial manner. By prioritizing ethical considerations and addressing the challenges posed by AI, researchers can ensure that AI research is conducted in a way that benefits all members of society. As such, ongoing dialogue and collaboration are essential to developing ethical guidelines and governance structures that can ensure the responsible development and implementation of AI systems in human science

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1. **Introduction**

Ethics are an integral part of scientific research because they help ensure that the research is conducted responsibly, transparently, and accountable. Ethical research practices help build trust among researchers, participants, and the wider society, enhancing the quality and impact of scientific research. By prioritizing ethical considerations in scientific research, researchers can ensure that their work benefits society while respecting the dignity and rights of all individuals involved.

Both ethics and scientific research are closely linked because scientific research requires making decisions about how to conduct studies, collect data, analyze results, and disseminate findings, all of which have ethical implications. Ethics are principles and values that guide human behavior and help us distinguish right from wrong. In scientific research, ethics are important because researchers have a responsibility to conduct studies in a way that is ethical and moral, and that protects the rights and well-being of study participants and the wider society.

Over time, the research community has recognized the importance of ethical principles and practices in scientific research and has developed more rigorous standards for ethical conduct. In the past, there were instances where research was

conducted without informed consent from participants, and where vulnerable populations were subjected to unethical experimentation. One well-known example is the Tuskegee Syphilis Study, in which African American men with syphilis were deliberately left untreated in order to observe the natural course of the disease. The study lasted for over 40 years and was widely condemned as a serious violation of ethical principles.

As a result of such incidents, there have been significant changes in research ethics over the years. For example, the Nuremberg Code of 1947 established guidelines for conducting research on human subjects after the atrocities committed by Nazi doctors during World War II. This code established the principles of informed consent, the right to withdraw from a study, and the need for risks and benefits to be carefully evaluated before conducting research. Since then, various ethical codes and guidelines have been developed, such as the Declaration of Helsinki and the Belmont Report. These guidelines established the importance of ethical principles such as respect for persons, beneficence, and justice, and emphasized the need for review and approval by independent ethics committees or institutional review boards.

In recent years, there has been increased attention to issues such as data privacy,

informed consent in online research, and the use of artificial intelligence in research. Ethical considerations are now an integral part of scientific research and are regularly assessed and monitored by ethics committees and review boards.

Overall, there have been significant changes in research ethics between the past and now. These changes reflect a growing recognition of the importance of ethical principles and practices in scientific research, and a commitment to ensuring that research is conducted in a responsible, transparent, and accountable manner that protects the rights and well-being of study participants and the wider society.

In this article, we discuss the importance of ethical considerations in the age of artificial intelligence. AI has the potential to impact many aspects of our lives, and it's important to consider the ethical implications of how we design and deploy AI systems to ensure that they are fair, unbiased, and safe for individuals and society.

2. The importance of Research Ethics Topic :

Research ethics is not a new topic. It has been a critical aspect of research for many years. However, the way in which research ethicsto observe the disease's natural coursedered important have evolved over time. The need for research ethics can be traced back to the Nuremberg Code of 1947, which was developed in response to

the unethical medical experiments conducted by Nazi physicians during World War II **(Rogers, 1996, p. 96)**. The Nuremberg Code established the principles of informed consent and the protection of research subjects, which continue to be fundamental to research ethics today. This code focuses on voluntary informed consent, liberty of withdrawal from research, and protection from physical and mental harm, or suffering and death. It also emphasizes the risk-benefit 5 balance **(Fischer, 1996)**. The only weak point of this code was the self regulation of researchers which can be abused in some research studies. All declarations followed, forbade non- therapeutic research. It was only in 1964 with the declaration of Helsinki that the need for non therapeutic research was initiated. The declaration emphasised the protection of subjects in this kind of research and strongly proclaimed that the well being of individuals is more important than scientific and social interests." In terms of Nursing the first inquiry was the "Nightingale Pledge" (1983). Since then there has been a significant development of professional codes in conduct and research. The American Nurses' Association (ANA) Guidelines for Research, the Human Rights Guidelines for nurses in clinical and other research (1985) and the Royal College of Nursing Code for nurses in research (1977) provide a strong assistance to professional nurses as well as reassurance to patients,

the public and society of professional intentions (**Abraham, 1984**)

Today, research ethics is a well-established field that encompasses a broad range of topics, including informed consent, confidentiality, data protection, conflicts of interest, and the responsible conduct of research. While the principles underlying research ethics have remained relatively consistent, the specific issues and challenges faced by researchers have changed as technology and society have evolved.

