

Creativity versus Artificial Intelligence

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Abstract

This article examines the evolving relationship between human creativity and artificial intelligence, focusing on the transformative impact of Generative AI (GenAI) on the landscape of human expression. By investigating the inherent tension between algorithmic processing and innate human cognition, this conceptual study acknowledges AI as an indispensable tool for synthesizing complex datasets and automating functional tasks across diverse sectors. However, its role within the creative domain remains highly contested. This inquiry posits a fundamental cognitive risk arising from the hybridization of the creative process, noting that human cognitive evolution is failing to keep pace with the accelerating velocity of AI development. Through an analysis of the works of historical masters such as Caravaggio, Picasso, and Leopardi, the article argues for the inherent ontological superiority of human creativity, which is rooted in a unique capacity to transmit complex emotion and aesthetic depth. The comparative case study method enables the identification of theoretical models in human-artificial intelligence interaction. Ultimately, the study evaluates whether GenAI functions as a sophisticated augmentative tool or a disruptive force capable of eroding the exclusive cognitive functions that define human artistic mastery.

Keywords: Generative AI, Human Creativity, Cognitive Risk, Human-AI Symbiosis, Aesthetic Depth

1. Introduction

Artificial intelligence (AI) represents a paradigm shift in technological innovation. Characterized by the capacity to process heterogeneous datasets, AI has become an indispensable tool for synthesizing complex knowledge maps and decoding environmental stimuli. Its utility extends across diverse domains, encompassing automated software engineering, robotics, clinical diagnostics, and autonomous transit systems. Nevertheless, a fundamental distinction remains: while AI is a synthetic construct based on algorithmic frameworks and machine learning, creativity is essentially a natural phenomenon innate in human beings.

Beyond practical utilities in various domains—such as streamlining recruitment, marketing, clinical interventions, and legal proceedings—AI is demonstrating significant creative potential. Specifically, Generative AI (GenAI)—a subset of AI—by leveraging vast datasets can produce literary works, visual art, and original musical compositions, thereby fundamentally restructuring the landscape of human expression.

The primary challenge of AI is not merely its technological risk, but rather the cognitive risk that arises as creativity tend to become a hybrid process. Furthermore, as AI's speed increases, humans are not accelerating at the same pace. This leads to a critical question: how will the development of AI—specifically GenAI—impact human creativity? Furthermore, do these systems have the potential to substitute for human creative capabilities, or will they merely serve to augment them?

Schilirò (2025) argues that GenAI is profoundly influencing human behavior and transforming the creative process. However, he suggests that this technology serves to augment, rather than replace, human creativity; in this symbiotic partnership, AI provides computational scale, whereas humans contribute foundational ideas and interpretative meaning.

In this article, I contend that human creativity possesses an inherent ontological superiority over its artificial counterpart—a position supported by the legacy of historical figures who innovated long before the advent of such technology. Specifically, this inquiry examines whether creativity remains an exclusive function of human cognition or if society is moving toward a—perhaps uncritical—reliance on artificial intelligence. Should the latter prevail, it raises the question of whether the future could produce masters of the caliber of Caravaggio or Picasso, or poets of

Leopardi's profundity. While these figures lacked access to AI, it remains a critical point of speculation: had they utilized such tools, would their creative processes and aesthetic depth have been augmented, or would their capacity to transmit complex human emotion have been diminished?

Therefore, in terms of theoretical contribution, this research adds to the broad body of knowledge regarding the debate on AI-human creativity. Specifically, it engages with the discourse on computational creativity (Boden, 2009) by challenging the positivist view of AI creativity, while acknowledging the utility of AI tools in supporting the human creative process.

2. Methodological Approach

This conceptual paper employs a comparative case study method to derive theoretical propositions regarding the uniqueness of human creativity. As this research does not rely on empirical surveys or quantitative datasets, its primary evidence consists of the qualitative differences between two distinct creative processes. To define the "uniqueness" of human creativity, the study first establishes what it is not. Whereas AI creativity is rooted in optimization and probability—a closed system of refinement defined by mathematical convergence—human creativity constitutes an open system of meaning-making (Doyle, 2017). Within this framework, creative "flow" (Csikszentmihalyi, 1997) is driven by divergence and the existential necessity to resolve internal or external tension.

