The Creativity Paradox: How Generative AI Undermines Employees' Strategic Thinking and Originality in Business Contexts

Yixuan Liu

Australian National University, Canberra ACT, 2601, Australia

Keywords: Generative Artificial Intelligence; Creativity Paradox; Strategic Thinking; Originality; Business Management

Abstract: With generative AI rapidly taking root in business, unprecedented efficiencies are poised to be unlocked in content generation, data informatics and general business strategy. But this effectiveness also serves as a warning sign of what we might call the "creativity paradox" — that by becoming more efficient, AI may actually make us less so when it comes to creative and strategic thought. Based on theoretical talk together with empirical literature review, it suggests that there are at least three potential effects of generative AI on corporate creativity: dependency effect, homogenization effect and short-term utilitarian effect. Too much dependence on AI may give rise to cognitive inertia, as well as to homogenisation in the outputs of innovation between firms and a reformulation of efficiency (i.e. cutting back on SG and R&D spending) may come at the cost of long-term strategic vision. Additionally, this paper explores organizational and Individual coping strategies that are based on the requirement of human-machine complementarity systems and think critical thinking abilities. That is, such firms can remain competitive only by achieving dynamical balance between efficiency and originality in the generative AI wave.

1. Introduction

The intense appeareance of generative AI is turning up the way regular business is done [1]. It generates content and answers as close to real time as we have ever seen, from marketing to competitive analysis, copywriting and product design: It delivers content and solutions that can get companies moving at the speed of light [2]. However, the efficiency is that of a ``sleeping policeman", and there can be trade offs between innovation and efficiency [3]. So, when the talent becomes more and more insouciant with the gadgets of industrial intelligence in their daily work, they will not be thinking as independently, which leads to a depletion of original thought [4]. This will entail the risk of a paradox "Generative AI" Unlocking Productivity but Creativity and Strategic Intelligence Which Business Counts On to Compete may Get further marginalised [5]. This paradox is exemplified into strategy duration and sustainable innovation-based entities [6]. The creativity paradox, so-called, is going to be the meta motif concerning the corporate life and death, success or failure in a mindstorm-laden more stress by now than any time world; it carries also an advanced type of work organizations and citizen's ways of living within corporations [7]. This paper systematically investigates the negative impact mechanisms of generative AI on strategic thinking and creative originality, puts forward some solutions accordingly, and offers theoretical reference as well as practical guidance for enterprises to find a new balance point in technology introduction while keeping creativity.

2. Generative AI and the Emergence of the "Creativity Paradox"

In recent years, there has been a tremendous progress in generative artificial intelligence which proves to be a crucial tool in businesses for the automation of tasks and increased productivity [8]. With the aid of big corpora and deep learning models, it almost shows to such an extend even human creativity can be approximated in practice like text generation, image generating, stock market tipping etc [9]. For many companies, it's a strategic enabler in how knowledge gets created more quickly and the foundation of content decisions. Its limitations are consistently clouded by the genealogy of generative AI [10]. It is not so much about the ingredients and recipes that people share as it is about

patterns of shared information, which are fed to a computer who has no real newness and disruption—it's how you generate strategic albeit novel break thoughts (i.e., creationed intentions) [11].

This paradox where the application of generative-AI could lead to a decrease in innovation or creative work among employees is referred as the "creativity paradox," despite that it has been hyped as another way for companies[12] to boost their labor efficiency and innovative output. And to the extent: (1) that AI aids became smarter and more useful for workers, it is less likely the worker will engage in troubling through problem solving, seeking of organizationally strategic issues, with deleterious consequences for many on critical thinking and strategic reasoning over time.[13] And the deeper creativity is likely to be depleted as the company becomes more efficient [14]. This paradox can be present not only at an individual level, but may extend to an organizational cognitive dependence and an organization creativity blunting problem impact on the competitiveness of a company in the long-term. Can Generative AI Pave Way to Less Creativity in Employees, a creativity decay function is constructed as follows:

$$C = C_0 e^{-\alpha D} \quad (1)$$

The creativity paradox brought by generative AI is not merely a technical issue but a profound challenge concerning the reconstruction of human-machine relationships and the transformation of organizational innovation models [15]. Understanding the essence of this paradox is a prerequisite for exploring its specific impacts on strategic thinking and originality.