3. Internet research ethics, new challenges :

Artificial Intelligence (AI) has become the main disruptive force in 21-century society and its different fields of activity, not always for the better. On one hand, AI offers great opportunities to improve productive, health care, clinical, communicative, participative, decision-making, artistic, research and innovative processes in terms of sustainability, predictability, speed, exhaustiveness, extensibility, capacity, completeness, consistency, efficiency, ratification, precision, detection, entertainment and creativity, among many other things. On the other hand, the use of AI also has a less pleasant side because of its direct or indirect involvement in the exponential increase in the underlying complexity, generating higher levels of uncertainty, inequality, disaffection, instru-

mentalisation, reification, heteronomy, alienation, anomie and psychopathologies .

In the field of scientific research, the potential of AI and its different digital application techniques and technologies, such as machine learning, facial recognition and data mining, has been reflected in a series of developments. These include an exponential increase in scientific productivity; the democratisation of scientific knowledge; the removal of barriers that once limited scientific progress; the possibility of achieving objectives that were unattainable just a decade ago; the increased predictability and control of nature; the development of surprising techniques for observing physical or social phenomena; and the economic, social and environmental sustainability of the scientific research and communication processes. In this respect there are outstanding paradigmatic cases, such as the publication of the first academic book written by a digital researcher ; the capture of the first image of a black hole thanks to the use of a massive AI algorithm ; and the design of AI chips by AI itself . The common denominator of these cases is an AI algorithm powered by big online databases and metadata (**González-Esteban & Patrici Calvo, 2022**).

Artificial intelligence (AI) is transforming the world around us, enabling us to solve complex problems and create new opportunities for innovation. As AI technology continues to evolve at an unprecedented pace, it is having a profound impact on how we conduct research and innovation across a wide range of fields. In this article, we will explore the ways in which AI is transforming research and innovation, and the opportunities and challenges that come with this new era of AI.

AI in Research

AI is having a transformative impact on research, enabling us to analyze vast amounts of data and make connections that were previously impossible. For example, in the field of medicine, AI is being used to analyze medical images and diagnose diseases with greater accuracy and speed. In astronomy, AI is being used to analyze large datasets and detect patterns in the universe that were previously unknown.

AI is also being used to accelerate the pace of scientific discovery. For example, researchers are using AI to design new drugs and materials with novel properties. AI is being used to simulate complex systems and predict outcomes, enabling researchers to test hypotheses and make predictions in real-time. In this way, AI is enabling us to conduct research that was previously impossible.

AI in Innovation

AI is also transforming innovation, enabling us to create new products and services that were previously unimaginable. For example, AI is being used to create personalized recommendations and experiences for customers, enabling companies to create new revenue streams and engage customers in new ways. AI is also being used to create autonomous systems and robots that can perform tasks that were previously done by humans.

AI is also enabling us to accelerate the pace of innovation. For example, companies are using AI to identify new market opportunities and develop new products and services in real-time. AI is also being used to optimize supply chains and logistics, enabling companies to deliver products and services more efficiently and effectively.

Opportunities and Challenges

The opportunities presented by AI in research and innovation are vast, but they are not without challenges. One of the biggest challenges is the need for data. AI requires vast amounts of data to be trained and validated, and this data must be of high quality and representative of the population being studied. Another challenge is the need for transparency and accountability. AI systems are often complex and difficult to understand, which

can make it difficult to ensure that they are fair and unbiased.

There are also ethical and societal challenges that come with the use of AI in research and innovation. For example, there are concerns about the impact of AI on employment and the potential for AI to perpetuate biases and discrimination. There are also concerns about data privacy and security, as well as the potential for AI to be used for malicious purposes.

AI is transforming research and innovation, enabling us to solve complex problems and create new opportunities for innovation. However, it is important to ensure that the use of AI is ethical, transparent, and accountable. As we continue to push the boundaries of what is possible with AI, it is important to remain mindful of the challenges and opportunities that come with this new era of AI. By doing so, we can ensure that AI continues to benefit society and create new opportunities for research and innovation.

data protection, conflicts of interest, and the responsible conduct of research. While

5. Research Ethics Changes by The advent of Artificial intelligence

AI ethics is an emergent field that is still in its nascent phase and continues to evolve. However, there are a number of disciplines that have long traditions and literature from which AI ethics draws and can be seen as,

in various ways, a continuation of. The three bodies of literature we believe are most relevant are (1) engineering ethics, (2) philosophy of technology, and (3) science and technology studies. Before we discuss each in turn below it is important to note that there are other bodies of literature, which we are not discussing, that many will reasonably argue are crucial predecessor/streams that feed into AI ethics.⁶ Perhaps the most important is the ethics of robotics. We certainly recognize this and our selection of the three chosen themes are not to be read as exhaustive. The reason we have chosen the fields is because the three span the extremes of interdisciplinarity—with, on the one hand the philosophy of technology as the “abstract” non-empirical pole, and, on the other hand, engineering ethics as practitioner, highly applied, other pole (and science and technology studies straddling the middle). In addition to these predecessor disciplines, we note that the umbrella of “responsible innovation” as a new approach toward innovation is a strong contemporary current. This is demonstrated by the fact that social and ethical aspects are explicitly taken into account and economic, socio-cultural, and environmental aspects are balanced (**Emre Kazim, 2021, pp. 1-12**).

