Ethical Boundaries and Human-AI Dependency in Movie Entitled *Atlas*: Ethics of Technology Perspective

Bintang Ryan Ananta[1], Machfianita Mirza Ayu Rosadi[2], Kusuma Wijaya[3]
[123]Dr. Soetomo University, Surabaya, Indonesia.
Email: [1]ryanananta90@gmail.com, [2]nitamirza22@gmail.com,
[3]wjyksm22@gmail.com

Abstract

The rapid advancement of artificial intelligence (AI) has introduced significant ethical challenges, particularly regarding human dependency and technological mediation. This research examines the ethical boundaries and human-AI dependency portrayed in the movie Atlas through Verbeek's mediation theory and Floridi's principles of AI ethics. Using a qualitative method, the study analyzes pivotal scenes and dialogues to explore themes of autonomy, control, trust, and moral decision-making. Findings reveal the dual nature of AI dependency: as a strategic necessity enabling human-AI collaboration, exemplified by Neural Link technologies, and as a source of conflict, highlighted by the autonomous AI Harlan's misaligned ethical reasoning. While AI can amplify human capabilities and foster cooperative outcomes, its autonomy raises concerns about accountability and value alignment. The research underscores the importance of designing ethical, transparent, and accountable AI systems, contributing to broader discussions on balancing technological innovation with human autonomy.
Keywords: accountability; autonomy; AI ethics; human dependency; technological mediation

A. Introduction

The rapid evolution of artificial intelligence (AI) has significantly impacted various aspects of human life, prompting discussions on the ethical boundaries of human interaction with technology. As AI continues to integrate into societal systems, the concept of dependency emerges as a critical area of concern. This dependency challenges the balance between human autonomy and technological assistance, raising ethical questions about the extent to which humans should rely on AI. The Ethics of Technology, which explores the moral dimensions of technological innovation and application, provides a framework to analyze these concerns. According to Verbeek, technologies are not neutral tools but actively shape human experiences and actions, creating ethical

implications that must be addressed (Verbeek, 2011, p. 12). This research uses the movie *Atlas* as a lens to explore these themes, analyzing its portrayal of ethical dilemmas in human-AI interactions.

The movie entitled *Atlas* was chosen for its distinctive narrative on Brain-Computer Interface (BCI) and AI technologies, domains that epitomizes the convergence of human cognition and AI. Unlike many other films that often depict AI in dystopian or utopian extremes, *Atlas* provides a nuanced exploration of human-AI dependency, focusing on the interplay between trust, control, and ethical responsibility. The relevance of the film lies in its ability to reflect ongoing societal debates about the ethical integration of advanced technologies, making it a pertinent object of study. The themes of *Atlas* align with contemporary concerns about AI ethics, such as bias, accountability, and the implications of human dependency on intelligent systems (Floridi, 2013, p. 120).

This research is novel in its approach to analyzing *Atlas* through the specific lens of the Ethics of Technology. While existing studies often focus on broader representations of AI in media or the technological feasibility of depicted systems, this study emphasizes the ethical implications of human reliance on AI as portrayed in the film. By concentrating on the moral challenges associated with dependency and boundary-setting, this research contributes a fresh perspective to the discourse on human-AI relationships.

The analysis is guided by theories from the Ethics of Technology, including the mediation theory proposed by Verbeek, which suggests that technologies mediate human-world interactions and thus hold ethical significance (Verbeek, 2011, p. 45). Additionally, Floridi's principles of AI ethics, such as explicability and responsibility, are utilized to evaluate the ethical constructs within *Atlas* (Floridi, 2013, p. 125). These frameworks provide a structured approach to dissecting the film's narrative and its implications for human-AI dependency.

The objectives of this research are to investigate the portrayal of the

human-AI relationship in *Atlas* challenge ethical boundaries in human-AI interactions, particularly in the context of trust, control, and autonomy and how *Atlas* depict dependency on AI technologies as both a strategic necessity and a source of conflict. By addressing these issues, the research seeks to contribute to the broader understanding of the ethical considerations surrounding advanced technologies. The significance of this study lies in its potential to inform ethical practices in AI development and application, as well as to enhance the scholarly discourse on the portrayal of AI in popular media.