3. The Triple Impact of Generative AI on Strategic Thinking and Originality

Generative AI could be an incredible source of efficiencies and business value for organizations, but not all its broader effects on the workplace are so clear cut. As workers increasingly rely on AI tools, creativity and strategic thinking are at risk of three different kinds of erosion: Overreliance leads to cognitive complacency, crowding out independent analysis and judgment. The fact that this generation logic is based on big data and previous pre-existing patterns means homogenised outputs are totally prevalent with little room for genuine original thought. An over focus on efficiency and output in the short term could blind organizations to long-term strategic planning issues and deeper exploration. These three effects interact with each other to collectively materialize the essence of creativity paradox in the generative AI scenario.

3.1 Dependency Effect: From Assistance to Substitution

Initial objective of generative AI deployment in enterprises is frequently to be a help-working tool for employees, aiming at freeing them from routinized work and improving the efficiency of knowledge processing. From preparing reports and proposals to doing market predictions, AI can serve as an instant source of choices. As these systems proliferate and become more sophisticated, employee reliance on them becomes high. AI is moving from an "assistant role" to a "decision surrogate." Although this change is expedient, it plants for the future a cast of mind which will weaken independence of thought, In order to visually present the association between employee creativity and AI dependency, a graph of employee creativity and AI dependency is drawn (Figure 1):
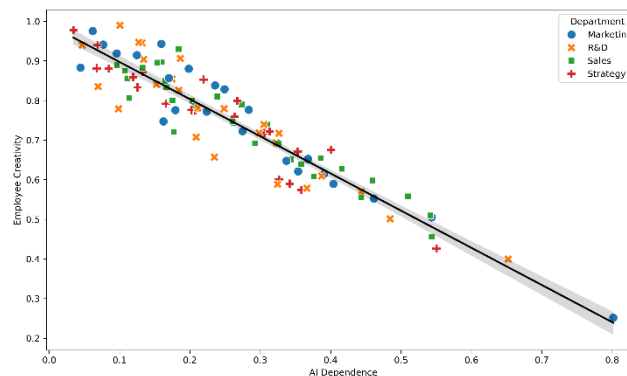

Figure 1 Employee Creativity vs AI Dependence

An adverse effect of excessive dependence on AI is mental stagnation. AI is used as an heuristic by employees when facing intricate challenges, before task analysis and critical thinking. Independent conceptualization and reflection diminish, which can likely lead to cognitive capacity and strategic reasoning loss, over time. This reliance creates a shortage of fundamental divergent thinking and complex thinking within the context of high-stakes problem solving and decision making, impairs their ability to work independently as autonomous thinkers in an ambiguous environment. To gauge the influence of strategic thinking of employees on their reliance of AI, a formula for calculating the Strategic Thinking Index is proposed:

$$S = \beta E - \gamma R \quad (2)$$

True, the replacement effect of AI is not at the level of isolating individual cognitive tasks but that it reshapes patterns of work organization in much more deep-reaching ways. As the decisions and ideas that make up a company are offloaded onto artificial intelligence, its employees become dispossessed of sensemaking, and they relinquish agency over many aspects of domain over time, forced into doing acting as execution and validation. This displacement makes the companies blind to a number of human cognitive input-related systemic issues associated with the dimension of strategic thinking and innovativeness and which results in potential harm for creativity.

It helps them -1 function, autonomously(ai), and generateCenter a tactical" destruction to support, what I refer too as, "thinking substitute". Merchants, meanwhile, might seem more efficient and faster to react to events on the surface – but risk dulling, or even destroying, their employees' ability to think for themselves or see the bigger picture. Unexorcised, this dependency destroy transformative capability and core competitive advantage of any firm in the long term, i.e., it is the most apparent outgrowth of creativity paradox.

