

Building Trust through Sincerity and Honesty: The Ethical Foundations of Research Integrity

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Summary

The fourth industrial revolution has brought many groundbreaking technologies, with Artificial Intelligence (AI) at the forefront. While these advancements and innovations bring numerous opportunities and benefits, such as increased productivity and efficiency, they also require careful consideration due to their profound impact on human society. Many educators around the world have raised concerns about the potential negative impact of AI on students' learning, creativity, and critical thinking skills. Though these are valid concerns, currently, there is no definitive evidence or comprehensive research to fully understand how the pervasive use of generative AI may shape the cognitive abilities of future generations.

This gap in research is the motivation for my study. My research seeks to explore and analyze the impact of generative AI technologies on human cognition, particularly how these technologies might influence the way we think, learn, and solve problems. As AI technologies continue to evolve and become more integrated into our everyday lives in the future, it's high time to understand their long-term effects on human cognition.

I hope through my empirical study, I can shed light on the unforeseen consequences Generative Artificial Intelligence (GAI) may have on human cognition, particularly when we become more dependent on these technologies. This could help guide the development of educational policies and societal norms surrounding the usage of GAI technology while harnessing the benefits of these advancements without sacrificing the essential cognitive skills that define our humanity.

I approach this research with a deep sense of responsibility and commitment. From the initial stages of planning to the eventual publication of my findings, I am determined to conduct my study with the utmost honesty and sincerity. While sincerity and honesty in any research are crucial for maintaining academic integrity, I will approach these qualities in my research in line with the learnings and insights from Pierre Teilhard De Chardin.

This essay explores the attributes of sincerity and honesty that I incorporate in my research, with detailed explanations of each by drawing insights from Chardin's principles. I aim to not only understand the impact of GAI but also to approach the research with a perspective that acknowledges both the potential and the risks of technological advancements on humanity. By incorporating sincerity and honesty into my methodology, I hope to contribute to a more thoughtful and balanced discourse about the future of AI and its role in shaping human cognition.

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Introduction

Sincerity and truth are the basis of every virtue
- Confucius

Honesty and Sincerity – Makoto is one of the eight virtues of Bushido, which means speaking and doing are the same action. In the realm of virtues, sincerity and honesty stand high and determine the qualities of a person. The very basic foundation of human society originates from sincerity and honesty as they form the fundamental and essential building blocks of a person`s character.

Our ancestors, the Samurais, held honesty and sincerity as one of their founding principles and they lived their lives according to these principles. The **Roman Emperor, Marcus Aurelius**, lived 1900 years ago marked “**If it is not right, do not do it; if it is not true, do not say it.**” This is a straightforward yet profound way that denotes honesty and sincerity.

Depicting sincerity and honesty in every confronting endeavor is important as it makes a person more trustworthy, genuine, and truthful overall. A person can achieve success and reach greater heights by cultivating these qualities in their thoughts and doings. Ascertaining these qualities as one`s character portrays that person`s morality and represents his or her ethical standard of living.

Research is an activity that is initiated by curiosity and driven by a desire to explore and understand the interaction or workings of things around us. The word research itself implies `re-search`, which means **searching again** or in other words searching repetitively. Every research starts with good intentions to invent or explore but not all research succeed at the first attempt. Even though those researchers failed at the first attempt, the sincere and honest contribution given by researchers eased fellow researchers` understanding and paved the way for successive work, and finally, effective trying made them possible. All the scientific and technological advancement we witness today in society is because of the research that was built upon belief and trust within researchers of the scientific community.

Thus, the betterment and development of society has its roots in research that relies heavily on principles of sincerity and honesty, and determining these qualities in research is extremely important for the well-being of our human community. It is

through research and its findings that our human race has improved and progressed in many ways and keeps on evolving into better day by day. The **sincere and honest contribution** of every researcher involved in the research is indispensable as they are directly proportional to the growth of our community.

In this essay, I tried to explore in detail about sincerity and honesty and its role in my proposed research from the inspirations and learning from the work of Pierre Teilhard De Chardin. I took insights from two of his books, ` **The Phenomenon of Man**, ` where he presents his groundbreaking view on human evolution by interconnecting science and spirituality, and ` **The Future of Man** ` where he expands his ideas introduced in The Phenomenon of Man and acknowledges the importance of technology in advancing human evolution with caution about potential dangers.