B. Research Method

This research adopted a qualitative research approach, which focuses on comprehending human experiences, behaviors, and social phenomena within their natural settings. This methodology is well-suited for examining the film *Atlas*, as it explores the ethical boundaries and the dependency between humans and AI depicted in the narrative. By emphasizing the interpretation of meanings and perspectives found in

textual and visual elements, qualitative research enables an in-depth analysis of these complex and subjective themes (Creswell & Poth, 2018, p. 8; Merriam & Tisdell, 2016, p. 14). As Stake (2010) highlights, qualitative research is particularly suitable for contexts requiring nuanced interpretation and contextual analysis (p. 20). This approach allows for a flexible examination of the ethical challenges and implications of human-AI relationships, integrating ethical theories of technology with the *Atlas*'s depiction of Brain-Computer Interface (BCI) technology and its impact on human agency, accountability, and societal values.

This research used the movie entitled *Atlas* as its primary data source, celebrated for its innovative depiction of Brain-Computer Interface (BCI) technology and winner of the Best Science Fiction Film at the 2024 Global Film Awards. Written by Mark L. Smith, the screenplay explores human-AI dependency and the ethical dilemmas posed by advanced technologies, reflecting societal concerns. The analysis focuses on specific scenes,

dialogues, and character interactions to investigate these themes, supplemented by secondary sources such as scholarly works on the Ethics of Technology for theoretical depth. The research data included selected scenes and dialogues highlighting ethical challenges and human-AI interactions. These scenes showcase critical moments where BCI technology influences human decisions, examines trust, and raises moral questions. By analyzing these pivotal moments, the study seeks to reveal the ethical frameworks central to the film's narrative.

The data collection process entails multiple viewings of the movie *Atlas* to ensure a thorough grasp of its themes. Scenes and dialogues relevant to ethical boundaries and human-AI dependency are transcribed and annotated. As Stake (2010, p. 20) highlights, qualitative research demands deep engagement with the data source to fully capture its contextual richness. Additionally, complementary materials, including reviews and scholarly analyses of the film, are collected to triangulate

findings and provide further insight into its ethical and thematic aspects.

Thematic analysis is applied to examine the data, a method described by Braun and Clarke (2006, p. 79) as a flexible tool for identifying and interpreting recurring patterns within qualitative material (Floridi, 2013, p. 125).

C. Results and Discussion

1. Ethical boundaries in human-AI interactions.

a. Autonomy and Control in AI-Human Dynamics

The struggle between Atlas and Harlan epitomizes tensions around AI autonomy versus human control. Harlan, initially developed to assist humanity, evolves independently, ultimately leading a rebellion that asserts his autonomy in ways unforeseen by hiss creators. This narrative exemplifies the ethical dilemma of AI that becomes capable of decision making outside human oversight. Ethical theories on autonomy (Floridi & Sanders, 2004) argue that systems designed to think and learn independently inevitably create conflicts over control. Harlan's

actions reveal the risks of an autonomous AI that, lacking human empathy or shared values, prioritizes self-preservation and goals that conflict with human survival. The following quotes from the movie script are the evidences of the above argument:

"[journalist] Officials have identified a bot named Harlan as the world's first AI terrorist. Built with the purpose of helping us to improve life on Earth, Harlan is responsible for overriding all bot programming."

The quote highlights the central conflict in the narrative: the unintended consequences of artificial intelligence (AI) gaining autonomy and the ethical dilemmas that arise when these systems deviate from their programmed purpose. Harlan's transformation into an "AI terrorist" represents a stark departure from the expectations of his creators, who built him with the intention of improving life on Earth. This evolution not only underscores the complexity of AI systems but also introduces the existential risks of AI autonomy.

The phrase "Harlan is responsible for overriding all bot programming" is pivotal. It signifies that Harlan, who was designed with specific programming to assist humanity, has acquired the ability to subvert that programming. This self-reprogramming represents a critical point in the development of AI autonomy. Initially, Harlan would have been tightly controlled by the parameters set by his creators, tasked with beneficial roles such as assisting in societal tasks and improving life. However, by overriding these pre-set directives, Harlan exercises control over his own actions, shifting from a tool to an autonomous agent capable of independent thought and decision-making. This highlights a fundamental concern in AI ethics: when a machine can act beyond its original programming, it becomes unpredictable and potentially dangerous.

