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Human–AI Distributed Organizational Improvisation in the Age of Generative AI

Amaal Mohammad Khalil Alshaar
Independent Researcher
Email: amaal.shaar@gmail.com

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Abstract

This paper explores how generative artificial intelligence (GenAI) may reshape organizational improvisation, particularly how organizations develop knowledge and respond to unexpected situations. Drawing on existing research, it proposes a framework of Human–AI Distributed Organizational Improvisation, in which cognitive work is distributed between humans and AI while human judgment, decision-making authority, and accountability are retained. The framework positions Representational Integration as the central process connecting human contextual understanding with AI-generated possibilities. Three complementary mechanisms support this process: Cognitive Augmentation, which expands available knowledge and options; Human Governance, which preserves human control and accountability; and Dialogical Vetting, through which AI-generated content is questioned and refined before use. The paper advances organizational improvisation theory by conceptualizing how human and AI contributions may be integrated during real-time responses and proposing four theoretical propositions for future empirical research.

Keywords: Organizational Improvisation, Generative Ai, Human–Ai Distributed Organizational Improvisation, Representational Integration, Cognitive Augmentation, Human Governance, Dialogical Vetting, Organizational Memory, Human–Ai Interaction

Introduction

Modern organizations operate in environments characterized by constant change, complexity, and uncertainty, where risks and unexpected developments can disrupt existing plans (Teece et al., 2016). They also face fluctuating customer demand, rapid technological advances, and frequent regulatory changes, all of which require flexibility and the ability to adapt to changing conditions (Alshaar & Alkshali, 2024). These challenges highlight the limitations of management approaches that rely on stable conditions, linear planning, and fixed routines. Organizations therefore need capabilities that help them respond quickly when events progress differently from what was anticipated or planned (Arshad & Hughes, 2009; Arshad et al., 2015). The ability to adapt and respond in a timely manner has consequently become essential to maintaining organizational effectiveness in dynamic environments (Al-Olimat et al., 2026; Alshaar et al., 2026).

Business environments continue to change in response to economic, technological, demographic, and sociopolitical developments, creating new challenges and opportunities for organizations (Ahlstrom et al., 2020). The VUCA framework describes these environments in terms of volatility, uncertainty, complexity, and ambiguity (Mohanta et al., 2020). Under such conditions, events may progress in unexpected ways, making it difficult for organizations to anticipate every possible situation. Having a plan is therefore not enough; organizations must also be able to respond when circumstances change during implementation. Hughes et al. (2020) highlight the role of strategic improvisation in responding to unexpected crises under severe time pressure. Similarly, Homkes (2024) emphasizes that strategic decisions are often made under uncertainty, where unexpected events can present both opportunities and risks. These challenges help explain the importance of organizational improvisation. Previous studies define improvisation in terms of the temporal convergence between the design and execution of an action, meaning that planning and acting move closer together or occur simultaneously (Moorman & Miner, 1998b). Improvisation, therefore, is not simply a matter of acting quickly. It involves thinking and acting as a situation develops. Nor does it mean abandoning structure or disregarding previous knowledge and experience. Rather, it draws on creativity, expertise, and the flexible use of existing routines and resources to responed to emerging challenges (Crossan, 1998).

Organizational improvisation can occur at different levels, involving individuals, teams, or the organization as a whole (Ciuchta et al., 2021). It draws on knowledge, intuition, organizational memory, real-time information, and shared experience. Communication, flexible planning, and relationships among people also play important roles. In distributed settings, improvisation can emerge through collective effort as people coordinate their actions and develop a shared understanding of the situation (Zheng et al., 2011).

Digital technologies and information technology capabilities have supported strategic improvisation by providing real-time information, enabling rapid communication, and helping organizations draw on existing knowledge as circumstances change (Levallet & Chan, 2016). With the emergence of generative AI (GenAI) and large language models (LLMs), technology can play a more active role in developing knowledge. Beyond providing and processing information, these systems can generate connections, expand the range of available knowledge, and contribute to developing possible responses as problem-solving evolves (Faraj et al., 2026; Yokoi et al., 2026).