By contrasting the divergent/open Human Creative Loop with the convergent/closed AI Creative Loop, the method isolates specific variables—such as experiential friction and suffering—that are structurally absent from AI. In doing so, it establishes a framework for identifying theoretical patterns of human–AI interaction, creating the tension necessary for conceptual inquiry. By analyzing historical masters such as Caravaggio, Picasso, and Leopardi, the study establishes a benchmark of high-level human cognition. Comparing these historically validated works against the probabilistic outputs of Generative AI (GenAI) reveals a distinct ontological gap, demonstrating that while AI can replicate aesthetic style, it cannot replicate the transformative process that birthed the original work.

3. Generative AI: Potential and Pitfalls

The rapid rise of AI has fundamentally transformed both human and business activities. This evolution was accelerated by exponential growth in computational power and the availability of Big Data. Alongside AI, several key technologies—including machine learning, cloud computing, digital platforms, the Internet of Things (IoT), robotics, blockchain, extended realities (AR/VR), and digital twins—have collectively driven the ongoing digital transformation (Schilirò, 2022).

More recently, AI has evolved into GenAI, (Note 1) enabling new forms of creativity and innovation. Eapen et al. (2023) argue that a primary opportunity GenAI offers organizations is the ability to augment human creativity. Specifically, it serves as a powerful brainstorming tool that streamlines the idea-generation process. Schilirò (2024) contends that GenAI is reaching unprecedented levels of creativity and understanding through increasingly sophisticated models. In this regard, Crupi et al. (2025) highlight that the emergence of Generative Adversarial Networks (GANs)—pioneered by Goodfellow et al. (2014)—alongside the introduction of the transformer architecture, marked a pivotal milestone in the development of GenAI.

Unlike traditional AI, which is designed for standardized, well-defined tasks, GenAI relies on sophisticated machine learning algorithms and neural networks capable of learning from data and generating original content. Consequently, GenAI processes information in non-linear ways to produce outputs that often transcend the limits of conventional human reasoning (Schilirò, 2025). The primary goal of GenAI is to create new content through non-linear, probabilistic exploration. For instance, Zhou and Lee (2024) highlight how GenAI utilizes text-to-image systems—such as Midjourney, Stable Diffusion, and DALL-E—to automate artistic execution and generate complex digital artwork. Advanced generative deep learning models are capable of generating new ideas and innovating through novel creative products and service concepts. However, as Drucker (1985) notes, within a business context, creativity is defined as the generation of ideas; these only become innovations when—through purposeful, systematic discipline and management as a corporate function—they are translated into novel products and services. While Drucker (2002) observed that knowledge-based innovations typically exert the greatest market impact, they historically required decades to be realized; in the era of GenAI, this timeframe has been dramatically compressed. Yet, this gain in speed does not automatically equate to a gain in value. This technical efficiency introduces a strategic paradox: the ease of generation can undermine the rigor of innovation.

The potential of GenAI is no longer limited to text generation; it assists in generating new ideas, identifying unexplored opportunities, and enhancing the quality of initial concepts. Furthermore, its creative capacity enables the development of diverse artistic forms, including painting, music, and literature.

A significant development in generative AI is the emergence of Agentic AI. The rise of these autonomous agents

promises to further revolutionize how creators develop content, offering powerful ways to automate and amplify creative workflows. While standard GenAI is passive—waiting for input and responding to specific prompts—Agentic AI is active, setting its own sub-tasks to achieve a broader goal and independently executing workflows. Consequently, the human role shifts: whereas GenAI requires directing every step, Agentic AI allows humans to define the overarching objective and set the necessary boundaries. However, for the purposes of this essay, the focus remains primarily on GenAI.

Beyond merely automating processes, GenAI facilitates the ideation of new products, services, and business strategies. By shifting from generic outputs to the real-time creation of customized solutions, GenAI also serves as a catalyst for innovation. In this capacity, it acts—as Drucker’s theories on systematic innovation suggest—as an engine for creativity that dramatically reduces the time required to move from an initial concept to a market-ready product. Finally, GenAI empowers non-technical personnel to perform high-level data analysis and creative execution, shifting the organizational focus from executing tasks to directing them.

