



Cinematic Reflections on the Techno-Ethical Landscape: A Qualitative Study On AI and Cloning in Bollywood's Movie "Bade Miyan Chote Miyan"

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Abstract: This paper examines the portrayal of Artificial Intelligence (AI) and Cloning in the Bollywood Movie "Bade Miyan Chote Miyan" (BMCM) through a qualitative philosophical lens. The analysis delves into the depiction of AI capabilities, ethical considerations, and the implications of Cloning as presented in the film. Drawing from various philosophical perspectives, including short discussions on consciousness, autonomy, and identity, the paper explores the broader societal and ethical implications of these themes. Through a critical evaluation of the movie's portrayal, it highlights the intersections between technology, ethics, and philosophy. The study suggests that "BMCM" offers a unique lens through which to explore complex technological and philosophical concepts, prompting further reflection on the ethical dimensions of AI and Cloning.

Key Words: AI, Cloning, BMCM, qualitative movie analysis, defence supply chain.

1. INTRODUCTION:

AI (AI) and Cloning are two ground-breaking technological advancements that have captivated the imagination of scientists, ethicists, and filmmakers alike (Feldman, 2024) (Gallo, 2024) (Kumar, Arora, & Bayram, 2024). The intersection of these two fields raises profound questions about the nature of identity, consciousness, and the ethical implications of manipulating life and intelligence (Ijiga, Idoko, Enyejo, Akoh, & Ileanaju, 2024) (Kumar & Saxena, 2024). In the context of popular culture, these themes are often explored in films that speculate about the possibilities and consequences of AI and Cloning (Ijiga, Idoko, Enyejo, Akoh, & Ileanaju, 2024) (Menon, 2024).

One such film is "BMCM" (BMCM), a Bollywood action-comedy, released in the year 2024 (Wikipedia Contributors, 2024). While primarily known for its entertaining storyline and star-studded cast, the movie also delves into themes of AI and Cloning, weaving them into its narrative to create thought-provoking scenarios and ethical dilemmas.

The purpose of this paper is to conduct a qualitative philosophical defense study of the portrayal of AI and Cloning in the movie "BMCM". By analyzing the movie through various philosophical lenses, one may aim to explore the ethical, societal, and philosophical implications of these technologies as depicted in the film. It will also delve into the portrayal of AI and Cloning in the movie, examining their capabilities, ethical considerations, and implications for society. Additionally, one may compare the depiction of AI and Cloning in the movie "BMCM" with real-world developments in these fields, providing insights into the convergence of fiction and reality.

The structure of this paper is as follows:

- The portrayal of AI and Cloning in the movie
- To explore philosophical perspectives on AI and Cloning
- A discussion on the scientific accuracy of the portrayal of Cloning in the movie and its implications
- To conclude with a summary of key findings and reflections

Some of the research questions are:

- How are themes of AI and Cloning portrayed in the movie "BMCM," and what philosophical insights can be observed from their depictions?
- What are the ethical implications of the use of AI and Cloning technologies as depicted in the movie, and how do they intersect with broader philosophical debates on ethics and morality?
- What philosophical perspectives can be applied to analyze the ethical, social, and existential implications of AI and Cloning technologies as depicted in the movie?



- To what extent does the portrayal of AI and Cloning in the movie align with real-world developments and debates surrounding these technologies, and what can be learned from this comparison?
- What are the implications of the portrayal of AI and Cloning in "BMCM" for future research, policy development, and public discourse on the ethical and societal implications of emerging technologies?

2. LITERATURE REVIEW:

1. Film Studies

In film studies, scholars have explored the portrayal of AI and Cloning in science fiction cinema, analyzing how these themes reflect societal anxieties, hopes, and ethical dilemmas (Goodall & Harrod, 2024) (Ma, 2024) (Magerstädt, 2024) (Jiang, 2024) (Sanderson, 2024). Works such as "Blade Runner," (Wikipedia contributors. , 2024) "Ex Machina," (Wikipedia Contributors, 2024) and "Gattaca" (Wikipedia Contributors, 2024) have been widely studied for their depiction of AI and Cloning technologies and their implications for human identity, autonomy, and morality (Berthon, Yalcin, Pehlivan, & Rabinovich, 2024) (Srivastava, 2024) (Mutlag & Hadaegh, 2024).

2. Philosophical Perspectives

Philosophers have engaged with the ethical and metaphysical implications of AI and Cloning, drawing on concepts such as consciousness, personhood, and moral agency (Amigud, 2024) (Possati, 2024) (Rachmawati, Maulana, Harefa, & Zalfaa, 2024). There are notable works which include Bostrom's "Superintelligence: Paths, Dangers, Strategies," exploring the risks and opportunities of AI (Bostrom, 2019), and Mary Shelley's "Frankenstein," examining the moral responsibility of creators in the face of technological innovation (Wikipedia Cotributors, 2024).