3.2 Homogenization Effect: Converging Outputs and Narrowed Creativity

A more general problem is that since AI outputs are generated from patterns within the inputs, they typically sit on a continuum of what has been seen before. While it's good to bring content fast and answer here as quickly as possible, by the way there is no innovation or creativity at all. While the outlets will group to some degree, for businesses, AI "suggestions and ideas" are mostly data re-hashes and common ground experiences. And those who rely on these outputs also end up being OK with the idea of "reasonable but mediocre," as they project away from radical or unusual.

This convergence effect is all the more pronounced when generative AI becomes widely adopted in organizations so that it can be deployed for generating content or strategic support. Independent teams, or perhaps even entire companies, could develop very similar solutions to the same types of problems, eroding competitive differentiation. Generative AI subtly nudges strategic thinking and creative output, along with doctrine around decision-making, to a sameness at enterprises all over the world and an erosion of the specialness and scarcity of innovation while also increasing efficiency. To assess the association between organizational innovation output and individual employee creativity, an organizational innovation output model is developed:

$$I = \sum_{i=1}^{N} C_i \cdot K \quad (3)$$

Workers' imagination is stifled by a long-term dependence on AI's outputs. Because AI produces "average" content, interactions slowly lead users to a "shrunken mindset." For the problems-solutioning or "concepting," they more and more start from generics hardwired in to them by AI, and lack the energy to attempt breaking through/out of that. This more narrow mindset also erodes an institution's ability to be expansive when looking for new marketplaces or forging new strategic directions.

As a result, homogenizing effects may not be simply an organic extension of technology logic itself, but also an institutional risk created by the organisational overreliance on AI. If enterprises, however, do not bust the myth of convergence before it is too late and fall into a trap called "high efficiency but low originality", strategic homogenization, monotonous product varieties and decreased capability will be inevitable. In other words, even as generative AI causes productivity growth and allows companies to do more with less, it also erodes the originality-based edge that businesses use to compete

for survival and make breakthroughs.

3.3 Short-Term Utilitarian Effects: Efficiency First at the Expense of Strategic Depth

The most obvious benefit of generative AI is its potential for fast output and instantaneous feedback. Enterprises that use AI rarely view it as an important tool to improve short-term business results—similar to how they might view the ability to reduce proposal cycle times, or generate more content faster, or speed up market forecasting. This "efficiency first" mindset makes organizations favor short-term gains when making resource allocation and goal-setting decisions, at the expense of delving deep and planning for the longer term necessary for strategic thinking. To quantify the degree of output homogenization due to AI, a homogenization effect formula is designed:

$$H = 1 - \frac{\sigma_O}{O} \quad (4)$$

People's mental space is more and more engaged in trying to struggle for paying the rent or providing food other than thinking systematically and creative. They are less focused on rapid implementation of AI to deliver a surface glossy result, and more interested in investing time into deep and cross-disciplinary research. As people get older and more experienced, strategic thinking is increasingly "becoming a more simplified and local rather than integrated and global process," they show: Workers become less involved in "forward-looking thinking" aimed at problem-solving but that instead focuses on the quick-fix. That's not only bad, personally accumulating wisdom is also a process that is stifled in organizations over time.

But a more insidious threat is that short-term utilitarian results might erode, over the years and decades, how much of a long-term strategic vision a company has for itself. Because, since AI outputs are, by definition predicated on data which already exists, the results it generates are also inherently going to be more immediate in their service (-useful for problem solving rather than supporting of exploration or foresight). The harmful effects of myopic management become apparent when businesses get stuck in this pattern of "data-led short-term solutions" too frequently, particularly for critical company decisions, it can have an adverse impact on a company's ability to steer strategically and innovate – either continuing down a path toward purely tactical development or permanently pigeon-holed into achieving little more than marginal tactical success. To specifically highlight how much we prioritize acting efficiently at every, a graph of the relationship between strategic thinking and efficiency is drawn (Figure 2):
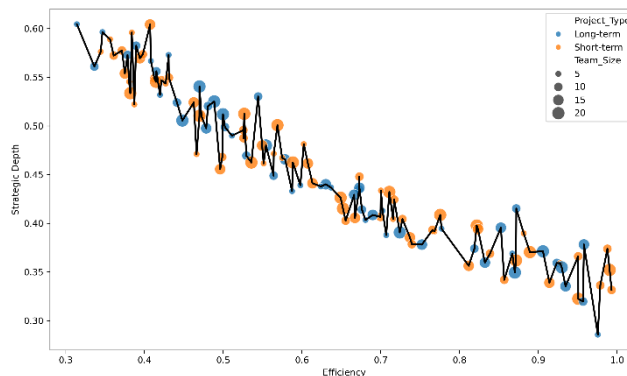