As Schilirò (2025) underscores, another original aspect of GenAI is its ability to overcome the biases of experience. (Note 2) Preconceptions arising from past experiences can often limit a designer’s ability to imagine radically new solutions; GenAI, by processing unconventional inputs, can help overcome these cognitive limitations. For instance, atypical designs generated by AI can stimulate new perspectives and counter design fixation—an excessive focus on standardized forms—by encouraging the exploration of innovative shapes and functions. Consequently, the evolution of GenAI has transformed it into a creative tool that does not replace human intuition but augments it, as highlighted by Ivcevic and Grandinetti (2024). This demonstrates that an increasingly close collaboration between human intelligence and AI can foster creativity by breaking traditional mental models.

However, GenAI is not without its pitfalls, which are becoming increasingly structural and strategic rather than merely technical. While the technology automates tasks, the high-speed generation of content often results in 'hallucinations' and fabricated citations. This can lead to the proliferation of low-utility synthetic content (or '*workslop*')—an influx of mediocre, AI-generated material that requires more human time to verify and refine than the original task would have taken. (Note 3)

Moreover, an overreliance on AI for reasoning threatens to induce a decline in critical thinking and originality among the workforce, intellectuals, and researchers. Finally, many organizations fall into the trap of 'shadow AI,' where employees utilize disparate tools without a centralized strategy, leading to significant risks regarding data security and operational efficiency. It follows that while GenAI is a powerful and transformative tool, it must remain governed by human intelligence. Humans must define the ethical boundaries and strategic direction of its use, rather than allowing the technology to dictate the terms of human engagement.

4. Creativity and Its Significance

There is no single, unified definition of creativity. However, it is a phenomenon inextricably linked to human nature and an essential human skill; indeed, the great cultural, social, scientific, and technological shifts throughout history have originated from the inherent creative capacity of the human spirit (de Barros et al., 2025). Although popular discourse often confines creativity to the artistic realm, it is crucial to broaden this perspective and recognize creative capacities across all spheres of life, as creativity is, effectively, the engine of progress.

Beyond its historical and social impact, creativity is among the most complex and valued cognitive abilities. Cognitive definitions typically focus on the traits of the creative individual and their internal psychological processes, encompassing the generation of novel, useful ideas and expressions. It involves divergent thinking, flexible problem-solving, and the ability to connect disparate concepts—effectively redefining boundaries by representing people, places, and environments in original ways.

As Guilford (1950) highlighted, creativity requires divergent thinking to work alongside convergent thinking to produce viable, novel solutions. Scholars across disciplines (Gardner, 1983; Sternberg, 2003; Jung & Hunter, 2023) further emphasize that creativity is a multidimensional process, involving not only the generation of ideas but also the ability to synthesize information and adapt to rapid change.

On the other hand, human intelligence—as defined by Sternberg in the *Britannica*—consists of the abilities to learn from experience, adapt to new situations, understand and handle abstract concepts, and use knowledge to manipulate one’s environment. Effective adaptation draws upon several cognitive processes, including perception, learning, memory, reasoning, and problem-solving. A key emphasis in defining intelligence, therefore, is that it is not a singular cognitive process; rather, it is a selective combination of these processes purposively directed toward effective adaptation.

Creativity, while distinct from intelligence, is closely related to it. This relationship has been extensively studied, with the prevailing view—specifically the Necessary Condition Hypothesis—proposing that while intelligence is a necessary

prerequisite for creativity, it is not by itself sufficient (e.g., Karwowski et al., 2016). Recent empirical evidence from specialized statistical tests provides strong support for this hypothesis. Consequently, the connection between the two is recognized as fundamental, essential, and inextricable.

5. Creativity in Caravaggio and Picasso

Caravaggio, the pseudonym of Michelangelo Merisi, was born in Milan in 1571 and died at the age of 39 in 1610. He led a tumultuous and adventurous life; after fleeing Rome—where he spent the majority of his career—following a murder accusation, he spent his final years traveling between Naples, Malta, and Sicily. He eventually died (or was perhaps murdered) in Porto Ercole, Tuscany, while attempting to return to Rome.

Caravaggio is undoubtedly one of the greatest painters of all time. As a founder of the modern naturalist movement and a precursor of Baroque sensibility, he was a true innovator.

To grasp his vast intelligence and profound creativity, one needs only observe his oil painting, *The Calling of Saint Matthew*, preserved in the Contarelli Chapel of the Church of San Luigi dei Francesi in Rome.