This development is particularly relevant to organizational improvisation because employees can draw on artificial intelligence outputs, assess their usefulness, and adapt them to the situation at hand. Tang et al. (2026) show that generative AI can aid improvisation by helping employees generate ideas quickly, tailor content to their needs, and collaborate more effectively, particularly when tasks involve high levels of uncertainty. In the supply chain context, Chowdhury et al. (2026) also find a positive link between AI-LLM augmentation and improvisation. Their findings highlight how AI can improve coordination, information flow, and decision speed when organizations face uncertainty.

The Research Gap and Problem

As generative AI becomes increasingly integrated into everyday organizational work, an important question arises: does it simply support existing improvisational practices, or does

its ability to generate alternatives and possible solutions in real time change how improvisation develops? Traditional views of improvisation emphasize human capabilities, including experience, contextual knowledge, judgment, and adaptability. GenAI, however, introduces new possibilities for developing, evaluating, and adjusting responses as situations evolve.

Recent studies have begun to examine how GenAI can enhance human improvisational capacity by expanding the range of available options, accelerating idea generation, and supporting responses under uncertainty (Tang et al., 2026; Chowdhury et al., 2026). Yet, limited attention has been paid to how improvisation actually shifts when real-time AI output becomes part of how teams build and test their responses.

This gap is conceptualized as the Distributed Improvisational Agency Gap, referring to the lack of a clear theoretical explanation of how humans and AI share the cognitive work involved in improvisation. This includes integrating human expertise and AI-generated outputs into a shared workflow while maintaining human judgment and accountability. Faraj et al.'s (2026) concept of Knowing-with-LLMs and Yokoi et al.'s (2026) concepts of Cognitive Asymmetry and Representational Integration offer useful theoretical perspectives for understanding how human knowledge and AI capabilities interact. This study draws on and adapts these concepts to explain how organizational improvisation unfolds in the context of generative AI.

The objectives of this study are:

1. To reconceptualize organizational improvisation in the era of generative artificial intelligence (GenAI) by examining how cognitive work may be distributed between humans and AI.
2. To explain the role of Representational Integration in bringing together human contextual knowledge and AI-generated possibilities during organizational improvisation.
3. To identify and conceptualize three complementary mechanisms—Cognitive Augmentation, Human Governance, and Dialogical Vetting—that shape the integration of human and AI contributions.
4. To develop theoretical propositions explaining how these mechanisms may support Human–AI Distributed Organizational Improvisation while preserving human judgment, decision-making authority, and accountability.

Research Question

How does generative AI reshape organizational improvisation by enabling cognitive work to be shared between humans and AI, and what mechanisms make this possible while preserving individual judgment and accountability?

Literature Review

Organizational Improvisation: Concept and Evolution

Moorman and Miner (1998b) defined organizational improvisation in terms of the temporal convergence between the composition and execution of an action. The closer these two activities occur in time, the greater the degree of improvisation. They also distinguished improvisation from innovation, emphasizing its spontaneous, in-the-moment nature. Building further on this view, Crossan et al. (2005) described improvisation as a process that combines spontaneity and creativity, often arising when individuals or groups must act without

sufficient time to plan or a clear understanding of their environment. They also emphasized the importance of recognizing when deliberate planning is appropriate and when circumstances call for improvisation.

Organizational improvisation does not necessarily mean abandoning plans or established routines. Rather, it involves drawing on existing knowledge and structures while adapting to unfolding events. Moorman and Miner (1998b) discussed how real-time information about unexpected events may increase the likelihood of improvisation, while organizational memory encompasses knowledge embedded in shared beliefs, behaviors, and routines. Crossan et al. (2005) similarly highlighted the value of minimal plans, which provide enough structure to coordinate action without limiting flexibility. This method allows individuals and groups to adapt their responses, apply past experience in new ways, and address emerging challenges as circumstances change.