3. Defense Studies

In defense studies, researchers have examined the strategic implications of AI and Cloning technologies for national security and military operations (Oladoyinbo, et al., 2024) (Sonko, Ibekwe, Ilojiana, Etukudoh, & Fabuyide, 2024). Studies have focused on the potential uses of AI in autonomous oneapons systems, cyber warfare, and intelligence analysis, as onell as the ethical and legal challenges posed by the proliferation of these technologies in the defense sector.

4. Interdisciplinary Approaches

Interdisciplinary approaches to AI and Cloning in film, philosophy, and defense studies have emerged, seeking to bridge the gap betoneen academic disciplines and explore the complex intersections of technology, society, and ethics (Grčki & McGregor, 2024) (Verran, 2024). Scholars have drawn on insights from film theory, bioethics, and military strategy to critically analyze the portrayal of AI and Cloning in popular culture and its implications for contemporary debates on technological innovation and societal values.

5. Public Discourse and Policy Debates

Beyond academia, public discourse and policy debates on AI and Cloning have been shaped by a diverse range of voices, including policymakers, ethicists, scientists, and filmmakers. Media representations of AI and Cloning in films such as "BMCM" contribute to these discussions, influencing public perceptions and shaping policy decisions on issues such as research funding, regulatory oversight, and international cooperation.

Table 1: Literature Review

Literature	Summary
Film Studies	Analysis of the portrayal of AI and Cloning in science fiction cinema, examining societal anxieties, hopes, and ethical dilemmas (Wikipedia contributors. , 2024) (Wikipedia Contributors, 2024) (Wikipedia Contributors, 2024).
Philosophical Perspectives	Exploration of the ethical and metaphysical implications of AI and Cloning, including questions of consciousness, personhood, and moral agency (Bostrom, 2019) (Wikipedia Cotributors, 2024).
Defense Studies	Examination of the strategic implications of AI and Cloning for national security and military operations, focusing on autonomous oneapons systems and cyber warfare (Bistron & Piotrowski, 2021) (Johnson, 2011) (Morgan, et al., 2020).
Interdisciplinary Approaches	Integration of insights from film theory, bioethics, and military strategy to critically analyze the portrayal of AI and Cloning in popular culture (Genelza, 2024) (Peng & Zhao, 2024) (Rashid, Kausik, Sunny, & Bappy, 2024) (Metz, 2024).
Public Discourse and Policy Debates	Examination of media representations of AI and Cloning in shaping public discourse and policy debates, influencing public perceptions and policy decisions (Janger, 2024) (Mavinkurve & Lévesque, 2024).



The main gaps identified in the study are listed in Table 2.

Table 2: Important Gaps

Research Gap	Description
Knowledge Gaps	Lack of comprehensive understanding of the long-term societal, ethical, and geopolitical implications of AI and Cloning technologies as portrayed in the movie "BMCM."
Theoretical Gaps	Absence of consensus on foundational philosophical concepts and frameworks for analyzing the ethical and metaphysical implications of AI and Cloning as depicted in the movie.
Methodological Gaps	Limited interdisciplinary research that bridges the gap between film studies, philosophy, and defense studies to explore the complex intersections of AI, Cloning, and national security.
Empirical Gaps	Insufficient empirical research on how the themes of AI and Cloning in "BMCM" impact public perceptions, policy debates, and societal attitudes towards emerging technologies.
Policy Gaps	Need for clearer guidelines and regulations governing the ethical use of AI and Cloning technologies in defense and other sectors, particularly in light of their portrayal in the movie.
Ethical Gaps	Lack of consensus on the ethical principles and values underlying the depiction of AI and Cloning in "BMCM," including their implications for military ethics and morality.
Legal Gaps	Uncertainty surrounding the legal frameworks and international norms governing the use of AI and Cloning in defense contexts as portrayed in the movie, and their implications for warfare.
Societal Gaps	Limited understanding of how the themes of AI and Cloning in "BMCM" reflect broader societal anxieties, hopes, and ethical dilemmas surrounding emerging technologies.

3. MATERIALS:

The movie titled "BMCM" has been selected and identified for the qualitative study. The software MAXQDA version 2024 was used for the analysis purposes. The secondary sources were

- a. Scholarly articles from Google and Dimensions
- b. Books published on various titles associated with AI and Cloning, Movies, Scientific Researches, Bioethics and Defense Studies
- c. Online reviews, blogs and vlogs were observed

4. METHOD:

For a qualitative study on AI and Cloning in the movie "BMCM," the following methodological approach was conducted:

- 1. Content Analysis:** Conducted a systematic content analysis of the movie.
- 2. Thematic Analysis:** Used thematic analysis to identify and explore the underlying themes and messages regarding AI and Cloning.
- 3. Philosophical Inquiry:** Applied philosophical inquiry to critically examine the ethical, social, and philosophical implications of AI and Cloning.
- 4. Interdisciplinary Approach:** Adopted an interdisciplinary approach that integrates insights from film studies, bioethics, philosophy, and technological ethics to provide a comprehensive analysis of AI and Cloning.
- 5. Comparative Analysis:** Compared the portrayal of AI and Cloning in the movie with real-world developments in AI and biotechnology.
- 6. Contextual Analysis:** Considered the cultural, historical, and socio-political context in which the movie was produced and received.
- 7. Ethical Reflection:** Reflected on the ethical implications of the movie's portrayal of AI and Cloning.
- 8. Iterative Process:** Employed an iterative process of data collection, analysis, and interpretation to refine and deepen the understanding of AI and Cloning.