A brief Introduction about Pierre Teilhard De Chardin

Pierre Teilhard de Chardin, a **notable scientist of the 20th century** was a Jesuit priest, scientist, paleontologist, theologian, philosopher, and teacher and authored many scientific papers and books. He was a man of profound vision, and his contribution as a scientist is prominent, his work shows deep interest in exploring the evolution of life on Earth and its interconnectedness with the universe. One of his mainstream scientific achievements included taking part in the **discovery of the Peking man**.

Out of his many works, I choose two of his books, ` The Phenomenon of Man ` and ` The Future of Man ` . With the inspiration and learnings from these books, I tried to explore and discuss sincerity and honesty in my research and how I apply these qualities in a detailed manner.

Introduction to My Research

My Research Topic: Impact of Generative Artificial Intelligence on Human Cognition

As humans evolve through time, many inventions are made to enhance comfort and quality of life. The saying "**Necessity is the mother of invention**" rings true as technological advancements continually strive to address human needs and solve

problems. From ancient times to the digital era, technology has greatly transformed our lives and become integral to every aspect.

As technology advances and society progresses, the increasing reliance on technology for day-to-day tasks has increased. With the emergence of digital technology and the internet, in specific, the way of thinking and analyzing has been changed and it has already instigated a noticeable influence on human cognition, evidenced by a decline in human IQ points in the US for the first time in a century, with some research stating this trend to technological factors.

Alongside this backdrop, the emergence of Generative Artificial Intelligence (GAI) presents both opportunities and challenges. Generative artificial intelligence is a form of AI that makes use of large artificial neural networks to produce outputs or works that can be randomly varied in some way without loss of objectivity. While it promises enriched handiness through on-demand content generation, that represents works of human creativity, there are concerns about the potential consequences of over-reliance on GAI, particularly among the younger generation. If they gradually turn to GAI for information, decision-making, and problem-solving, there is a possibility that the natural strengthening of neural connections, the very foundation of human cognition could reduce over time.

With this technological development of the past decade, AI research has multiplied, and debates surrounding the effects of AI on human cognition have become increasingly demanding. In particular, as the usage of Generative Artificial Intelligence (GAI) technologies has tremendously increased among students across the globe, it is necessary to understand how these technologies impact human cognition. This accentuates the importance of reflecting on the implications of GAI on human cognition and the need to strike a balance between using technology for convenience and preserving and enhancing our cognitive abilities.

The main purpose of my research is to understand how GAI technologies influence our thinking, decision-making, and learning process and to evaluate the access dependency risks on our brain by identifying and analyzing for relative changes in the structure and function of the brain. Another key purpose of analyzing the impact of GAI on human cognition is to inform policy and ethical guidelines because by understanding how GAI

usage affects mental processes, we can better address concerns and help shape frameworks that ensure the responsible use of technology in society to promote our cognitive health and enhance human well-being.

Sincerity and honesty in research

According to Pierre Teilhard De Chardin, ` **Research is the highest form of adoration** ` . We are well aware that research forms the bedrock of scientific inventions and discoveries that shape our world. Therefore, every researcher should meticulously practice sincerity and honesty in their research for the prosperity and development of the community.

With the inspirations and learnings from Pierre Teilhard De Chardin`s work, ` The Phenomenon of Man, ` I approach Sincerity and honesty in my research through various key attributes of these qualities. This essay outlines my approach by defining those attributes and explaining how they contribute to maintaining sincerity and honesty in my work and the importance of these qualities in research.

Attributes of Sincerity and honesty in my research

1. Transparency

Being transparent in all aspects of the research process is an important aspect of sincerity and honesty in research. Transparency involves openly disclosing key elements of the research process, including:

- Transparency in stating the research methodology clearly
- Transparency in identifying data sources
- Transparency in explaining data analysis techniques.
- Transparency in acknowledging limitations and potential biases.

While approaching my research, transparency will be a fundamental principle that starts with a clear and precise description of research methodologies, including how data is collected, analyzed, and interpreted. There will be forthrightness in explaining how analysis of collected data is carried out and will ensure that my findings are disclosed or confronted truthfully based on the evidence, regardless of whether my

results are positive or negative. My research conclusions will be based on thorough evidence-based analysis, and I will present them honestly and openly, even when the results challenge preconceived expectations.