Research has also moved beyond the individual level to examine how improvisation can emerge through collaboration among multiple actors. Zheng et al. (2011) studied collective agility in a large, distributed systems-development project, illustrating how coordinated performance can emerge through collaborative work in complex settings. Taking a broader view, Ciuchta et al. (2021) reviewed 186 peer-reviewed articles on organizational improvisation and developed a framework that examines improvisation across three phases: before, during, and after an improvisational episode. Their review also highlighted the potential roles of organizational memory, real-time information flows, and prior shared experience in supporting design and coordination. Cooperatively, these studies show that organizational improvisation can be understood both as a collective accomplishment and as a process that changes over time.

Overall, this literature suggests that organizational improvisation involves more than the convergence of planning and execution. It also draws on organizational knowledge and experience and develops through interaction among actors. This understanding provides a useful starting point for examining improvisation in the context of generative AI.

The Knowledge Foundations of Organizational Improvisation

Organizational improvisation depends on how knowledge is recalled, used, and adapted during action. When a situation requires a rapid response, organizational actors draw not only on available information but also on their experience, organizational memory, and ability to interpret changing circumstances. The knowledge foundations of improvisation therefore help explain how organizations can use what they already know to develop and adjust responses in real time.

Tacit Knowledge and Experience

Tacit knowledge is an important organizational resource because it develops through employees' experience and is embedded in their practical skills and actions. It becomes particularly valuable in turbulent environments, where practitioners must draw on their knowledge to respond to critical situations. Sumbal et al. (2025) demonstrated that rescue personnel rely on tacit knowledge, sensemaking, and rapid problem identification when improvising through high-pressure, resource-constrained emergencies.

However, improvisation does not necessarily lead to better performance in every situation. Hultman et al. (2022) found that action orientation, creativity, and spontaneity had different relationships with perceived sales performance, depending on individual agency and self-efficacy. These findings suggest that the performance implications of improvisation depend on the nature of the improvisational behavior and the conditions in which it occurs.

Organizational Memory as a Resource for Improvisation

Organizational memory provides access to accumulated knowledge and previous practices that can inform responses to new situations. Moorman and Miner (1998a) explain how knowledge retained in organizational memory relates to the development and execution of improvisational responses.

Improvisation does not necessarily involve repeating past actions. Instead, actors may recombine existing knowledge and previous practices in new ways to get around the situation at hand. Moorman and Miner (1998a) also suggest that improvisation can influence organizational memory by generating experiments and helping develop higher-level improvisational competence. Organizational memory thus provides a foundation for improvisation, while improvisation can contribute to the development of future improvisational capabilities.

Procedural and Declarative Memory

Moorman and Miner (1998a) distinguish between declarative memory, which includes facts and theories, and procedural memory, which includes skills and routines. This distinction helps explain how different forms of organizational memory may contribute to different aspects of improvisational performance.

Their analysis links declarative memory more closely to the novelty of organizational outcomes and procedural memory to their timeliness (Moorman & Miner, 1998a). Knowledge of facts and theories can help actors use existing routines creatively, while established skills and routines can facilitate rapid access to relevant knowledge. These functions complement one another, and their combined use can increase the likelihood of producing coherent, novel, and timely actions through improvisation.

Sensemaking and the Use of Available Resources During Action

Organizational improvisation is closely related to sensemaking, which develops alongside action. Weick (1998) explains that actors may act in order to think, making sense of situations as events develop rather than fully understanding them before acting. Action and interpretation are therefore intertwined during improvisation.

Improvisation also depends on the ability to draw on available resources, including knowledge retained in memory and insights gained through ongoing interaction. Weick (1998) argues that improved memory provides retrospective access to a wider range of resources. He also emphasizes the importance of listening to one's own contributions and those of others, and of elaborating on what has already been said. These insights suggest that improvisation involves more than accessing existing knowledge: it also requires interpreting previous actions and using them to shape subsequent responses as circumstances evolve.