What does this painting tell us? First of all, there is the unusual choice of setting a religious scene in a location seemingly unsuitable for the divine: a Roman tavern where people eat, drink, and gamble. This was a place frequented by ordinary people, rather than illustrious figures, nobles, or ecclesiastics. However, these choices are precisely what make his style so profoundly innovative and dramatic. Had he hypothetically consulted an Artificial Intelligence, would it have suggested he set a sacred scene in a tavern? Certainly not.

Secondly, Caravaggio achieves a visual revolution through his masterful use of light and shadow. He treats light with profound intentionality, making it the defining feature of his work. The scene is immersed in deep semi-darkness; the sole source of illumination is a stark shaft of light that originates not from the window within the painting, but from an unseen point in the upper right, beyond the frame. Furthermore, the light serves a dual function: a practical one, highlighting the figures with striking realism, and a symbolic one, visually representing the saving intervention of Providence. Indeed, the light follows Christ's beckoning gesture, striking Matthew squarely and signaling his divine calling. Would Artificial Intelligence have suggested that Caravaggio handle the light in such a way? Certainly not.

Thirdly, Saint Matthew and his companions are dressed in the fashion of the late 16th and early 17th centuries, contrasting sharply with Jesus and Saint Peter, who wear the traditional robes of their own era. This stylistic device serves to represent the power of the Christian message as something capable of transcending time. This, combined with the choice of a tavern setting, gives the work a timeless character. If he had consulted an AI, would it have suggested such historical anachronisms? Certainly not.

Another aspect that distinguishes Caravaggio as an innovator is his decision to depict well-known prostitutes within sacred imagery. A prime example is *The Penitent Magdalene*, which features Anna Bianchini, a notorious courtesan of the era. Caravaggio portrays Magdalene seated with her head bowed and hands resting in her lap. To her right, discarded jewels lie on the floor, symbolizing her rejection of vanity and past sins. This specific painting broke the traditional rules of the Counter-Reformation.

As with the innovative aspects previously discussed, Caravaggio's human unpredictability is far more powerful than the rigid logic and 'creativity' of an Artificial Intelligence.

Finally, Caravaggio's mastery of color was central to his impact. He employed a selective palette—most notably deep yellows, intense blacks, and mineral blues—chosen for their ability to catch the light against profound shadows. This technique provided his figures and props with striking depth and realism. By marrying this specific color theory with his innovative lighting, Caravaggio created an atmosphere of such psychological intensity that his work remains uniquely haunting and memorable.

Another example of creative genius is Pablo Picasso. He lived in exile in France—primarily Paris—for much of his life, where he was poorly tolerated by authorities who denied him French citizenship for decades. Alongside Georges Braque, Picasso was the theoretician of painting as an autonomous, conceptual practice; he assembled elements drawn not from the reality of vision, but from the reality of conception. His work is distinguished by an innovative vision of space, delineated by a geometric network of points; of time, captured through a simultaneity of moments; and of the human form, where multiple perspectives exist in co-presence. The decomposition of forms—a hallmark of Analytic Cubism—breaks objects down into geometric shapes depicted from multiple perspectives simultaneously, creating an effect of visual complexity. Ultimately, his treatment of objects blurs the boundary between mimesis and fiction.

His masterpiece, *Guernica*, located at the Reina Sofía Museum in Madrid, captures the horror of the town's bombing by depicting a room filled with distorted faces, disintegrating bodies, and dying horses. By using a monochrome palette of grey tones, he presents the world not as a construction governed by proportion and perspective, but as pure disorder and

chaos. Would AI have the ability to suggest such a harrowing theme, drawn from historical experience, to Picasso for a painting? Furthermore, would AI choose a monochrome palette of grey tones to convey that message?

From these two examples of creative genius—Caravaggio and Picasso—we can draw a broader conclusion regarding the nature of creation: the essential role of time. Art requires the labor of unsuccessful attempts, the humility to examine one's own mistakes, the persistence to solve problems as they arise, and—above all—freedom of mind.

In this context, time passes slowly; there is space for observation, for hushed questions, for legitimate errors, and for the painstaking effort to remedy them, as the creator is fully embodied in the creative process (Wittmann, 2014). This "Slow Time" shapes both artistic and professional maturity, ensuring that the process is valued as much as the result.