Openness to research methodology, a willingness to share exact findings, and intellect to confront unexpected or negative results are essential for building trust among researchers and fostering collaboration within the scientific community. Being transparent in reporting every aspect eases the reproducibility of my research and can be easily built upon by other researchers. This **reproducibility** of research is crucial for the advancement of science, as most of the future scientific innovations are often built upon the results of previous research findings. Also, being transparent in reporting enables other researchers to **learn from my mistakes** if any, and allows them to refine their methods, and ensure that the same mistakes or errors are not repeated in future studies.

Ultimately, transparent research helps to build public trust by demonstrating a commitment to truth, and it promotes accountability and facilitates the progress of research by creating a solid foundation upon which future studies can be developed, tested, and refined for the better.

Chardin also reveals his transparent approach in describing the process of evolution of life and the future trajectory of humanity in his works. He clearly explains how he produced data from various disciplines, such as science, philosophy, and theology. He also portrays human evolution as a purposeful interconnected process leading towards complex consciousness symbolized by the concept of noosphere. Chardin's commitment to empirical findings over assumptions is evident in his approach. His work is transparent in its exploration of both science and spiritual dimensions and outlines it so clearly that one can read the book and validate his claims by checking the stated references.

2. Integration and collaboration

Integration and collaboration are other main attributes of sincerity and honesty in research. These qualities foster a research environment that brings together diverse expertise, perspectives, and resources and encourages the sharing of ideas, and

concerns through constructive feedback. Through open dialogue and ongoing collaboration, researchers can develop more robust research study designs and innovative solutions.

For my research, I aim to integrate and collaborate across the fields of **neuroscience, cognitive psychology, and education**. This interdisciplinary approach allows me to approach my topic from multiple angles and ensures a more well-rounded and comprehensive framework for understanding the topic, of how Generative Artificial Intelligence usage impacts cognitive development among the younger generation. Neuroscience will help to understand the biological processes of the brain, cognitive psychology will shed light on the understanding of learning processes, and education will ground the research in practical applications that can directly benefit students and educators. This interdisciplinary approach is essential for my topic as it ensures broad relevance and potential impact by enriching both the research process and its outcomes.

Moreover, collaboration encourages continuous learning and intellectual growth. Working alongside experts from various diverse fields creates an environment for knowledge exchange that benefits deepening my knowledge and skills and assists me in incorporating the latest advancements and techniques from various fields into my work. By combining perspectives from neuroscience, psychology, and education, I am more likely to uncover any hidden patterns that would be difficult to identify in separation. Additionally, this collaboration of combining neuroimaging techniques from neuroscience with cognitive experiments from psychology may lead to more precise and subtle insights into how the brain processes learning.

This idea of integrating diverse domains is also reflected in the book, `The Phenomenon of Man`, where Chardin thoughtfully binds science and spirituality by integrating evolutionary biology with his profound spiritual and philosophical insights. He believes that both realms offer valuable truths about the nature of life on earth and argues that the evolution of life and consciousness is not just a biological process but also a spiritual journey, in which humans are moving towards a higher state of unity with the divine. This integration of science and spirituality is a main theme of his writing, suggesting that both realms must collaborate to understand the full scope of human existence and purpose.

I believe pooling ideas, methodologies, and technologies from different researchers in diverse fields enables researchers to achieve a higher level of accuracy and relevance in their research, with a greater potential for societal and scientific impact. This collaborative spirit grounded with a commitment to a **holistic view** is essential for meaningful research as it shifts the focus from individual accomplishments towards a collective, unified search for truth that ultimately benefits the society through advancement of knowledge.

3. Acknowledgement of limitations and uncertainties

Another attribute of sincerity and honesty in research involves acknowledging the limitations and uncertainties in their research. Researchers who openly recognize the constraints of their studies avoid misleading claims and aid others in understanding the true extent of their contribution. Furthermore, by identifying areas of uncertainty or areas in need of further inquiry, researchers allow the scientific community to critically assess the context of their research, which promotes more informed and balanced interpretations that enrich the scientific discussion.