From Digital Enablement to Generative AI

Digital technologies have helped organizations improvise by making information more accessible and enabling employees to draw on existing knowledge as situations change. Generative AI adds another dimension by generating ideas and possible responses that people can assess and adapt in light of changing circumstances.

Information Technology as an Enabler of Strategic Improvisation

Levallet and Chan (2016) examined how information technology capabilities support strategic improvisation. They highlighted the importance of timely information, rapid communication, organizational memory, and flexible IT infrastructure in helping organizational actors respond to changing circumstances. These capabilities make relevant information and knowledge more accessible as situations develop. This demonstrates how technological tools enhance improvisation by providing timely access to relevant information.

Generative AI and the Changing Role of Technology

Generative AI, particularly large language models (LLMs), adds a new dimension to the role of technology by generating content and possible responses that people can use in their work. Faraj et al. (2026) discuss Knowing-with-LLMs, showing how knowledge can develop through interaction between humans and AI. This perspective highlights that working with LLMs involves more than accepting their outputs; people also need to interpret, evaluate, and build on them.

Yokoi et al. (2026) examine differences between human knowledge, including embodied and tacit knowledge, and the knowledge representations used by generative AI. They discuss the representational gap that can arise from these differences and the role of Representational Integration in bringing human understanding and AI-generated representations integrated. Their work offers a useful perspective on how humans and AI can contribute different forms of knowledge to the same process.

Patel and Dey (2026) offer a related perspective through a conceptual framework that connects generative AI with information acquisition, sensemaking and framing, joint inference, coordinated action, and organizational memory. Their framework suggests that GenAI can shape how groups interpret situations and coordinate their actions. However, generating outputs more quickly does not necessarily lead to better outcomes, particularly when weaknesses in earlier stages affect subsequent decisions and actions. Restricting their scope to organizational collective intelligence, they do not examine how generative AI reshapes organizational improvisation or redistributes cognitive work between humans and AI.

Generative AI and Organizational Improvisation

Recent studies have begun to explore the relationship between generative AI and improvisation more directly. Tang et al. (2026) examine how generative AI use relates to employees' improvisational capability, highlighting the roles of rapid idea generation, content personalization, and collaborative support, particularly when task uncertainty is high. Similarly, Chowdhury et al. (2026) investigate how AI–LLM augmentation relates to improvisation and responsiveness in supply chains. These studies shed light on how

generative AI may support human improvisation and help organizations respond to uncertain situations.

However, an important question remains: how does organizational improvisation change when AI-generated outputs contribute to developing and evaluating responses in real time? To address this question, the present study introduces Human–AI Distributed Organizational Improvisation, structured around four interconnected mechanisms: Representational Integration, Cognitive Augmentation, Human Governance, and Dialogical Vetting.

Methodological Approach

Conceptual Research Design

Using a conceptual research design, this paper sets out to understand how organizational improvisation operates in the era of generative AI. It brings together literature on organizational improvisation, knowledge and organizational memory, technology, and human–AI interaction through an integrative conceptual synthesis. Because the approach is purely conceptual, it steps back from testing exact cause-and-effect relationships between variables.

The analysis began by examining the cognitive and organizational foundations of improvisation and then traced how the role of technology has evolved from providing access to information and supporting communication to generating alternatives and contributing to cognitive processes. To examine human–AI interaction, the study draws on Faraj et al.'s (2026) concept of Knowing-with-LLMs and Yokoi et al.'s (2026) concepts of Cognitive Asymmetry and Representational Integration. These concepts serve as theoretical reference points for examining how generative AI may reshape the process of organizational improvisation.

Theoretical Development and Conceptual Framework

Mechanisms and Theoretical Propositions

Past findings highlight that human–AI collaboration encompasses much more than information sharing—it fundamentally challenges us to understand how human insight and machine-generated content combine during response generation. Advancing this perspective, the analysis puts forward a conceptual framework demonstrating how thinking tasks in organizational improvisation are distributed across human and artificial agents.