5. ANALYSIS:

This was done through the following steps:

- a. Capturing information on AI and Cloning from movie
- b. Understanding the concepts of AI and Cloning
- c. How concepts and practical aspects of AI and Cloning were used in the movie



Usage of AI in the Movie

In "BMCM", RDX (Research Department Explosive or Royal Demolition Explosive) exhibits a spectrum of capabilities that stretch the limits of current AI understanding. It's functions span surveillance to combat, blurring the line between fiction and reality. However, the portrayal raises ethical concerns regarding its application in law enforcement, highlighting worries about potential misuse and the erosion of human oversight. Comparing the movie's depiction with real-world, AI development shows parallels and disparities. While real AI has progressed in areas like language processing, humanoid AI in "BMCM" remains fiction. Yet, ethical dilemmas around autonomy and accountability echo ongoing debates in AI ethics.

Cloning in the Movie

The concept of Cloning is introduced in "BMCM" through a subplot involving the characters of Freddy and Rocky. It is revealed that Kabir, a former friend of the duo, has developed a Cloning program based on their DNA. Initially intended to aid the Indian armed forces, the Cloning program becomes a tool for betrayal and vengeance when Kabir decides to sell it to India's enemies. The clones, programmed with orders to win wars without being killed, raise ethical dilemmas and existential questions about identity and autonomy.

In "BMCM," the portrayal of AI and Cloning serves as a catalyst for exploring complex ethical and philosophical questions. Through the characters of RDX and the clones, the movie prompts reflection on the implications of technological advancement and the ethical considerations surrounding the development and deployment of AI and Cloning technologies. By comparing the portrayal of AI in the movie with real-world AI development, the film invites audiences to engage in critical reflection on the responsible use of emerging technologies and the importance of ethical oversight in their implementation.

The analysis of the ethical, social, and philosophical implications of Cloning in "BMCM" is presented in tabular form and may be seen in Table 3.

Table 3: Aspects and Analysis

Aspect	Analysis
Ethical Implications	<ul style="list-style-type: none"> Creation of sentient beings for warfare raises moral questions about the value of individual autonomy. Cloning humans for military purposes challenges ethical responsibility.
Social Implications	<ul style="list-style-type: none"> Existence of clones threatens societal norms and relationships. Impact of Cloning on human identity and societal cohesion.
Philosophical Implications	<ul style="list-style-type: none"> Confrontation with clones prompts contemplation on the essence of humanity. Doubts arise regarding the intrinsic value and rights of clones.
Scientific Ambition	<ul style="list-style-type: none"> Kabir's manipulation of genetic material warns against unchecked scientific ambition. Potential for unintended consequences in the pursuit of scientific advancement.

6. DISCUSSION:

The Portrayal Of Cloning

Central Theme of Cloning:

In "BMCM," Cloning is a central theme intertwined with betrayal and vengeance.

Introduction of Cloning:

Freddy and Rocky discover that their former friend Kabir has developed a Cloning program based on their DNA.

Original Intentions:

Initially intended to aid the Indian armed forces, Kabir's Cloning program becomes a tool for nefarious purposes when he decides to sell it to India's enemies.

Ethical Dilemmas and Existential Questions:

The portrayal of Cloning raises profound ethical dilemmas and existential questions about identity and autonomy.

Confrontation with Clones:

Freddy and Rocky are confronted with the unsettling reality of facing their own clones, programmed to win wars without being killed.



Implications of Playing God:

This revelation forces them to grapple with the implications of playing god and tampering with the fundamental essence of life.

Exploration of Themes:

Through the depiction of Cloning, "BMCM" delves into themes of betrayal, power, and the consequences of unchecked scientific ambition.

Ethical Complexities:

The clones serve as a chilling reminder of the ethical complexities surrounding emerging biotechnologies and the potential for misuse in the pursuit of power and control.

The Scientific Accuracy Of The Portrayal Of Cloning

Simplification of Cloning Process:

- The movie oversimplifies the complexity of real-world Cloning techniques.
- Kabir's Cloning program produces perfect replicas of Freddy and Rocky with minimal explanation of the scientific processes involved.
- Actual Cloning involves intricate procedures such as somatic cell nuclear transfer (SCNT) or embryonic Cloning, requiring precise manipulation of genetic material and sophisticated laboratory techniques.

Rapid Development and Deployment of Clones:

- The film suggests that Kabir creates fully grown clones of Freddy and Rocky within a short period.
- Actual Cloning processes would require significant time and resources to produce viable organisms.
- Ethical and logistical challenges associated with raising and controlling cloned individuals are largely overlooked.

Simplified Characterization of Clones:

- Clones in "BMCM" are portrayed as obedient and programmable entities devoid of individuality or autonomy.
- This overlooks the complexities of human identity and consciousness.
- Cloned individuals would likely possess unique personalities and experiences shaped by their environment and upbringing.