Figure 2 Strategic Thinking vs Efficiency

This short-term utility effect reveals another facet of generative AI applications: while efficiency delivers immediate gains, neglecting strategic depth and long-term objectives risks accumulating latent threats beneath rapid growth. Only by consciously balancing efficiency with depth when deploying AI can organizations avoid the trap of "maximizing short-term gains," ensuring sustainable strategic advantage amid technological waves.

4. Organizational and Individual Response Pathways

Faced with the coming of weakenedness in strategic thinking and originality brought by generative

AI, organizations need to develop organizational strategies to shape a human-machine complementing innovation ecosystem. Companies should explicitly state AI's role as a supplement and not a substitute tool so that employees will keep the power of subjective judgment and pro-active decisions while interacting with AI. Enterprises can direct employees to optimize AI for efficiency while maintaining the independence and depth of strategy by creating usage guidelines, and assessment mechanisms. Efficiency vs. In order to study the trade-off between improving efficiency and increasing strategic depth, the efficiency and strategic depth trade-off formula is constructed:

$$S_d = \frac{\lambda}{1+\mu E_f} \quad (5)$$

Given the current state of institutions and culture, organisations should encourage original exploration of complex systems through their institutional and cultural frameworks. Certain mechanisms, e.g., cross-department cooperation, creative brainstorm and policy workshops should be set up to create environment of conducting autonomous innovation and thinking in multiple dimensions for employees. This will encourage not just minds to think for themselves but also organisations to nurture collective intelligence that can resist the hypothetical homogenizing influence of AI.

Employees at the individual level need to actively develop and acquire interdisciplinary competencies and critical thinking. With ongoing learning and knowledge synthesis you are able to take insights from AI-based artificial intelligence and created even deeper solutions, thoughts/directions using your own independent creative thinking. By deliberately leaving open exploratory or trial-and-error areas in reasoning and creative processes, independent thinking and strategic judgment are fostered.

Technologically, it's the difference between trying to point AI tools at "augmenting human capabilities" and pointing them at "replacing human thought." For instance, through introduction of explainable AI, offering or allowing multiple generative options and enabling interactive feedback where the AI output becomes a starting point for an employee to consider what would be more appropriate versus the final result. By this man-machine collaboration mode, the enterprises can experience such efficiency upgrade while remaining and developing the strategic thinking and creativity of employees, which are irreplaceable for long-term sustainable development.

5. Conclusion

No one will argue that the efficiency and convenience that generated AI confers to various corporate environments, notwithstanding, there is this "creativity paradox" it connotes. Based on theoretical analysis, this paper identifies three influences of AI on the strategic thinking and originality of employees: the variations effect weakens independence of thinking, creativity, and quality judgment; the homogenisation effect leads to uniform results and a lack of innovative vitality; These impacts interact such that companies are confronted with virtual downsides of innovation stagnation and losing strategic focus together with the technology divorce.

For this paradox to be solved, we need organizations that oversee human-machine collaboratives so that AI is framed as assistance support and original discovery and multi-aspect thinking are encouraged. At an individual level, what employees can each do is to develop critical thinking, cross-disciplinary skills that will enable them to tread water with independent thought expertise post-AI fed insights. From a technological standpoint, AI's trajectory should be to augment human capacity, not mimic it. The dynamic equilibrium of organization efficiency and innovation could be realized by the regulation in the three dimensions, which are organizational level, individual level and technology level.