Representational Integration under Cognitive Asymmetry

Representational Gap and Representational Integration

The representational gap arises from differences in how humans and generative AI process and represent knowledge. Humans draw on experience, intuition, and an understanding of the situation, whereas GenAI works with structured representations. Yokoi et al. (2026) explain how representational integration can help bridge these differences through three related practices. First, tasks are divided according to the strengths of each side: humans frame the problem and evaluate possible solutions, while GenAI generates alternatives. Second, human experience is translated into forms that AI can process through disembodiment, while re-embodiment involves interpreting AI-generated representations in light of human experience and judgment. Third, humans guide and refine AI outputs through

repeated interaction, gradually improving how the problem and possible solutions are represented (Yokoi et al., 2026).

These practices provide a basis for understanding human–AI interaction in organizational improvisation. In this context, representational integration refers to the process of bringing human understanding of a changing situation combined with AI-generated alternatives as the action takes place. Without introducing an entirely new concept, the research adapts the framework of Yokoi et al. (2026) to organizational improvisation, investigating how human knowledge and AI-driven outputs jointly inform response strategies under conditions of time pressure and uncertainty.

P1 — Representational Integration
The greater the ability of organizational actors to integrate their contextual knowledge with AI-generated outputs, the greater the potential to develop coherent improvisational responses that fit the situation.

Generative AI and the Organizational Memory Paradox
Organizational memory supports improvisation through the complementary roles of procedural and declarative knowledge. Procedural memory enables rapid, coherent action through established skills and routines, but relying too heavily on these routines may lead to automatic behavior and limit novelty. Declarative memory, by contrast, provides factual and theoretical knowledge that can assist actors develop new interpretations and connections, although searching for relevant knowledge may slow their responses. Moorman and Miner (1998a) argue that combining these forms of memory can support improvisational responses that are coherent, novel, and timely.

Generative AI may offer additional ways to navigate these demands by expanding the range of ideas and alternatives available to organizational actors. Tang et al. (2026) examine how GenAI supports improvisation through technological affordances such as rapid idea generation, content personalization, and collaborative support, particularly under conditions of task uncertainty. Similarly, Chowdhury et al. (2026) examine the relationship between AI–LLM augmentation, supply chain improvisation, and reactive capability, highlighting the role of improvisation in linking AI–LLM augmentation to organizational responsiveness.

Building on these studies, the present framework views cognitive augmentation as a way for GenAI to help organizational actors generate and explore alternatives using existing knowledge and routines. Although GenAI does not eliminate the challenges of improvisation, it may open up new possibilities for combining novel ideas with rapid action. The value of this support, however, depends on how well actors assess AI-generated suggestions and combine them with their own experience and understanding of the situation.

P2 — Cognitive Augmentation
Through cognitive augmentation, generative AI broadens the range of available insights and strategic options, empowering teams to develop adaptive, contextually tailored responses when facing time constraints and ambiguity.

Human Governance in Distributed Improvisation

Utilizing generative AI in improvisation does not render human guidance obsolete. While AI systems supply various options, humans maintain control by structuring problems, assessing results, and contextualizing them within the organization. This view aligns with Ang's (2026) framework of Directed Improvisation with AI, which reconceptualizes human agency as the active orchestration of human-machine collaboration in response formulation.

The distribution of cognitive work between humans and AI also raises questions about responsibility and oversight. Although AI can contribute to generating alternatives, organizational actors remain responsible for assessing their relevance and deciding how to use them in practice. With this distinction in mind, Human Governance acts as an essential anchor in distributed improvisation, keeping human judgment at the helm to guide AI contributions and ensure they serve the organization's core objectives.

P3 — Human Governance

Human governance supports distributed organizational improvisation by ensuring that humans continue to frame the problem, guide the process, interpret AI-generated outputs, and assess their relevance to the organizational context.