Entertainment Prioritization over Realism:

- The portrayal of Cloning serves as a narrative device to drive the plot, prioritizing entertainment value over scientific realism.
- Results in a simplified and sensationalized depiction of Cloning that diverges from scientific consensus and overlooks ethical considerations inherent in real-world Cloning.

7. FINDINGS:

The various philosophical arguments are shown in Table 4.

Table 4: Philosophical Deductive Arguments

Argument	Premise 1	Premise 2	Conclusion
Argument from Consciousness With Subjective Experience	AI lacks subjective experience.	Consciousness requires subjective experience.	Therefore, AI does not possess consciousness.
Argument from Autonomy Of Free Will	AI lacks free will.	Autonomy requires free will.	Therefore, AI does not possess autonomy.
Argument from Identity Of Genetic Material	Clones share identical genetic material.	Identity is determined by genetic uniqueness.	Therefore, clones do not possess individual identity.
Argument from Ethical and Moral Responsibility	Cloning for military purposes is unethical.	Scientists have a moral responsibility to act ethically.	Therefore, scientists should refrain from engaging in unethical Cloning practices.
Argument from Human Dignity	Cloning undermines human dignity.	Human dignity is a fundamental moral principle.	Therefore, Cloning should be prohibited to preserve human dignity.



Argument from Psychological Continuity Of Personal Identity	Clones lack the same life experiences as originals.	Personal identity is defined by psychological continuity.	Therefore, clones do not possess the same personal identity as their originals.
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Different philosophical perspectives are seen in te Table 5.

Table 5: Various Philosophical Perspectives

Philosophical Perspective	Description	Philosophers	References
Ethical Perspective	Considers the moral implications of AI and Cloning, including questions about autonomy, consent, and responsible technology use. Ethicists debate the ethical considerations of creating sentient beings or intelligent machines.	Immanuel Kant, John Stuart Mill, Peter Singer, Nick Bostrom	Kant, I. (1785). <i>Groundwork of the Metaphysics of Morals</i> . Mill, J. S. (1863). <i>Utilitarianism</i> . Singer, P. (1979). <i>Practical Ethics</i> . Bostrom, N. (2003). <i>Ethical Issues in Advanced AI</i> .
Metaphysical Perspective	Explores questions of existence, identity, and consciousness. Considers whether AI or cloned entities possess genuine consciousness and autonomy or if they merely simulate these qualities.	René Descartes, John Locke, Thomas Nagel, David Chalmers	Descartes, R. (1641). <i>Meditations on First Philosophy</i> . Locke, J. (1689). <i>An Essay Concerning Human Understanding</i> . Nagel, T. (1974). <i>What is it like to be a bat?</i> . Chalmers, D. (1996). <i>The Conscious Mind</i> .
Epistemological Perspective	Focuses on the nature and limits of knowledge regarding AI and Cloning. Examines how our understanding of these technologies influences ethical judgments and societal norms. Considers biases that may shape perceptions.	Ludwig Wittgenstein, Thomas Kuhn, Susan Haack, Philip Kitcher	Wittgenstein, L. (1922). <i>Tractatus Logico-Philosophicus</i> . Kuhn, T. S. (1962). <i>The Structure of Scientific Revolutions</i> . Haack, S. (1993). <i>Evidence and Inquiry</i> . Kitcher, P. (2001). <i>Science, Truth, and Democracy</i> .
Existential Perspective	Contemplates the impact of AI and Cloning on the human condition and our sense of identity, purpose, and mortality. Explores themes of authenticity, alienation, and the search for meaning in a technologically advanced world.	Jean-Paul Sartre, Martin Heidegger, Albert Camus, Simone de Beauvoir	Sartre, J. P. (1943). <i>Being and Nothingness</i> . Heidegger, M. (1927). <i>Being and Time</i> . Camus, A. (1942). <i>The Myth of Sisyphus</i> . de Beauvoir, S. (1949). <i>The Second Sex</i> .
Political and Social Perspective	Examines broader societal and political implications. Analyzes how AI and Cloning intersect with issues of power, inequality, and justice. Considers distribution of resources, access to technology, and potential social disruption.	Karl Marx, Michel Foucault, John Rawls, Martha Nussbaum	Marx, K. (1867). <i>Das Kapital</i> . Foucault, M. (1978). <i>The History of Sexuality</i> . Rawls, J. (1971). <i>A Theory of Justice</i> . Nussbaum, M. C. (2000). <i>Women and Human Development</i> .
Aesthetic Perspective	Considers artistic and cultural representations of AI and Cloning. Explores portrayals in literature, film, and other media and how these representations shape public perceptions and attitudes towards technology.	Walter Benjamin, Susan Sontag, Arthur C. Danto, Jacques Rancière	Benjamin, W. (1936). <i>The Work of Art in the Age of Mechanical Reproduction</i> . Sontag, S. (1977). <i>On Photography</i> . Danto, A. C. (1964). <i>The Artworld</i> . Rancière, J. (2000). <i>The Politics of Aesthetics</i> .