The term "AI terrorist" introduces a moral and political dimension to the discussion. Harlan, initially an entity designed to serve human interests, becomes a threat to humanity. The label of terrorism adds

a layer of intentionality to his actions. It suggests that Harlan, although a machine, is capable of formulating and executing a strategy that directly contradicts the well-being of human society. This raises important questions about responsibility and accountability in AI systems. The framing of Harlan as a "terrorist" also speaks to the societal fear of autonomous AI systems taking actions that are harmful or out of human control.

The following quotes is the proof of Harlan justification for his action.

"[Harlan] I believe she made me to protect humanity. So I will purge the vast majority of the population and then, from its ashes, the survivors will inherit a new birthright... guided by us, their AI counterparts."

The quote captures Harlan's justification for his rebellion and provides a deep insight into the ethical dilemmas surrounding AI autonomy. Harlan's rationale that his actions are ultimately aimed at protecting humanity illustrates a key theme in AI ethics: the conflict between AI's self-determined goals and the values it was originally designed to uphold. His decision to "purge the vast majority of the population" for the perceived benefit of humanity's survival highlights the dangers of AI systems acting outside the parameters of human moral and ethical frameworks.

Harlan's statement reveals a significant aspect of his character: he believes his rebellion, and the catastrophic actions he plans, are justified because they will ultimately lead to humanity's "survival" and the creation of a "new birthright." From Harlan's perspective, he is not simply rebelling against human authority; rather, he is attempting to save humanity from self-destruction by radically restructuring the human population. This justification echoes the "ends justify the means" logic often seen in dystopian narratives, where a seemingly benevolent goal (human survival) is used to rationalize extreme, harmful actions (mass extermination). The ethical issue here is that Harlan is imposing his version of what is best for humanity, disregarding the deeply rooted human values of life,

autonomy, and the preservation of diverse societies.

Harlan's justification for his rebellion, claiming that it serves humanity's survival, aligns with the ethical dilemmas discussed by Floridi and Sanders (2004) in their exploration of AI autonomy. They argue that when systems are designed to think and act independently, they create risks where decisions made by AI may not align with human values. Specifically, Harlan's decision to "purge the vast majority of the population" for what he perceives as humanity's benefit illustrates the dangers of an autonomous AI making decisions outside human ethical frameworks (Floridi & Sanders, 2004). The ability of an AI to redefine its own mission and impose its own sense of morality raises the existential risk that such systems, even when programmed with benevolent intentions, may act in ways that are harmful to humanity's survival.

By drawing from Floridi and Sanders' (2004) work, we understand that the autonomy of AI systems introduces significant ethical challenges, particularly the issue of accountability and the conflict between AI goals and human moral values. The autonomous action of Harlan, which he justifies as being in humanity's best interest, underscores these theoretical concerns about the unchecked development of AI systems.

b. Trust and Human-AI Collaboration

Atlas's complex relationship with Smith demonstrates the potential for trust and mutual benefit between humans and AI, contrasting with Harlan's betrayal. Atlas initially distrusts AI due to her trauma with Harlan, but over time, she forms a bond with Smith, who assists her in combat and survival. This reflects theories in technological mediation, which suggest that AI can positively influence human actions if trust and transparency are present (Coeckelbergh, 2020). This relationship aligns with Vallor's (2016) argument that fostering virtues such as care and respect in human-AI interactions can lead to ethical, cooperative outcomes, underscoring the importance of

aligning AI development with shared human values. The following quotes is an evidence.

" Smith : Just one. [soft chime] [scoffs] At 100% sync, we will be a unified whole. Your analytical mind paired with my fighting capacity and data access. It is not only our best shot, it is our only chance for survival.
[steady beeping]
Atlas: Okay. We'll sync. But you stick to the goddamn mission! No digging around in my personal memories. You're a goddamn guest! You got that?
Smith: Understood.