In contrast, modern artificial intelligence traverses and compresses that time. It analyzes, synthesizes, and acts without the need for hesitation or apprenticeship. The risk is not merely that AI will work for us, but that it will *learn* for us. If experience is born from the friction between theory and practice—the iterative cycle of attempt, error, and correction—what happens when that friction disappears?

Where current AI interactions are often transactional (Prompt → Result), "Slow Time" promotes a dialogical process. It represents a fascinating pivot from the industry's obsession with "efficiency at all costs," offering a fresh theoretical lens to evaluate Human-AI interaction. By moving beyond simple efficiency metrics, we can move toward a model of contemplative co-creation.

The challenge, then, is to preserve the spaces where the artist, professional, or researcher can still observe, fail, and grow. We must design a future where technology complements experience rather than replacing it, safeguarding the sanctuary where the mind remains free to stumble, improve, and ultimately, evolve.

6. The Poem *L'Infinito*: Human Creativity and Emotions versus AI

Section 2 notes that GenAI is capable of generating text and crafting original literary content. While this is true, it raises an essential question: could AI ever truly replicate the profound depth of a poet like Giacomo Leopardi?

A vastly cultured intellectual, Leopardi remains one of the most significant figures in world literature. His life in the first half of the 19th century was defined by chronic ill health and a strained relationship with his father. Famed for his 'cosmic pessimism,' he is widely regarded as a profound precursor to existentialism.

His most celebrated poem, '*L'Infinito*,' composed of fifteen blank hendecasyllables, is a mental journey that juxtaposes the vastness of space with the immediate landscape (Leopardi, 1845). (Note 4) By focusing on the interior self in relation to physical reality, Leopardi creates a profound suggestion of infinity. Here, nature represents a threshold; his poetics seek to transcend the limits of human perception to reach the truly infinite.

The poem captures the 'experiments, situations, affections, and historical adventures' of his soul, as Leopardi himself noted in a letter. In his vision, '*L'Infinito*' is not an objective reality, but a construct of the human imagination—a metaphysical concept representing the vital impulse and the inherent striving for happiness. Within the poem, the experience of the infinite is dualistic, balancing the loss of self with the profound pleasure that emerges from it. Ultimately, it is a meta-poem: a text that explores the very possibility of creation, born from solitude and *the imagination of the unseen*. This poetry also navigates the clash between the infinitesimally small and the immeasurably large—that which the mind is capable of comprehending within itself as it expands toward the boundaries of space and time. Furthermore, silence serves as a fundamental dimension, acting as the medium through which we truly grasp the infinite.

In this regard, we can certainly speak of innovation and creativity. Leopardi is an inherently innovative poet, breaking new ground in both the poem's form—which rejects traditional metrical constraints—and its philosophical content.

Could artificial intelligence truly express Leopardi's emotions and the metaphysical vision presented in '*L'Infinito*'? I would argue it could not. Leopardi's creativity is deeply rooted in his immense erudition, a life marked by physical suffering, a strained relationship with his environment, and a profound philosophical willpower. I do not believe that any evolution of AI can bridge the gap between mere data processing and this uniquely human struggle.

Ultimately, replicating Leopardi is not merely a matter of rhyme or meter; it requires a specific, profound desperation inseparable from his personal suffering and philosophical convictions. This is precisely where technology encounters an insurmountable obstacle. Critics contend that the 'infinite' emotion of the poem is precisely what a machine fails to replicate.

This reflection on Leopardi's '*L'Infinito*' leads us to argue that not only emotions, but consciousness and awareness remain unique traits of human intelligence—at least for now. These qualities challenge machines by highlighting the distinctiveness of human thought: our critical spirit, our ability to question claims, as well as our knack for unearthing AI's inherent weaknesses.

7. Theoretical Patterns of Human–AI Interaction

The comparative case study method facilitates the derivation of theoretical patterns in human–AI interaction, providing a basis for broader conceptual frameworks. First, consider the AI Creative Loop, which is designed to minimize the temporal and mental distance between an input and a generated response. This process is optimized for frictionless output, following these key stages:

The process begins with data input, representing the raw material the AI draws upon as it accesses its massive, static training database. The second stage is pattern analysis, where the AI instantly identifies statistical regularities, associations, and common structures based on the input prompt. The third stage is optimization, in which the AI calculates and refines its response using predefined mathematical loss functions to provide an instant synthesis through rapid computation. Finally, the output is delivered immediately, emphasizing speed and transactional clarity.