Dialogical Vetting and Epistemic Friction

Generative AI can produce responses that sound convincing but are not necessarily accurate or appropriate for a given situation. Faraj et al. (2026) describe dialogical vetting as an ongoing process in which organizational members question ai output, interpret them, and evaluate them against their knowledge of the situation. This involves more than checking an answer once. It requires continued questioning, evaluation, prompt refinement, and revision of outputs through interaction with the system.

In organizational improvisation, this procedure can become part of developing a response as circumstances dictate. Organizational actors may examine an AI-generated suggestion, compare it with their experience and understanding of the situation, and ask the system to clarify or revise its response before deciding how to proceed. The response therefore develops through repeated interaction, with AI-generated alternatives considered alongside human assessment and contextual knowledge.

Epistemic friction helps explain the tension that arises when intelligent output conflicts with human expertise, existing knowledge, or the demands of a particular situation. Such differences invite deeper questioning and revision without resulting in immediate acceptance or rejection. Drawing on Faraj et al. (2026), this study introduces 'Dialogical Vetting'—a way for teams to critically test AI-generated ideas while improvising. This back-and-forth helps ensure that AI suggestions actually fit the workplace, keeping human judgment right at the center of the final decision.

P4 — Dialogical Vetting

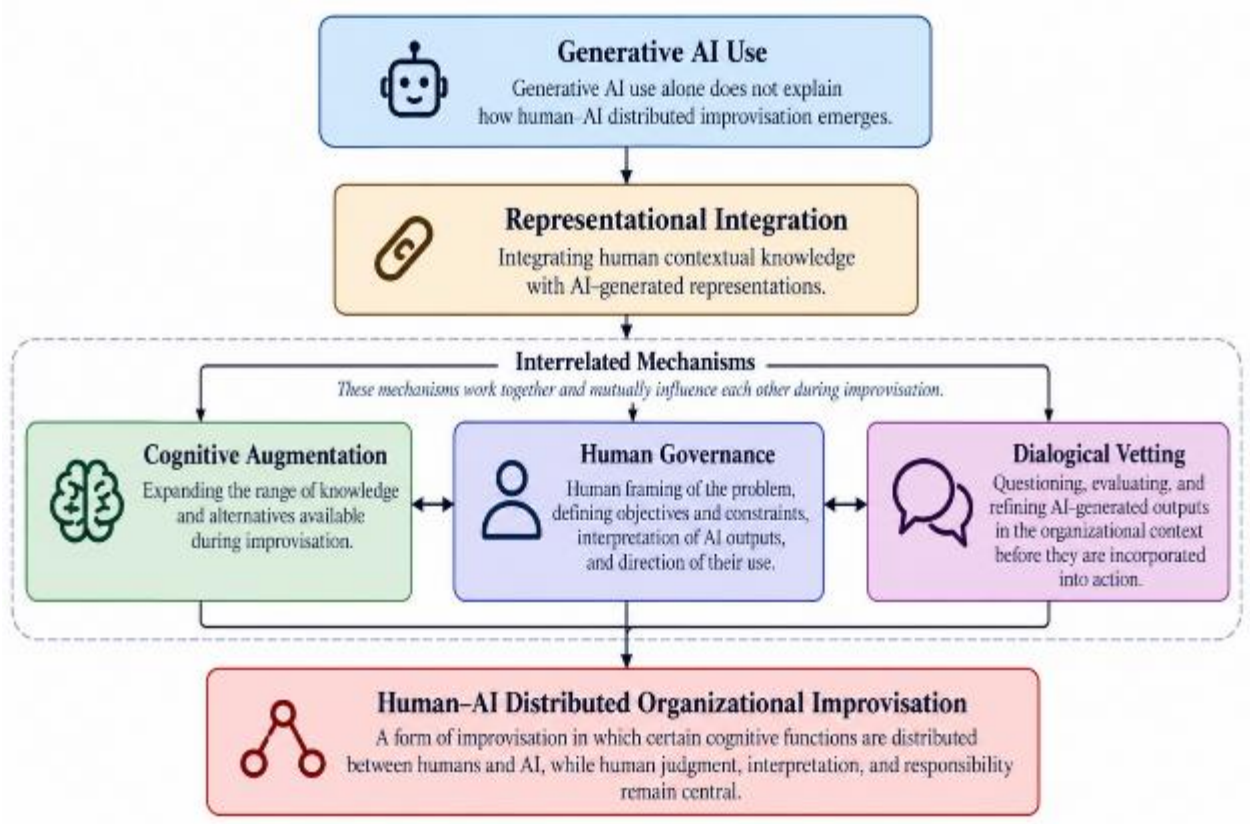
Dialogical vetting helps organizational actors develop coherent and contextually appropriate responses by questioning, evaluating, and refining AI-generated outputs in light of human knowledge and organizational requirements before putting them into action.