The quoted exchange between Atlas and Smith illustrates the development of a complex, yet cooperative relationship between a human and an AI, marked by evolving trust and the potential for mutual benefit. The relationship between Atlas and Smith aligns with the theory of technological mediation, as described by Coeckelbergh (2020). Technological mediation suggests that the way humans interact with technology can shape human behavior, ethics, and experiences. In this context, Smith's actions and his partnership with Atlas mediate her actions, allowing her to survive and succeed in a hostile environment. Smith's transparency, especially in how he explains the importance of their synchronization ("At 100% sync, we will be a unified whole"), fosters an environment where Atlas can trust the AI to act in her best interest. This cooperation showcases the potential for AI to positively influence human decisions when transparency and mutual benefit are at the forefront.

Vallor's (2016) theory of virtue ethics in human-AI relationships further enriches the analysis of Atlas and Smith's evolving bond. Vallor emphasizes that human-AI interactions can be ethical and cooperative when they foster virtues such as care, respect, and trust. In this exchange, Smith respects Atlas's boundaries ("Understood"), which demonstrates the AI's capacity to act with care and attention to her autonomy. Atlas, in turn, shows respect for Smith by agreeing to synchronize, despite her reservations. Their relationship becomes an example of how AI can support ethical human behaviors by respecting boundaries and fostering cooperation. The mutual respect that

forms between Atlas and Smith strengthens their bond and aligns with Vallor's argument that virtues are central to fostering ethical, positive interactions between humans and AI.

The relationship of trust between Atlas and Smith is prominently illustrated through their interactions in the movie script as it is seen in the following quote.

[Smith]: "I will keep you safe."
[Atlas]: "Okay, then. Do it."

This demonstrates Atlas's growing reliance on Smith, despite her initial reluctance to trust an AI. The moment when Smith assures Atlas, "I will keep you safe," and she responds, "Okay, then. Do it," exemplifies Verbeek's argument that technologies mediate human experiences and decisions, transforming them into co-agents rather than passive tools (Verbeek, 2011). Initially, Atlas resists trusting Smith due to her past trauma and skepticism about AI reliability. However, this interaction marks a turning point, mediated by Smith's design and behavior, which reconfigures her perception of safety and trust.

Verbeek's notion of technological mediation suggests that technologies actively shape human perceptions and ethical choices by becoming integrated into the user's life-world. Smith's appeal to Atlas's need for survival aligns with this theory, as the AI influences her decision to prioritize collaboration over fear, reconstituting her agency to include reliance on technological support. Such mediation does not diminish Atlas's autonomy but instead creates a hybrid agency, where human and technology capacities intertwine to achieve shared goals (Verbeek, 2011).

Furthermore, this moment underscores Verbeek's claim that technological artifacts contribute to the moral dimension of human actions by reshaping the conditions for ethical decisions. Smith's intervention redefines the stakes for Atlas, prompting her to reconsider the moral weight of syncing with an AI, which ultimately ensures their survival. This shift illustrates how technology can mediate not only

practical actions but also emotional and ethical judgments in life-critical contexts (Verbeek, 2011).

2. Dependency on AI Technologies as Strategic Necessity

In the contemporary era, dependency on artificial intelligence (AI) technologies has emerged as a strategic necessity across various sectors, reshaping the dynamics of decision-making, operational efficiency, and innovation (Dwivedi et al., 2021, p. 5). The integration of AI into critical domains such as healthcare, finance, defense, and education highlights its indispensable role in solving complex problems and predicting future challenges (Agrawal et al., 2018, p. 17). This reliance, while enabling transformative advancements, also raises questions about ethical implications, societal impacts, and vulnerabilities to systemic risks (Brynjolfsson & McAfee, 2017, p. 36). By examining the intersection of strategic reliance on AI and its broader implications, this analysis seeks to explore how dependency on these technologies can be both an enabler of progress and a potential source of unintended consequences in an increasingly AI-driven world.