The defining characteristic of this AI Creative Loop is its frictionless acceleration. The cycle facilitates a vending machine-like interaction: clean, fast, and clear, but lacking the "Slow Time" necessary for human growth.

The AI Creative Loop – Fast Time Efficiency

Data → Pattern Analysis → Optimazation-Instant Synthesis → Final Output

This is a rapid and repetitive process that minimizes mental and temporal distances.

In contrast, the Human Creative Loop is centered on cultivating insight. This process, which aligns with the concept of "Slow Time," is optimized for reflection, deeper understanding, and the development of meaning through creative struggle. It unfolds through the following stages:

The process begins with lived history, the foundation of all creation. Here, the creator draws from a lifetime of subjective, emotional, and social experiences—such as the volatile world of Caravaggio, the profound grief of Picasso, or the metaphysical vision of Leopardi. This is followed by a stage of productive struggle (Suffering/Friction), where legitimate errors and painstaking effort are encountered. This step represents the crucial friction between theory and practice—a resistance that forces the creator to engage more deeply with their work.

This resistance leads to a process of iterative correction, embodying Schön's (1983) "Reflection-in-Action." It involves hushed questions, internal dialogue, and intentional attempts to remedy failures as they arise in real time. Out of this sustained struggle, genuine insight—a unique conceptual leap and new understanding—is born. This revelation requires a degree of human vulnerability and cognitive risk that a purely algorithmic process cannot simulate.

Finally, the work reaches its completion as a meaningful output, representing the human creative contribution. This is the final piece—like *Guernica*—which carries a deep and earned significance precisely because it is the result of a transformative, time-bound journey.

The Human Creative Loop – "Slow Time" Incubation

Experience/Memory → Suffering/Friction → Insight/Meaning → Meaningful Output

This is a recursive time bound journey through productive struggle and iterate correction. This process, aligning with "Slow Time", is optimized for cultivating insight and genuine meaning throgh human vulnerability.

In conclusion, by defining human output as earned significance, we create a sharp contrast with the transactional clarity of AI. One is a product of time; the other is a product of speed. By integrating these two models, the "Slow Time" lens moves beyond evaluating AI as a mere efficiency tool, reframing it instead as a potential partner in a dialogical process.

While the AI Creative Loop provides transactional clarity through the rapid synthesis of data, the Human Creative Loop offers the earned significance that only comes from navigating friction and vulnerability. A "Slow Time" approach to human–AI interaction does not seek to eliminate the struggle of creation; rather, it seeks to design interfaces and workflows that protect human reflection. Ultimately, this lens suggests that the most valuable AI systems are not those that replace the human journey with a faster result, but those that provide the necessary space—and the productive friction—for the mind to stumble, improve, and evolve.

8. Conclusion

This essay argues that human creativity possesses an inherent ontological superiority over AI. As AI technology becomes more pervasive, its rapid development threatens to outpace our cognitive capacity; however, human intelligence possesses a more fundamental and independent level of existence. As Lowe (1994) suggests when stressing the existential independence aspect of ontological superiority, human intelligence remains a primary cause, while AI is a derivative or contingent entity. Consequently, creativity and originality of thought—inextricably linked to human intelligence—remain essential to the human experience. As intelligent machines are increasingly steered toward commercial objectives, the integrity of this human heritage is called into question.

While artificial intelligence is a human creation—a technological expression of intellect—we must ask: Is creativity, as an essentially human characteristic, at risk? Although philosopher Toby Ord (2020) warns that AI development could lead to a misalignment with human values, potentially threatening human existence, humans possess a multifaceted intelligence that is simultaneously logical, instinctive, and emotional. Grounded in moral values, these uniquely human traits can prevent AI from eclipsing the human mind. As Leopardi suggests, shifting the horizon toward ethics remains a task that only we can fulfill.