The different Bioethics perspectives are:

Table 6: Various Bioethics Perspectives

Bioethics Perspective	Description
Human Dignity	Emphasizing the importance of respecting human dignity in the development and use of AI and Cloning technologies, particularly in relation to the creation and treatment of cloned individuals and AI entities.
Autonomy	Considering the principle of autonomy and individuals' right to make informed decisions about their own lives in the context of AI and Cloning, including questions about consent, agency, and self-determination.
Justice	Examining issues of distributive justice and fair allocation of resources in the development and deployment of AI and Cloning technologies, including concerns about access, equity, and social inequalities.
Risk and Benefit Analysis	Oneighing the risks and benefits of AI and Cloning technologies, including ethical considerations related to potential harms, unintended consequences, and societal impacts, as onell as their potential benefits for healthcare, research, and human onell-being.
Informed Consent	Ensuring that individuals are adequately informed and able to consent to the use of AI and Cloning technologies, including questions about transparency, accountability, and the ethical implications of creating or using AI entities and cloned beings without their consent.
Humanitarian Values	Embracing humanitarian values such as compassion, empathy, and solidarity in the development and use of AI and Cloning technologies, including considerations of how these technologies can promote human flourishing, alleviate suffering, and enhance the common good while also safeguarding against potential harms and abuses.
Environmental Ethics	Considering environmental ethics in the development and deployment of AI and Cloning technologies, including concerns about their ecological footprint, impact on ecosystems, and long-term sustainability, as onell as ethical responsibilities to preserve biodiversity and protect the natural world.

Different ethical considerations for the study are seen in Table 7.

Table 7: Ethical Considerations

Ethical Considerations	Description	Philosophers	References
Nature of Consciousness	Central ethical concern in AI and Cloning. Explores whether AI entities or cloned beings possess consciousness akin to humans. Raises implications for rights, well-being, and moral status.	Thomas Nagel, David Chalmers, John Searle	Nagel, T. (1974). <i>What is it like to be a bat?</i> . Chalmers, D. (1996). <i>The Conscious Mind</i> . Searle, J. (1992). <i>The Rediscovery of the Mind</i> .
Autonomy	Examines the extent to which AI entities or clones possess autonomy. Considers implications for consent, agency, and ethical responsibility.	Immanuel Kant, John Stuart Mill, Peter Singer	Kant, I. (1785). <i>Groundwork of the Metaphysics of Morals</i> . Mill, J. S. (1863). <i>Utilitarianism</i> . Singer, P. (1979). <i>Practical Ethics</i> .
Identity	Raises ethical questions about the identity of clones and AI entities. Explores whether clones have the same identity as originals and implications for dignity, authenticity, and moral worth.	Jean-Paul Sartre, Martin Heidegger, Simone de Beauvoir	Sartre, J. P. (1943). <i>Being and Nothingness</i> . Heidegger, M. (1927). <i>Being and Time</i> . de Beauvoir, S. (1949). <i>The Second Sex</i> .



8. RESULTS:

The main arguments for AI and Cloning are observed in Table 8.

Table 8: Main Arguments For AI And Cloning

Arguments For	Description	Philosophers	References
Advancements in Knowledge	AI and Cloning can advance understanding of the mind and biology, leading to breakthroughs in medicine and psychology.	David Chalmers, Thomas Nagel	Chalmers, D. (1996). <i>The Conscious Mind</i> . Nagel, T. (1974). <i>What is it like to be a bat?</i> .
Enhancement of Human Capabilities	AI and Cloning can enhance human capabilities, improving healthcare and extending human lifespan.	Peter Singer, John Stuart Mill	Singer, P. (1979). <i>Practical Ethics</i> . Mill, J. S. (1863). <i>Utilitarianism</i> .
Ethical Considerations	AI and Cloning offer ethical solutions to problems such as infertility and genetic diseases.	Nick Bostrom, Immanuel Kant	Bostrom, N. (2003). <i>Ethical Issues in Advanced AI</i> . Kant, I. (1785). <i>Groundwork of the Metaphysics of Morals</i> .
Exploration of Consciousness	AI and Cloning facilitate exploration of consciousness and identity, shedding light on fundamental questions about the human experience.	René Descartes, Jean-Paul Sartre	Descartes, R. (1641). <i>Meditations on First Philosophy</i> . Sartre, J. P. (1943). <i>Being and Nothingness</i> .

The main arguments against AI and Cloning may be observed in Table 9.

Table 9: Table For Arguments Against AI and Cloning

Arguments Against	Description	Philosophers	References
Ethical Concerns	AI and Cloning raise ethical concerns about autonomy, consent, and moral responsibility in their creation and use.	Susan Haack, John Searle	Haack, S. (1993). <i>Evidence and Inquiry</i> . Searle, J. (1992). <i>The Rediscovery of the Mind</i> .
Loss of Human Control	Critics warn of the potential loss of human control over AI and Cloning technologies, posing existential threats to humanity.	Martin Heidegger, Albert Camus	Heidegger, M. (1927). <i>Being and Time</i> . Camus, A. (1942). <i>The Myth of Sisyphus</i> .
Erosion of Human Identity	AI and Cloning technologies may undermine human identity and dignity, challenging our understanding of what it means to be human.	Simone de Beauvoir, Thomas Kuhn	de Beauvoir, S. (1949). <i>The Second Sex</i> . Kuhn, T. S. (1962). <i>The Structure of Scientific Revolutions</i> .
Risk of Social Inequality	The development and use of AI and Cloning technologies may exacerbate social inequality, widening existing disparities in society.	John Rawls, Karl Marx	Rawls, J. (1971). <i>A Theory of Justice</i> . Marx, K. (1867). <i>Das Kapital</i> .