As the availability of data on almost every aspect of life, and the sophistication of machine learning (ML) techniques, has increased , so have the opportunities for

improving both public and private life . Society has greater control than it has ever had over outcomes related to: (1) who people can become; (2) what people can do; (3) what people can achieve; and (4) how people can interact with the world . However, growing concerns about the ethical challenges posed by the increased use of ML in particular, and Artificial Intelligence (AI) more generally, threaten to put a halt to the advancement of beneficial applications, unless handled properly **(Morley, 2020, pp. 2141-2168)**

The advent of artificial intelligence (AI) has brought about significant changes in research ethics. One of the key concerns is the issue of privacy and security, as AI has the capacity to process vast amounts of data, raising the need for researchers to ensure that data is collected and used in an ethical manner and that adequate measures are taken to protect the privacy and security of participants. Another major issue is the potential for bias and unfairness. AI algorithms are only as unbiased as the data they are trained on, which can lead to discrimination and perpetuate social inequalities. Therefore, researchers must ensure that they use diverse and representative data sets to avoid bias and promote fairness. Transparency and explainability are also crucial, as AI algorithms can be difficult to interpret and understand, raising concerns about transparency and accountability. Moreover, the use of AI in research may lead to a loss

of human control, as AI has the potential to automate many tasks previously performed by humans. Therefore, researchers must ensure that they use AI to empower and support humans, rather than replace them. Lastly, the use of AI in research raises new ethical questions, such as the regulation of AI in research and its use in decision-making processes. Thus, researchers must consider the potential impacts of their research on individuals and society and address these new ethical questions **(Service, 2021).**

Another important consideration related to the impact of AI on research ethics is the potential for unintended consequences. The complexity of AI systems can make it difficult to fully understand and predict their outcomes, leading to the possibility of unforeseen negative consequences. Researchers must ensure that they consider and mitigate these potential unintended consequences in their use of AI in research. Additionally, the use of AI in research can raise issues related to ownership and intellectual property. Researchers must ensure that they are using AI in a way that respects the intellectual property rights of others and avoids any potential conflicts of interest. Finally, the impact of AI on research ethics may vary across different disciplines and fields of research. Researchers must ensure that they understand the unique ethical considerations and challenges related to

their specific area of research and adapt their use of AI accordingly.

In addition to the considerations mentioned earlier, there are other important ethical issues related to the impact of AI on research ethics that researchers must consider. One such issue is the potential for harm to participants. While AI has the potential to improve the efficiency and accuracy of research, it also raises the potential for harm to participants. Researchers must ensure that they are using AI in a way that minimizes any potential harm to participants and that they have appropriate mechanisms in place to address any harm that may occur.

Another issue is the ethical implications of using AI to collect and analyze data without explicit consent. AI systems can be used to gather and analyze data from a variety of sources, including social media and other online platforms. Researchers must ensure that they have obtained appropriate consent from participants before collecting and analyzing their data and that they are using AI in a way that respects participants' rights and privacy.

The use of AI in research also raises issues related to accountability and responsibility. As AI systems become increasingly complex, it can be difficult to determine who is responsible for any negative outcomes that may occur. Researchers must ensure that they have appropriate mechanisms in place to ensure

accountability and responsibility for any negative outcomes that may occur.

Finally, the use of AI in research may raise issues related to power and control. AI systems can be used to automate many tasks previously performed by humans, potentially reducing the power and control that humans have over the research process. Researchers must ensure that they are using AI in a way that empowers and supports humans, rather than replacing them or reducing their control over the research process.

5. The Importance of AI Scientific Research Ethics

Artificial intelligence (AI) has become an increasingly important field of research in recent years. AI has the potential to transform many aspects of society, including employment, healthcare, and transportation. However, as AI becomes more pervasive, it also raises a range of ethical and social challenges. These challenges include issues such as bias and discrimination, transparency and accountability, and privacy and data protection.

One of the key ethical challenges in AI research is bias. AI systems are built on data, and if that data is biased, it can reflect and even amplify the biases and prejudices that are present in that data. This can have serious consequences for individuals and groups that are unfairly impacted by biased

algorithms. It is therefore essential for AI researchers to be aware of the potential for bias in their data and to take steps to mitigate it.

Transparency and accountability are also important ethical considerations in AI research. AI systems are often complex and opaque, making it difficult for researchers and end-users to understand how they work and how decisions are being made. This lack of transparency can make it difficult to hold AI systems accountable for their actions. It is important for researchers to be transparent about their methods and for AI systems to be designed with accountability in mind, so that people can challenge or contest decisions made by AI systems if necessary.