Fundamentally, AI relies on algorithmic logic and mathematical tools, whereas human intelligence remains a natural phenomenon. Creativity allows us to communicate complex emotions and shared histories that data alone cannot capture. Where AI is task-oriented and commercially driven, human behavior and its creative capabilities are—or should be—guided by moral values and an existential worldview. Ultimately, humans must exercise judgment, interpret ambiguity, and navigate uncertainty; these are realms where no algorithm can lead with certainty.

The primary challenge lies not simply in mastering AI, but in preserving our autonomy within a world where AI increasingly decides for us. We must, therefore—by freely interpreting Cooper's (1999) definition—cultivate *cognitive friction*: the mental deliberation that allows us to doubt, reflect, and reconsider. By highlighting the gap between our mental models and a machine's logic, this friction slows our choices and protects the 'human edge' in an automated world. This 'resistance' is precisely what prevents us from becoming passive observers of AI. As argued throughout this essay, creativity remains essential to the human experience; rather than being repressed, it must be actively stimulated. If governed correctly, AI can serve as a catalyst for this need—liberating individuals from routine tasks and enabling deeper creative engagement. In this capacity, AI plays a vital, positive role, yet it remains a tool rather than a replacement for the human spirit.

Therefore, this study has utilized a comparative illustrative case study method to move beyond abstract speculation regarding AI's role in the arts. By juxtaposing the probabilistic nature of GenAI with the "friction-driven" outputs of historical masters (Caravaggio, Picasso, and Leopardi), this approach has provided the necessary heuristic framework to isolate the exclusive cognitive functions of human mastery.

In summary, this contribution posits that human creativity remains superior to artificial intelligence. Evidence for this proposition is found in the legacy of "pre-AI" era masters—specifically Caravaggio, Picasso, and Leopardi—who serve as paradigms of aesthetic depth and the expression of complex emotion. The fundamental risk of AI lies in a blind reliance on algorithmic synthesis, which threatens to undermine the human intuition and innovative capacity that defined these masters.

Ultimately, the preservation of the human spirit in the age of automation requires a deliberate movement toward intentional resistance—a shift particularly important for the younger generation raised within the digital economy. By embedding 'cognitive friction' into our education system and policy frameworks, we ensure that AI remains a catalyst for human depth rather than a replacement for it.

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Authors' contributions

Daniele Schilirò is the only author of all manuscript.

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References

- Boden, M. A. (2009). Computer Models of Creativity. *AI Magazine*, 30(3), 23-34.
<https://doi.org/10.1609/aimag.v30i3.2254>