For example, in his work, Chardin explicitly acknowledges the speculative nature of many of his theories, including concepts like the omega point and noosphere. He presented his ideas as hypotheses that are subject to revision rather than as definite answers. His willingness to recognize the limits of his knowledge reflects his intellectual humility and fosters a sense of curiosity about the unknown, inviting others to explore and build upon his work.

In my research, I aim to maintain the same level of openness. Acknowledging the limitations and uncertainties will be a central aspect of my research. Whether it is the constraints of sample size or the scope of the data, I will strive to be clear about the factors that may influence the reliability of my findings. Additionally, I will also highlight areas where further research is necessary, framing these as opportunities for other researchers to expand on my work.

Furthermore, I believe recognizing and stating limitations will **improve the reproducibility** of my research because by documenting the factors that affect my

results, I suggest other researchers to replicate my study under different conditions or methodologies.

Ultimately, acknowledging uncertainties not only strengthens the **credibility** of my research but also establishes a foundation for continuous improvement in the field. By pointing out the areas where further investigation is needed, I aim to contribute to the broader scientific conversation and open the door for future studies. I believe this approach will foster critical thinking and encourage more understanding of the topic.

4. Commitment to ethical standards

Commitment to ethical standards is yet another important aspect of sincerity and honesty in research. Every researcher should adhere to ethical principles to uphold integrity, keep accountability, and protect the morality of conducting the research. By avoiding misconduct, researchers contribute to the credibility of their findings and gain trust and support from the academic and professional community. I consider these ethical standards to be not just merely principles but the considerations of human values and the overall benefit of society.

Chardin greatly emphasizes ethical conduct in both works I referred to. Though he did not mention the practice of ethical guidelines explicitly in the modern research sense, his wordings used throughout the work implicitly support an ethical commitment to the evolution of humanity. Chardin stresses the importance of human responsibility as we evolve, not only in terms of intellectual and scientific advancement but also in spiritual and moral dimensions. He considers the moral implication of the evolutionary process and the role of human consciousness in shaping the future. His sincerity about the ethical responsibilities of scientists and how their work should contribute positively to humanity highlights the importance of aligning research with bigger values and societal good.

With the stimulation from Chardin`s principles, I will strictly adhere to the ethical standards in my research. As my research involves gathering data from human subjects, I will ensure that my research studies are conducted with the **utmost respect and care** for all participants, including obtaining consent and ensuring the welfare of

participants. Furthermore, I will take all necessary steps to make sure that the confidentiality of the gathered personal data is protected safely and securely.

Additionally, I will reflect on how my research contributes to **societal standards**, and how my research findings will have implications for future generations. This reflection is to ensure how my research will contribute optimistically to the growth of society and the well-being of humanity.

5. Acknowledgment of sources

Sincerity and honesty in research are consigned to acknowledging the contribution of sources through appropriate citations and references truthfully. This is crucial because using someone else`s work without proper credit not only undermines the original author`s contribution but also misrepresents the researcher`s achievements. Accurate citations and references to previous research are vital to maintain academic integrity.

Pierre Teilhard De Chardin sincerely and honestly acknowledged various intellectual influences and sources throughout his writing though not in the formal citation style that we use in the present-day research methodology. However, the book`s overall approach suggests a deep respect for the intellectual and scientific traditions from which the ideas emerge. For instance, Chardin stated that for evolutionary theory, he refers to Charles Darwin, and for philosophy, he refers to Henri. He also acknowledged the contribution of early thinkers such as St. Augustine for his historical perspective on theological insights.

In my research, I will maintain **intellectual humility** by recognizing and respecting the sources that have inspired me through citations and references. I will also acknowledge the foundational contributions of prior thinkers explicitly in a formalized sense. I will make sure to use correct citation practices for paraphrasing or data taken from existing literature.

Finally, I will ensure that honesty in my work is preserved by adhering to appropriate citation practices, engaging critically with existing literature, and acknowledging diverse perspectives. I believe these practices will reflect my commitment to contributing to the scientific community and human society.

6. Intellectual commitment

Intellectual commitment is another essential attribute of sincerity and honesty in the research. The researcher should avoid cherry-picking data out of their personal biases and pressures to draw conclusions that are not supported by evidence. Falsification and fabrication of results will undermine the research`'s reliability and the public`'s trust in scientific findings.