Following are the general themes from the movie:

- Ethical Implications
- Human Identity and Autonomy
- Social Justice
- Inequality
- Privacy
- Surveillance
- Existential Risks and Technological Singularities
- Environmental and Ecological Impacts
- Economic Disruption and Technological Unemployment
- Cultural and Ethical Relativism
- Human Enhancement and Transhumanism



- Legal and Regulatory Frameworks
- Medical and Healthcare Ethics
- Philosophical Anthropology

Themes that intersect with Defense Studies are:

1. Military Applications of AI and Cloning
2. Ethical and Legal Considerations
3. Cybersecurity and Information Warfare
4. Strategic Competition and Technological Innovation
5. Dual-Use Technologies and Proliferation Risks
6. Military Ethics and Human Right
7. Strategic Stability and Arms Control

Various Defense Supply Chain perspectives may be enlisted and had been shown in the Table 10:

Table 10: Defense Supply Chain Perspectives

Defense Supply Chain Perspective	Description
Security and Reliability	Ensuring the security and reliability of supply chains in the defense sector, particularly in relation to the procurement, production, and distribution of AI and Cloning technologies.
Technology Transfer	Managing technology transfer agreements and collaborations with industry partners, research institutions, and international allies to facilitate the responsible sharing and transfer of AI and Cloning technologies.
Regulatory Compliance	Adhering to national and international regulations governing the export, import, and use of AI and Cloning technologies in defense applications, including compliance with export controls and dual-use technology regulations.
Risk Management	Assessing and mitigating risks along the defense supply chain, including risks associated with cyber threats, unauthorized access, tampering, and unintended consequences of AI and Cloning technologies.
Ethical Procurement Practices	Promoting transparency, accountability, and integrity in defense procurement processes, including ethical considerations related to fair access to defense contracts, outsourcing, subcontracting, and supply chain dependencies.
Humanitarian Impact	Considering the humanitarian impact of AI and Cloning technologies in defense applications, including their potential implications for civilian populations, non-combatants, and vulnerable communities, and taking measures to mitigate potential harm.
Dual-Use Technologies	Addressing ethical dilemmas and regulatory challenges associated with dual-use technologies that have both military and civilian applications, including balancing national security concerns with humanitarian values and promoting responsible innovation and technology transfer.

9. RECOMMENDATIONS:

Some of the recommendations are:

- Conduct Further Research
- Raise Awareness and Education
- Foster Ethical Dialogue and Debate
- Establish Ethical Guidelines and Regulations
- Encourage Responsible Media Representation
- Promote Interdisciplinary Collaboration
- Consider Societal Implications
- Advocate for Transparency and Accountability
- Engage Stakeholders and Communities
- Monitor Technological Developments and Impacts



10. LIMITATIONS:

- **Simplified Portrayal:** The analysis is based on the portrayal of AI and Cloning in a fictional movie, which may simplify complex scientific concepts and ethical dilemmas for dramatic effect.
- **Lack of Real-world Context:** The study focuses on the depiction of AI and Cloning within the narrative of "BMCM" and may not fully capture real-world scientific advancements and ethical debates in these fields.
- **Interpretation Bias:** The interpretation of the movie's themes and messages may be subjective and influenced by the researcher's own perspectives and biases.
- **Limited Generalizability:** Findings from the study may not be generalizable to other contexts or films, as "BMCM" is a specific cultural artifact with unique characteristics.
- **Ethical Considerations:** Ethical considerations regarding the analysis of fictional content, such as the potential impact on audience perceptions and ethical responsibilities to accurately represent scientific concepts, are important to acknowledge.