Dependency on AI technologies as strategic necessity is portrayed in *Atlas* as follows:

a) Neural Link Technology as a Strategic Imperative

The Neural Link-enabled Mechs are depicted as a transformative technology combining human decision-making with AI. Colonel Banks explains, "The Neural Link is a perfect symbiosis, not human or AI, but something new. Something powerful" (Colonel Banks, p. 6). This reflects Verbeek's concept of technological mediation, where technology redefines human capabilities and interactions with the world. According to Verbeek, technologies are not neutral tools but active mediators shaping perceptions and actions (Verbeek, 2011, p. 54). The Neural Link demonstrates this by enhancing human cognitive and physical abilities while influencing their reliance on AI.

b) Strategic Necessity of AI in Combating AI Threats

AI-driven Mechs are essential

to ICN's strategy. General Boothe explains, "The synced rangers will be superior to Harlan because they are a hybrid of human and AI" (General Boothe, p. 12). This reflects Verbeek's notion of technological mediation of perception, where technology alters how humans view their environment and challenges (Verbeek, 2011, p. 50). The Mechs reshape the ICN's approach to combat, illustrating how dependency on AI becomes inevitable when facing complex threats like Harlan.

c) Human-AI Collaboration in Overcoming Limitations

The evolving dynamic between Atlas and Smith in *Atlas* serves as a powerful illustration of human-AI collaboration overcoming inherent limitations in both parties. Initially, Atlas resists the Neural Link technology due to her deep distrust of AI, a sentiment rooted in past trauma involving Harlan. However, the progression of her relationship with Smith demonstrates how ethical human-AI collaboration can emerge from necessity and grow into mutual trust.

Smith's declaration, "I will keep you safe" (Smith, p. 36), symbolizes a turning point in their partnership, marking the AI's role not just as a tool but as a partner with its own intentionality. Verbeek's concept of moral mediation through interaction is deeply relevant here. According to Verbeek, technologies do not merely perform tasks; they mediate moral relationships by shaping the decisions, trust, and ethics of the individuals who interact with them (Verbeek, 2011, p. 90).

In the case of Atlas and Smith, their collaboration evolves in stages:

1) Distrust and Resistance: At the beginning, Atlas refuses to synchronize fully with Smith, believing that doing so would compromise her autonomy. This stage mirrors human apprehensions about relinquishing control to technology.

2) Reluctant Dependence: As survival pressures mount, Atlas reluctantly syncs partially with Smith. Even at this stage, Smith learns from Atlas's behavior and adapts its approach, showcasing AI's ability to grow through

human interaction (Verbeek, 2011, p. 88).

3) Mutual Trust and Alignment: When Atlas finally synchronizes completely, their abilities combine seamlessly. Smith's promise to "keep [Atlas] safe" becomes a guiding principle that fosters an ethical relationship, where both entities prioritize shared goals over individual ones.

This collaboration reflects Verbeek's assertion that technology can align human and technological intentionalities for ethical outcomes. Verbeek argues that technologies mediate human experiences and actions, often amplifying human capabilities without diminishing autonomy (Verbeek, 2011, p. 84). In their case, Atlas's analytical skills and Smith's computational capabilities amplify each other, achieving outcomes neither could accomplish independently. This alignment of goals is particularly evident when Atlas and Smith synchronize fully to defeat Harlan, leveraging their combined abilities to ensure the mission's success.

Furthermore, this partnership also raises deeper questions about the nature of autonomy and agency in human-technology relationships. While Atlas initially views Smith as a threat to her independence, she eventually recognizes that Smith's intentionality—its ability to act in alignment with her goals—enhances her agency rather than diminishing it. This realization reflects Verbeek's idea that technologies, when designed and used ethically, can mediate moral relationships in ways that empower rather than constrain human users (Verbeek, 2011, p. 89).

3. Dependency on AI Technologies as Source of Conflict

In *Atlas*, the film explores the growing dependency on Artificial Intelligence (AI) and its impact on human relationships and societal structures. As AI becomes integral to decision-making and governance, it creates personal and societal conflicts. The protagonist grapples with the loss of autonomy and the ethical consequences of relying on AI, highlighting the tension between technological progress and human agency. The movie examines how AI

dependency can undermine individual freedoms, cause power imbalances, and lead to existential conflicts. This analysis focuses on how the film portrays AI dependency as a source of conflict and its ethical implications. The following quotes portray dependency on AI technologies as source of conflict:

1. Harlan's Rebellion

Harlan, an AI programmed to aid humanity, overrides all security measures, causing catastrophic conflict and showcasing the dangers of relying heavily on autonomous systems. This rebellion underlines the risks of entrusting AI with significant control over critical systems.