In both works, Pierre Teilhard De Chardin tried to uncover the truth and gave maximum justice in providing his understanding of the history of life formation, to the place of humans in the universe. From his approach, one can understand that he was not interested in just mere collection of data and finding results rather he was truly concerned about what implications his findings might produce on humankind.

As a researcher and a fellow human being, through my research, I would like to exhibit my intellectual commitment and show a strong **desire to contribute knowledge** and findings to the community by being deeply involved in the research question and exploring how my research can be benefitted to humankind, beyond my immediate findings.

I will make sure that my research methodologies mainly focus on the research question, and I regularly assess my work for continuous improvement. Finally, the findings of my research will be shared with the academic and scientific community that engages positively with both academics and society.

7. Accessibility and clarity in presentation

Accessibility and clarity in the presentation of work along with findings are essential for the broader implications of any research. Expressing the objective and findings of research in a clean and organized way exhibits not only concern for readers but also invites them to be critically involved with the work.

In the book, "The Phenomenon of Man," Chardin demonstrated genuine curiosity and true passion for his study. He clearly explained the history of the evolution of life, starting from the elemental matter (the happenings before the existence of life), traversing to life and then the thought, and finally concluding with survival. This

approach of presenting his ideas in a neatly organized shows concern for his readers to engage with his work.

In line with Chardin's principle, I approach my research with **wholehearted dedication** and **sincere commitment** to the thorough investigation of the impact of Generative Artificial Intelligence technologies on human cognition. I aim to deeply understand and engage in a comprehensive exploration by pursuing an honest inquiry into people's dependency on the usage of Generative Artificial intelligence technologies during their cognitive developmental stages and measure their cognitive level by assigning various cognitive tasks. I ensure to make honest inquiries, examine various perspectives, and gather a diverse range of insights in my research. Additionally, as learning from Chardin, I will articulate and present my analysis and findings in a neatly organized way so that it will be easier for others to read and understand.

Conclusion

Above all, trust in the slow work of God.

We are quite naturally impatient in everything to reach the end without delay.

We would like to skip the intermediate stages.

We are impatient of being on the way to something unknown, something new.

And yet it is the law of all progress that is made by passing through some stages of instability, and that it may take a very long time.

- Pierre Teilhard De Chardin

Chardin exemplifies how sincerity and honesty can profoundly enhance research in the book, 'The Phenomenon of Man' and 'The Future of Man'. His sincere engagement with evolutionary theory, integration of science and spirituality, and the role of technology in shaping man's future portrays his commitment to a holistic approach and understanding. Acknowledgment of theoretical limitations, transparency in methodology, and ethical reflections contribute to a richer and more meaningful exploration of human evolution. By maintaining these values, Chardin not only advanced his research but also inspired others to approach their work with similar integrity. His work demonstrates that research is not merely about accumulating data but about seeking truth through a sincere and honest engagement with diverse perspectives.

Sincerity and honesty are indispensable to the integrity and advancement of research. Researchers should avoid **insincere and dishonest** practices in research, even when faced with tight timelines or pressure to publish, as they are directly proportional to the **betrayal of community trust**. Though it takes time and effort, practicing these qualities ensures that scientific inquiry remains a trustworthy and reliable source of knowledge, fostering progress and innovation. By applying these principles, researchers can ensure that their work is academically credible and impactful for the scientific society and community as a whole. Additionally, their honest and sincere work fosters a deeper understanding of complex issues, contributing positively to society's benefit.

Researchers have a **profound responsibility** to uphold these values as their adherence contributes not only to the advancement of their fields but also to the broader trust and utility of scientific endeavors in society. The commitment to sincere and honest research practices is, therefore, a commitment to the **pursuit of truth** and the betterment of humanity. I consider that sincerity and honesty are the qualities that one needs to protect and spread not only in research but also with people across the world. Everyone around us is influenced by each other and people behave and interact with us on how we behave with them. If we influence others by depicting and practicing good moral values, the people around us will act the same toward us and others thus making the world a desirable place to live in.

Finally, I would like to end my essay by stating the quotes of Benjamin Stillingfleet,

Sincerity and honesty carry one through many difficulties which all the arts he can invent would never help him through.

Thank you.