Privacy and data protection are also important ethical considerations in AI research. AI systems often rely on large amounts of personal data, raising concerns about how that data is collected, stored, and used. It is important for AI researchers to respect individuals' privacy and to ensure that data is collected and used in a responsible and ethical manner.

In addition to these ethical considerations, AI research also has important social and ethical implications. For example, AI could lead to job displacement and increased inequality if not developed and implemented in a socially responsible way. Ethical AI researchers need to consider the potential social and ethical impacts of their

research and work to minimize any negative consequences.

Finally, as AI becomes more pervasive, there is a growing need for regulations and governance to ensure that AI is developed and used in a responsible and ethical manner. Ethical AI researchers need to engage in discussions around AI policy and governance to ensure that AI is regulated in a way that benefits society as a whole.

In conclusion, AI scientific research ethics are critical to ensuring that AI research is conducted in a responsible and socially beneficial manner. Researchers must be aware of the ethical challenges posed by AI and work to address them in their work, so that the benefits of AI can be realized without causing harm or exacerbating existing social and ethical issues. By prioritizing ethical considerations in AI research, we can ensure that AI is developed and implemented in a way that benefits all members of society.

7- Challenges of AI scientific research ethics in Human science :

AI scientific research ethics in human science is a complex and multifaceted field that requires careful consideration of the ethical implications of using AI models. Researchers must be mindful of the ethical considerations and challenges associated with using AI models in human science research. By taking a responsible and thoughtful approach, researchers can use

AI to advance our understanding of human behavior, culture, and history in a way that is ethical, equitable, and beneficial for all.

- **Ethical use of data:** In human science research, data collection can be a sensitive and personal matter. Therefore, researchers must ensure that they obtain informed consent from participants and that the data they collect is necessary for their research. Researchers must also ensure that they protect the privacy and confidentiality of their participants' data by anonymizing the data or by obtaining explicit consent to use the data.
- **Bias and discrimination:** AI algorithms can perpetuate or even amplify human biases and discrimination, especially if the training data is biased. Human science researchers must ensure that their AI models are free of bias and discrimination, and that they are transparent about the algorithms they use. Researchers should also ensure that their training data is diverse and representative of the population they are studying.
- **Lack of transparency:** AI models can be complex, making it difficult to understand how they make decisions. This lack of transparency can create challenges for

accountability and ethical decision-making. Human science researchers must develop models that are explainable and transparent, allowing users to understand how the models work and how they make decisions. Researchers can use techniques such as model visualization, model interpretation, and model auditing to increase transparency.

- **Accountability:** With AI models making decisions that can have serious consequences, it's important to ensure that there is accountability for those decisions. Human science researchers must ensure that there are mechanisms in place to ensure accountability, such as audits, oversight, and reporting requirements. Researchers must also consider the legal and regulatory frameworks that govern the use of AI in their research.
- **Unintended consequences:** AI can have unintended consequences that can be harmful to society. For example, AI can perpetuate systemic biases and discrimination, or it can cause job displacement. Human science researchers must anticipate and mitigate these unintended consequences, such as the impact of AI on job displacement or the potential for AI

to perpetuate harmful stereotypes or discriminate against certain groups. Researchers can use techniques such as impact assessments and scenario planning to anticipate and mitigate unintended consequences.

- **Cultural sensitivity:** Human science research often involves working with diverse populations with different cultural backgrounds and beliefs. AI models must be sensitive to these cultural differences and should not perpetuate harmful stereotypes or discriminate against certain groups. Researchers must also consider ethical implications of how AI models can be perceived and interacted with by different cultures, communities and societies.

8. CONCLUSION

In conclusion, AI scientific research is poised to revolutionize many fields of human science. The ability of AI systems to process and analyze large amounts of data has the potential to uncover new insights and advance our understanding of complex biological and social systems. AI can also help us develop new diagnostic tools, therapies, and interventions that could improve human health and well-being.

However, the ethical challenges of AI scientific research must be carefully considered and addressed. Bias and discrimination, privacy and data protection, transparency and accountability, and social and ethical impact are all critical issues that need to be addressed in order to ensure that AI research is conducted in a responsible and ethical manner. As AI becomes increasingly pervasive in human science, it is essential for researchers to prioritize ethical considerations and work to minimize the potential negative consequences of AI systems.

In the end, AI scientific research holds great promise for advancing our understanding of the human body and mind, and for improving human health and well-being. By prioritizing ethical considerations and addressing the challenges posed by AI, we can ensure that AI research is conducted in a way that benefits all members of society. As such, it is essential for researchers to engage in ongoing dialogue and collaboration to develop ethical guidelines and governance structures that can ensure the responsible development and implementation of AI systems in human science.

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