- Cooper, A. (1999). *The Inmates are Running the Asylum*. Carmel, IN: Sams Publishing.
https://doi.org/10.1007/978-3-322-99786-9_1
- Crupi, A., Costa, A., & Amanti, A. (2025). Exploring the Research Landscape of Generative AI: A Bibliometric and Content Analysis (pp. 21-46). In A. Crupi, L. Marinelli, & E. Cacciatore, *The Generative AI Impact: Reframing Innovation in Society 5.0*. Leeds, England: Emerald Publishing Limited.
<https://doi.org/10.1108/978-1-83549-105-820251002>
- Csikszentmihalyi, M. (1997). *Creativity: Flow and the psychology of discovery and invention*. New York, NY: HarperCollins Publishers.
- de Barros, R., Resende, L. M., & Pontes, J. (2025). Exploring creativity and innovation in organizational contexts: A systematic review and bibliometric analysis of key models and emerging opportunities. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(2), 1-15. <https://doi.org/10.1016/j.joitmc.2025.100526>
- Doyle, C. (2017). Creative Flow as a Unique Cognitive Process. *Frontiers in Psychology*, 8(8), 1-4.
<https://doi.org/10.3389/fpsyg.2017.01348>
- Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. New York, NY: Harper & Row.
- Drucker, P. F. (2002). The discipline of innovation. *Harvard Business Review*, 80(8), 95-102.
- Eapen, T., Finkstadt, D. J., Folk, J., & Venkataswamy, L. (2023). How generative AI can augment human creativity. *Harvard Business Review*, July–August, 1-16. <https://doi.org/10.2139/ssrn.4759930>
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York, NY: Basic Books.
- Goodfellow, I., Pouget-Abadie, J., Mirza, M., Xu, B., Warde-Farley, D., Ozair, S., Courville, A., & Bengio, Y. (2014). Generative adversarial nets. *Advances in Neural Information Processing Systems*, 27, 2672-2680.
- Guilford, J. P. (1950). Creativity. *American Psychologist*, 5(9), 444-454. <https://doi.org/10.1037/h0063487>
- Ivcevic, Z., & Grandinetti, M. (2024). Artificial intelligence as a tool for creativity. *Journal of Creativity*, 34(2), 1-5.
<https://doi.org/10.1016/j.yjoc.2024.100079>
- Jung, R. E., & Hunter, D. R. (2023). A Call to More Imaginative Research into Creative Achievement. *Creativity Research Journal*, 35(3), 354-368. <https://doi.org/10.1080/10400419.2022.2143094>
- Karwowski, M., Dul, J., Gralewski, J., Jauk, E., Jankowska, D. M., Gajda, A., Chruszczewski, M. H., & Benedek, M. (2016). Is creativity without intelligence possible? A Necessary Condition Analysis. *Intelligence*, 57, 105-117.
<https://doi.org/10.1016/j.intell.2016.04.006>
- Leopardi, G. (1845). L'Infinito. In Ranieri (Ed.), *Canti Vol. I*. Firenze, Italy: Le Monnier.
- Lowe, E. J. (1994). Ontological Dependency. *Philosophical Papers*, 23(1), 31-48.
<https://doi.org/10.1080/05568649409506409>
- Ord, T. (2020). *The Precipice: Existential Risk and the Future of Humanity*. London, England: Bloomsbury Publishing.
- Schilirò D. (2022). Digital Economy and Digital Transformation. In E. G. Popkova (Ed.), *Digital Technologies for Entrepreneurship in Industry 4.0*, Hershey, PENN: IGI-Global Publishing.
<https://doi.org/10.4018/978-1-6684-4265-4.ch002>
- Schilirò D. (2024). *Digital economics. Exploring the digital economy*. Roma, Italy: Aracne.
- Schilirò D. (2025). Generative Artificial Intelligence, Creativity, and Innovation. (pp. 199-211). In A. Crupi, L. Marinelli, & E. Cacciatore, *The Generative AI Impact: Reframing Innovation in Society 5.0*, Leeds, England: Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83549-105-820251011>
- Schön, D. A. (1983). *The Reflective Practitioner: How Professionals Think in Action*. New York, NY: Basic Books.
- Sternberg, R. J. (2003). The Investment Theory of Creativity as a Decision (pp.106-123). In *Wisdom, Intelligence, and Creativity Synthesized*. Cambridge, England: Cambridge University Press.
<https://doi.org/10.1017/CBO9780511509612.005>
- Wittmann, M. (2014). Mindfulness and the Experience of Time. *Procedia - Social and Behavioral Sciences*, 126, 129.
<https://doi.org/10.1016/j.sbspro.2014.02.342>
- Zhou, E., & Lee, D. (2024). Generative artificial intelligence, human creativity, and art. *PNAS Nexus*, 3(3), pgae052.
<https://doi.org/10.1093/pnasnexus/pgae052>

Notes

Note 1. Generative AI is generally defined as an algorithm that creates outputs such as text, images, audio, and video. It is often contrasted with 'predictive AI,' which forecasts outcomes like the likelihood of a house selling at a specific price. However, this distinction is somewhat misleading, as generative AI is fundamentally built on predictive modelling.

Note 2. Computer scientists design AI algorithms to navigate complexity and solve intricate problems. While specific approaches vary, the core principle remains consistent: learning patterns from historical data to generate new outputs. Through this process, machine learning (ML) algorithms can perform a diverse array of tasks, from classifying images and analyzing resumes to generating original content or forecasting housing prices. However, these systems are often referred to as 'black boxes.' While scientists design the architecture that identifies patterns within training data, they often cannot pinpoint exactly what those patterns are. Consequently, the underlying reasoning for their specific conclusions remains opaque. This lack of transparency is particularly concerning given the potential for data bias; if the training data contains historical or human prejudices, the algorithm will likely replicate and even amplify those flaws in its outputs.

Note 3. The 'workslop' paradox is a phenomenon often visualized through a productivity curve where, beyond a certain point, the time spent on "human-in-the-loop" verification outweighs the efficiency gained from the AI.

Note 4. '*L'Infinito*' by Giacomo Leopardi was written in 1819 and is part of the collection *Canti*, which contains his most famous poetic works.