Future research should further illuminate the means by which generative AI may influence creativity and strategic thinking across different types of enterprises, industry conditions, and organizational cultures. Furthermore, practicing cases study could explore efficacious model of man-machine cooperation and incentive mechanism of the model, so as to provide references for an enterprise to keep competitive superiority in long term running orientation-tech driving innovation

environment. Upon the generative AI wave, companies can only acquire a sustainable development path when they balance efficiency and originality; instead of that, employees' strategic thinking and creativity could be allowed to grow.

References

[1] Feola G. What (science for) adaptation to climate change in Colombian agriculture? A commentary on "A way forward on adaptation to climate change in Colombian agriculture: perspectives towards 2050" by J. Ramirez-Villegas, M. Salazar, A. Jarvis, C. E. Navarro-Valci[J]. Climatic Change, 2013, 119(3-4):565-574.DOI:10.1007/s10584-013-0731-6.

[2] Chaudhuri S .The Path of the Devil: Early Modern Witch Hunts (review)[J].journal for the scientific study of religion, 2008, 47(1):171-173.DOI:10.1111/j.1468-5906.2008.00399_8.x.

[3] Henton J E .Freud Upside Down: African American Literature and Psychoanalytic Culture (review)[J]. Callaloo, 2011, 35(1):293-296.DOI:10.1353/cal.2012.0003.

[4] Brown S, Getz C .Privatizing farm worker justice: Regulating labor through voluntary certification and labeling[J]. Geoforum, 2008, 39(3):1184-1196.DOI:10.1016/j.geoforum. 2007.01. 002.

[5] Uitermark J .Looking Forward by Looking Back: May Day Protests in London and the Strategic Significance of the Urban[J]. Antipode, 2004, 36(4):706-727.DOI:10.1111/j.1467-8330.2004.00444.x.

[6] Bowen A, Hepburn C .Green growth: an assessment[J].Oxford Review of Economic Policy, 2014, 30(3):407-422.DOI:10.1093/oxrep/gru029.

[7] Rozman, G. (2010). Post Cold War evolution of Chinese thinking on regional institutions in Northeast Asia. *Journal of Contemporary China*, *19*(66), 605-620.

[8] Duffy G, Frederking B .Changing the Rules: A Speech Act Analysis of the End of the Cold War[J].International Studies Quarterly, 2010, 53(2):325-347. DOI:10.1111/j.1468-2478.2009. 00536.x.

[9] Vansieleghem N .Children in Public or 'Public Children': An Alternative to Constructing One's Own Life[J].Journal of Philosophy of Education, 2010, 43(1). DOI:10.1111/j.1467-9752.2008.00673.x.

[10] Eggen K A .Designing around NATO's deterrence: Russia's Nordic information confrontation strategy[J]. Journal of Strategic Studies, 2024, 47(3):26.DOI:10.1080/01402390.2024.2332328.

[11] He Wei. Empowering Enterprise Management with AIGC [J]. Enterprise Management, 2023(9):21-27. DOI:10.3969/j.issn.1003-2320.2023.09.009.

[12] Hu Xiaoyue, Yu Mingyue. Embracing the AIGC Wave: Exploration of Business Scenarios and Empowerment Recommendations for Telecom Operators [J]. Communications Enterprise Management, 2023(3): 66-68.

[13] Li Zhijun. AIGC Shines Brightly [J]. China Fashion, 2023(5):28-29.

[14] Guo Z, Song M, Fang X, et al. Exploring Synergies Between AIGC and TRIZ in the Optimization of Road Cone Design Through Integrated Innovation Methods [J]. Journal of Engineering Design, 2025, 36(2):256-275. DOI:10.1080/09544828.2024.2373038.

[15] Xu Jun, Zhou Peijin, Zhang Haijing, et al. Analysis of User Evaluation Metrics for AIGC Digital Illustration Design Principles[J]. Computer Science, 2024, 51(11): 47-53.DOI:10.11896/jsjkx. 240700085.