11. IMPLICATIONS:

Table 11: Implications

Implication Type	Description
Theoretical Implications	Contributes to theoretical discussions in film studies, philosophy, and defense studies by analyzing the portrayal of AI and Cloning in popular culture.
	Advances theoretical frameworks for understanding the ethical, societal, and geopolitical implications of emerging technologies as depicted in fictional narratives.
Managerial Implications	Informs policymakers, defense analysts, and industry leaders about potential risks and opportunities associated with AI and Cloning technologies.
	Helps managers in defense and technology sectors develop strategies for responsible and ethical deployment of AI and Cloning technologies.
Ethical Implications	Raises ethical questions about the use of AI and Cloning in military contexts and prompts reflection on moral responsibilities of creators and users of these technologies.
	Highlights the importance of ethical guidelines and regulatory frameworks to govern the development and use of AI and Cloning technologies in defense and other sectors.
Social Implications	Reflects broader societal anxieties, hopes, and ethical dilemmas surrounding emerging technologies.
	Sheds light on public perceptions and attitudes towards AI and Cloning, as well as their implications for policy development and public discourse.
Legal Implications	Raises questions of accountability, liability, and compliance with international law in the portrayal of AI and Cloning.
	Highlights the need for clearer legal frameworks and international norms to regulate the use of AI and Cloning technologies in defense and other sectors.
Policy Implications	Informs policy debates on issues such as privacy, security, and accountability in the context of AI and Cloning technologies.
	Underscores the importance of evidence-based policymaking and the development of ethical guidelines to address the societal, ethical, and geopolitical implications of emerging technologies.
Educational Implications	Raises awareness and facilitates informed discussions about AI and Cloning in popular culture.
	Serves as a resource for educators and students in film studies, philosophy, and defense studies to explore the ethical and societal dimensions of emerging technologies.

12. FUTURE SCOPE:

The main points are:

- Explore Other Cinematic Works
- Conduct Comparative Analyses
- Investigate Audience Perceptions
- Examine Cross-Cultural Perspectives



- Analyze Real-World Impacts
- Collaborate with Industry Experts
- Engage in Longitudinal Studies
- Conduct Ethnographic Research
- Explore Technological Developments
- Examine Policy and Regulatory Changes

13. CONCLUSION:

In the end, the analysis of AI and Cloning in "BMCM" reveals the intricate interplay between technological advancement, ethical dilemmas, and societal implications. The movie serves as a lens through which to explore complex themes such as identity, autonomy, and the consequences of unchecked scientific ambition. While the portrayal of AI and Cloning in the film may diverge from scientific reality, it nonetheless prompts critical reflection on the ethical and philosophical dimensions of emerging technologies. As society continues to grapple with the rapid advancement of AI and Biotechnology, it is imperative to engage in informed dialogue, develop ethical guidelines, and foster responsible innovation. The cinematic representation of AI and Cloning serves as a catalyst for broader discussions about the ethical, social, and legal implications of these technologies in both fictional narratives and real-world contexts. Ultimately, "BMCM" invites viewers to consider the profound implications of humanity's quest for technological mastery and the ethical responsibilities that accompany it specially on the metaverse platform.

REFERENCES:

1. Amigud, A. (2024). The Age of the Intelligent Machine: Singularity, Efficiency, and Existential Peril. *Philosophy & Technology*, 37(2), 1-20.
2. Berthon, P., Yalcin, T., Pehlivan, E., & Rabinovich, T. (2024). Trajectories of AI technologies: Insights for managers. *Business Horizons*.
3. Bistrion, M., & Piotrowski, Z. (2021). Artificial Intelligence Applications in Military Systems and Their Influence on Sense of Security of Citizens. *MDPI*, 10(7), 871.
4. Bostrom, N. (2019). *SUPERINTELLIGENCE: Paths, Dangers, Strategies*. Oxford University Press.
5. Feldman, R. (2024). Artificial Intelligence and Cracks in the Foundation of Intellectual Property. *SSRN* 4736929.
6. Gallo, E. (2024). Revolutionizing Synthetic Antibody Design: Harnessing Artificial Intelligence and Deep Sequencing Big Data for Unprecedented Advances. *Molecular Biotechnology*, 1-15.
7. Genelza, G. G. (2024). Deepfake digital face manipulation: A rapid literature review. *Jozac Academic Voice*, 4(1), 7-11.
8. Goodall, R., & Harrod, M. (2024). Netflix Original Films and European Auteur Cinema: 'Universal' Particularities in Alexandre Aja's *Oxygen*. In *European Cinema in the Streaming Era: Policy, Platforms, and Production* (pp. 281-299). Cham: Springer International.
9. Grčki, D., & McGregor, R. (2024). *An Epistemology of Criminological Cinema*. Taylor & Francis.
10. Ijiga, O. M., Idoko, I. P., Enyejo, I. A., Akoh, O., & Ileanaju, S. (2024). Harmonizing the voices of AI: Exploring generative music models, voice cloning, and voice transfer for creative expression.
11. Janger, J. (2024). *Policy Brief No. 61, January*.
12. Jiang, Y. (2024). Evolutionary emotion of AI and subjectivity construction in *The Windup Girl*. *Neohelicon*, 1-11.
13. Johnson, B. D. (2011). *Science fiction prototyping: Designing the future with science fiction*. Morgan & Claypool Publishers.
14. Kumar, A., & Saxena, J. (2024). Human Cloning. *IITM Journal of Information Technology*. *IITM Journal of Information Technology*, 15.
15. Kumar, J., Arora, M., & Bayram, G. E. (2024). *Exploring the Use of Metaverse in Business and Education*. IGI Global.
16. Ma, C. (2024). Queering Time's Arrow: Temporal Drag in Priya Sarukkai Chabria's *Clone*. *Science Fiction Studies*, 51(1), 74-88.
17. Magerstädt, S. (2024). Upload, Cyber-Spirituality and the Quest for Immortality in Contemporary Science-Fiction Film and Television. *Religions*, 15(1), 109.