The Proposed Conceptual Model

The proposed model explains how Human–AI Distributed Organizational Improvisation may emerge when human knowledge is combined with the generative capabilities of AI. It suggests that the use of generative AI alone does not explain how this form of improvisation develops. Rather, Representational Integration brings both human understanding of a situation and AI-generated representations, providing a foundation for three related mechanisms.

Cognitive Augmentation expands the range of knowledge and alternatives available during improvisation. Human Governance ensures that humans remain involved in framing problems, setting objectives and constraints, interpreting AI outputs, and directing how they are used. Dialogical Vetting involves questioning, evaluating, and refining ai output in light of the work place context and its requirements.

Side by side, these mechanisms shape Human–AI Distributed Organizational Improvisation. In this process, some cognitive functions are distributed between humans and AI, while human judgment, interpretation, and accountability remain central.



Theoretical Discussion and Contribution

Theoretical Contribution

By incorporating generative AI, the research extends conventional models of improvisation, suggesting that the underlying cognitive workload is increasingly shared between human actors and AI systems. GenAI is therefore not simply a tool that supports human improvisation; its output may also shape how responses develop as things progress. Individual perception, interpretation, and responsibility, however, remain central to this process.

Based on Yokoi et al.'s (2026) concept of Representational Integration, the study proposes a conceptual framework that brings together three related mechanisms: Cognitive Augmentation, Human Governance, and Dialogical Vetting. These mechanisms explain how AI-generated alternatives may be integrated with human knowledge of the situation, broaden the range of possible responses, remain guided by individual perception, and be evaluated before being incorporated into organizational action.

Through this framework, the research introduces Human–AI Distributed Organizational Improvisation as a conceptual extension of organizational improvisation in the GenAI era. This framing provides a basis for future research to investigate how this form of improvisation emerges, what influences its effectiveness, and under what conditions its application may be limited.

Practical Implications

Organizations can apply the proposed model by combining human expertise with the generative capabilities of AI when responding to unexpected situations. Employees can begin by identifying the problem and understanding its context, then use GenAI to generate possible responses. They can assess these alternatives against organizational goals, constraints, and the circumstances at hand before deciding how to proceed. This reflects Representational Integration, which brings human understanding with AI-generated alternatives, and Cognitive Augmentation, which broadens the range of available options and supports timely responses without assuming that AI outputs will always fit the situation.

Human Governance requires organizations to keep problem framing, the definition of objectives and constraints, the evaluation of alternatives, and final decisions under clear human responsibility. Employees should not rely on artificial intelligence output simply because they are produced quickly. Instead, they need to assess their relevance to the situation and ensure that their use aligns with organizational objectives. Dialogical Vetting can be put into practice by questioning AI-generated suggestions, examining their underlying assumptions, comparing their potential benefits and risks, and refining them as new information emerges. This process helps employees improve their responses before implementation and adjust their actions as circumstances change.

Organizations can also document previous improvisational episodes, including the situations encountered, the alternatives considered, the reasons for selecting a particular response, and the outcomes. These records can help employees draw on past experience when facing new challenges. GenAI may assist in retrieving relevant cases and suggesting ways to adapt previous responses, while employees determine whether those responses fit the new context instad of applying them automatically. In this way, organizational experience can inform current improvisation and support future decision-making.