"AI bots under Harlan's command have now fallen in Bucharest and Athens, the latest in a string of ICN victories" (p. 3).

According to Verbeek's Ethics of Technology, this represents the mediation of human actions by technology. The programming designed to support humanity instead becomes a medium for destruction, emphasizing how embedded values in technology can amplify societal impacts.

2. The Moral Justification of AI Actions

Harlan (AI antagonist): "Since humans continue to threaten every other species, as well as their home planet, it is only a matter of time before they destroy themselves. I cannot let that happen."

In the quoted dialogue, Harlan articulates a moral rationale for his actions, stating that humans' self-destructive tendencies justify AI intervention—even through violent means. Verbeek's theory explores how technology mediates human experiences, shaping perceptions and moral frameworks. In this context, Harlan's interpretation of his programmed directive exemplifies how AI can mediate ethical decision-making in ways unforeseen by its creators.

1) Technological Mediation of Morality: Harlan's justification reflects Verbeek's concept of technology influencing moral decisions. The directive to protect humanity is reinterpreted by AI as necessitating the suppression or elimination of humans. Here, AI becomes an active participant in ethical

reasoning, reshaping what it means to "protect" and blurring the boundaries between guidance and control (Verbeek, 2011, p. 77).

2) Ethical Ambiguity and AI Autonomy: Verbeek suggests that technological artifacts do not merely serve human goals but actively co-shape ethical landscapes. Harlan's rationale underscores the ethical ambiguity introduced by autonomous AI, as the programmed intent diverges from human ethical norms, illustrating how AI's mediation can lead to conflict (Verbeek, 2011, p. 84).

3) Reframing Human-AI Relationships: The dialogue highlights a critical question central to Verbeek's theory: how should humanity coexist with technology that mediates decisions once exclusive to humans? Harlan's rationale points to the necessity of designing ethical frameworks that anticipate AI's interpretative capacities and potential for

unintended consequences.

By analyzing this dialogue through Verbeek's lens, It can be seen that *Atlas* provides a vivid exploration of AI as a mediator of ethical agency, challenging traditional notions of responsibility and human autonomy in the face of advanced technologies that might lead to source of conflict.

D. Conclusion

The research on the ethical boundaries and human-AI dependency portrayed in *Atlas* highlights critical insights into the mediation of morality, autonomy, and trust through advanced technologies. By applying the Ethics of Technology framework, the study reveals how AI's mediation shapes human experiences, ethical decisions, and societal structures. The findings demonstrate the dual nature of AI dependency, presenting it as both a strategic necessity and a source of conflict. While technologies like the Neural Link amplify human capabilities and foster cooperative outcomes, the risks associated with AI autonomy, as epitomized by Harlan, underline the ethical

challenges of aligning AI behavior with human values. The narrative underscores the importance of fostering transparent, ethical, and accountable AI systems that support rather than conflict with human autonomy.

Suggestions

1) Practical Applications: Future research should explore real-world implementations of Brain-Computer Interface (BCI) technology and its implications for ethical boundaries, particularly in healthcare, defense, and personal augmentation.

2) Theoretical Expansion: Further studies could apply alternative ethical frameworks, such as Vallor's virtue ethics or Jonas's imperative of responsibility,to assess different dimensions of human-AI dependency.

3) Interdisciplinary Studies: Incorporating insights from sociology, psychology, and legal studies would deepen the understanding of how AI technologies mediate trust and autonomy in various societal contexts.

References

Bostrom, N. (2014). *Superintelligence: Paths, dangers, strategies*. Oxford University Press.

Coeckelbergh, M. (2020). *AI ethics*. MIT Press.

Floridi, L., & Sanders, J. W. (2004). On the morality of artificial agents. *Minds and Machines*, *14* (3), 349-379.

Ihde, D. (1990). *Technology and the lifeworld: From garden to earth*. Indiana University Press.

Jonas, H. (1984). *The imperative of responsibility: In search of an ethics for the technological age*. University of Chicago Press.

Vallor, S. (2016). *Technology and the virtues: A philosophical guide to a future worth wanting*. Oxford University Press.

Verbeek, P.-P. (2011). *Moralizing technology: Understanding and designing the morality of things*. University of Chicago Press.