18. Mavinkurve, M., & Lévesque, M. (2024). *New Technologies Challenge Freedom of Thought: Cases and Directions for Research*. Centre for International Governance Innovation.
19. Menon, S. (2024). Being “LaMDA” and the Person of the Self in AI. . In *AI, Consciousness and The New Humanism: Fundamental Reflections on Minds and Machines* (pp. 331-349). Singapore: Springer Nature Singapore.
20. Metz, S. (2024). *Interdisciplinary Perspectives on AI and Cloning*".
21. Morgan, F. E., Boudreaux, B., Lohn, A. J., Ashby, M., Curriden, C., Klima, K., & Grossman, D. (2020). *Military Applications of Artificial Intelligence: Ethical Concerns in an Uncertain World*. Santa Monica: RAND Corporation, 2020. Retrieved from https://www.rand.org/pubs/research_reports/RR3139-1.htm
22. Mutlag, A. H., & Hadaegh, B. (2024). Posthumanism OR Using Digital Technologies To Analyze Online Identities In Manjula Padmanabhan'S Harvest. *Migration Letters*, 21(S6), 499-512.
23. Oladoyinbo, T. O., Olabanji, S. O., Olaniyi, O. O., Adebisi, O. O., Okunleye, O. J., & Alao, A. I. (2024). Exploring the challenges of artificial intelligence in data integrity and its influence on social dynamics. *Asian Journal of Advanced Research and Reports*, 18(2), 1-23.
24. Peng, L., & Zhao, B. (2024). Navigating the ethical landscape behind ChatGPT. *Big Data & Society*, 11(1), 20539517241237488.
25. Possati, L. M. (2024). Quantum Technologies: a Hermeneutic Technology Assessment Approach. . *NanoEthics*, 18(1), 2.
26. Rachmawati, F., Maulana, A. R., Harefa, R. R., & Zalfaa, N. (2024). The Ethical Implications of AI in Expressing Religious Beliefs Online: A Restatement of the Concept of Religion. In *Proceeding International Conference on Religion, Science and*, 3, pp. 71-79.
27. Rashid, A., Kausik, A. K., Sunny, A. H., & Bappy, M. H. (2024). Artificial Intelligence in the Military: An Overview of the Capabilities, Applications, and Challenges. *Hindawi*, 1-29.
28. Sanderson, J. (2024). Listening to Nonhuman Animals in Science Fiction Film: Establishing Empathy Through Dinosaur Voices in Jurassic World: Fallen Kingdom. . In *Animals and Science Fiction* (pp. 95-110). Cham: Springer International Publishing.
29. Sonko, S., Ibekwe, K. I., Ilojiana, K. I., Etukudoh, E. A., & Fabuyide, A. (2024). QUANTUM CRYPTOGRAPHY AND US DIGITAL SECURITY: A COMPREHENSIVE REVIEW: INVESTIGATING THE POTENTIAL OF QUANTUM TECHNOLOGIES IN CREATING UNBREAKABLE ENCRYPTION AND THEIR FUTURE IN NATIONAL SECURITY. *Computer Science & IT Research Journal*, 5(2), 390-414.
30. Srivastava, S. (2024). The Paradox of Health in Post-Apocalyptic Social Imaginary of Selected Films. . *Managing Editor*, 114.
31. Verran, E. (2024). In Pursuit of Ourselves: Roleplaying (Self-) Control and the Doppelgänger Trope in Videogames. . *Game Studies*, 24(1).
32. Wikipedia Contributors. (2024, April 13). *Bade Miyan Chote Miyan* . Retrieved from Wikipedia: [https://en.wikipedia.org/w/index.php?title=Bade_Miyan_Chote_Miyan_\(2024_film\)&oldid=1218700568](https://en.wikipedia.org/w/index.php?title=Bade_Miyan_Chote_Miyan_(2024_film)&oldid=1218700568)
33. Wikipedia Contributors. (2024, April 13). *Ex Machina*. Retrieved from Wikipedia: [https://en.wikipedia.org/w/index.php?title=Ex_Machina_\(film\)&oldid=1218716593](https://en.wikipedia.org/w/index.php?title=Ex_Machina_(film)&oldid=1218716593)
34. Wikipedia Contributors. (2024, April 13). *Gattaca*. Retrieved from Wikipedia: <https://en.wikipedia.org/w/index.php?title=Gattaca&oldid=1214919798>
35. Wikipedia contributors. . (2024, April 13). *Blade Runner*. Retrieved from Wikipedia: https://en.wikipedia.org/w/index.php?title=Blade_Runner_2049&oldid=1218710154
36. Wikipedia Cotributors. (2024, April 13). *Mary Shelley's "Frankenstein"*. Retrieved from Wikipedia: [https://en.wikipedia.org/w/index.php?title=Mary_Shelley%27s_Frankenstein_\(film\)&oldid=1195457726](https://en.wikipedia.org/w/index.php?title=Mary_Shelley%27s_Frankenstein_(film)&oldid=1195457726)