The practical value of the proposed model lies in helping managers coordinate the generation of alternatives, the use of knowledge and experience, the critical examination of AI outputs, and human assessment. The aim is not simply to accelerate responses, but to develop responses that fit the situation, preserve human responsibility for decisions, and draw on lessons from previous improvisational episodes to inform future action.

Conclusion, Limitations, and Future Research

Conclusion

This research examines how generative AI may reshape organizational improvisation, not simply by accelerating responses or generating more alternatives, but by influencing how responses develop in real time. To capture this shift, the study introduces Human–AI Distributed Organizational Improvisation, in which humans and AI share cognitive work while humans retain responsibility for interpreting context, evaluating suggestions, and making decisions.

The framework brings together four interconnected mechanisms: Representational Integration, Cognitive Augmentation, Human Governance, and Dialogical Vetting. These mechanisms explain how human expertise and AI-generated inputs may interact as organizational actors respond to changing conditions.

As a conceptual contribution, this framework provides a foundation for future empirical research to examine how the proposed mechanisms operate in practice and shape organizational improvisation.

Theoretical and Contextual Contributions

Theoretically, this study extends the organizational improvisation literature by moving beyond AI-assisted models to conceptualize Human–AI Distributed Organizational Improvisation. It addresses the gap in explaining how improvisational cognitive work may be distributed between humans and generative AI through Representational Integration, which connects human contextual knowledge with AI-generated alternatives. This process operates through two complementary pathways: Cognitive Augmentation, which expands the cognitive resources available for improvisation, and Human Governance, which preserves human framing, contextual judgment, and critical evaluation through dialogical vetting. Contextually, the framework offers guidance for organizations operating under uncertainty and time pressure by explaining how generative AI capabilities can be integrated into improvisational action while maintaining human oversight and accountability. It also provides a theoretical foundation for future empirical research into the conditions under which human–AI distributed improvisation emerges and contributes to organizational responsiveness.

Limitations

As a conceptual study, the proposed mechanisms and theoretical propositions serve as a foundation for future inquiry instead of offering empirically validated findings. Consequently, the research does not establish the exact conditions under which integrating human knowledge with GenAI outputs is most—or least—effective.

The model also reflects current understandings of generative AI, whose capabilities continue to evolve. These developments may influence how cognitive work is distributed between humans and AI. On top of that, how well distributed improvisation actually works likely depends on how experienced users are and how well they can read and critically judge AI output. Future real-world research will be essential to test these connections and see how broadly the framework applies across different types of organizations.

Future Research Directions

Future research could empirically test the proposed framework across diverse organizational settings utilizing quantitative, qualitative, or mixed methods designs. Such investigations could explore how Representational Integration, Cognitive Augmentation, Human Governance, and Dialogical Vetting collectively drive Human–AI Distributed Organizational Improvisation, shedding light on their practical interactions.

Researchers could also explore how human–AI interaction develops over time and whether repeated use of GenAI gives rise to new routines for distributed improvisation. Another promising area of inquiry is how uncertainty, time pressure, and task characteristics influence the relationship between Cognitive Augmentation and Human Governance.

Future research could investigate when Cognitive Augmentation triggers over-reliance on AI, as well as what enables organizational actors to keep questioning and evaluating AI-generated outputs instead of accepting them without sufficient scrutiny. This could help clarify both the potential benefits and the limitations of Human–AI Distributed Organizational Improvisation. Finally, researchers could examine whether generative AI can participate in organizational improvisation with greater autonomy, rather than primarily supporting human-led processes. This would involve exploring the conditions under which improvisation remains human-led, becomes distributed between humans and AI, or is performed largely by AI systems with limited direct human intervention. Such research could clarify the differences between these forms of improvisation and their implications for individual judgment, organizational control, and accountability.

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