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Computational Creativity in the AI Era: A Research Agenda for Information Systems

Min Ding,[a] **Ram Gopal,**[b,*] **Ulrike Schultze,**[c] **D. J. Wu**[d]

[a] Pennsylvania State University, University Park, Pennsylvania 16802; [b] The University of Warwick, Coventry CV4 7AL, United Kingdom; [c] University of Groningen, 9712 CP Groningen, Netherlands; [d] Georgia Institute of Technology, Atlanta, Georgia 30332

*Corresponding author

minding@psu.edu (M. Ding), ram.gopal@wbs.ac.uk (R. Gopal), u.schultze@rug.nl (U. Schultze), dj.wu@scheller.gatech.edu (D. J. Wu)

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Abstract. This editorial presents computational creativity as a durable research program for Information Systems. Defining creativity as a structured, instrumentable, and improvable process of search, recombination, evaluation, and realization, we conceptualize computational creativity as being concerned with computational systems that model, simulate, enact, or augment the creative behavior of human creators. The five articles in this Special Issue show that the promise of computational systems—in particular, generative AI—lies in configuring human and machine agency so that creative work produces ideas and artifacts that are deemed creative—that is, novel and useful—while also safeguarding the generative, effortful, accountable, and socially meaningful nature of creativity. We translate these findings into an IS research agenda focused on process instrumentation, diversity-preserving design, agency-sensitive governance, organizational capability building for human-AI creative systems, and responsible computational creativity. The core challenge is to engineer the practices of computational creativity without forfeiting either the novelty or usefulness of the output, or human agency.

1. Introduction

Creativity is usually recognized after the fact—for example, when a new product succeeds, a scientific conjecture opens a new field of inquiry, a spatial design changes how people behave, or a work of art acquires cultural force. Computational creativity begins from a different premise. It studies computational systems that model, simulate, enact, or support the creative behavior of humans. Some of these (algorithmic) systems operate autonomously; others collaborate with humans (Colton and Wiggins 2012).

With the explosion of Large Language Models, the emergent class of technology referred to as Generative AI (GenAI) has made programmatic research into computational creativity urgent. Contemporary AI systems can produce text, images, code, audio, and design concepts with a speed and situational specificity that challenges conventional distinctions between human and algorithmic creativity. This raises important questions about how human and computational capabilities are configured in creative practice, under what conditions a given configuration produces creative output, and the nature of the output produced under different conditions:

- When is AI's capacity to expand dramatically the search space desirable in creative practice?
- Under what conditions does it pay to crowd out human agency?
- What are the likely unintended consequences of off-loading creative tasks to algorithms?
- How does human-AI divergence (or convergence) affect the creative process and outputs?

These questions connect directly to recent IS research on automation, augmentation, and the future of human-AI collaboration (Fügener et al. 2026).

This framing aligns strongly with the intellectual foundations of Information Systems. IS research has long examined how the entanglement of technologies, people, routines, representations, incentives, and institutions interact to produce value. This is evident in research on augmentation and automation (Raisch and Krakowski 2021), the delegation of tasks to agentic information systems (Baird and Maruping 2021), the imbrication of human and material agency (Leonardi 2011), and sociomaterial accounts of technology and organizing (Orlikowski and Scott 2008).

Creativity in the AI era may be viewed as a sociomaterial phenomenon. Within this perspective, AI is increasingly becoming a material participant in the creative process; its output, interface, algorithms, and institutional framing shape what human actors cocreate, imagine, and evaluate. Computational creativity gives IS scholars a way to build emergent theory and knowledge that can guide the design of sociomaterial configurations that produce either conceptual or material things that are deemed creative—that is, new and valuable.

The five articles in this Special Issue examine multiple sociomaterial configurations of creative work, including individual designers situated in specific stages (e.g., ideation and implementation) of the creative process, exposed to different conditions of transparency (e.g., mandated disclosure of AI use), interacting with text- versus image-based concretizations of the creator's ideas, (not) learning in human-GenAI dyads over repeated rounds of collaboration, and using AI capabilities to support exploration after a significant rupture in organizational leadership (e.g., CEO turnover).

Taken together, the studies show that creative AI effects are contingent, processual, and deeply social. AI can broaden search, but it can also induce fixation. It can reduce effort, but effort may be the very medium through which learning, human agency, and a sense of self are accomplished by ideators. AI can increase transparency in creative work, but transparency is not neutral: making the process visible may alter how the work is produced before audiences ever encounter it. And it can support organizational exploration, but only when embedded in complementary capabilities.

2. Computational Creativity: Configuring Human and AI Agency

Creative work involves multiple activities: preparation, incubation, illumination, evaluation, and implementation, including social validation. In an era of AI, the enactments of each are being (re)distributed across human actors, algorithms, interfaces, and organizational routines to form new sociomaterial configurations. A computational lens on creativity, therefore, directs attention to configurations rather than the capabilities of any one component—for example, the algorithm. It asks what humans and machines do together, in what sequence, with what representational modalities, under which governance regimes, and with what consequences for novelty, usefulness, effort, ownership, and learning.

Taking a process-oriented view of creativity, the articles in this special issue suggest that there are a number of affordances through which GenAI use in creative work enacts computational creativity:

First, by *synthesizing disparate search spaces into novel ideas,* a creative process characterized by linking unrelated concepts and divergent thinking is fostered. GenAI offers seemingly infinite combinations of fragmented, remotely associated, and category-shifting content, thereby promoting breakthrough ideas that are both original and novel. Access to a vast corpus of ideas frees ideators from lower-value, upstream search activities, allowing them to invest their effort and agency in higher-value, downstream refinement of ideas.

Second, GenAI offers *multimodal concretization of emergent ideas.* Depending on the ideators' preferences or needs, the digital creations can be materialized equally readily as text, still or moving image, speech, and/or music. The modality of the idea's manifestation has implications for the human ideator's engagement with it. Text demands more effort for humans to process than do images. The form of an idea's materialization (e.g., code fragments, a dialogue, or video) thus significantly shapes the configuration of human-AI agency (e.g., augmentation) in computational creativity.

Third, the digital rendering of a creator's nascent ideas creates the possibility for *interactive refinement of emergent ideas.* As ideators' vague intuitions take shape through AI concretizations, creators can analyze their own ideas from a more critical distance. Computational creativity takes shape as a collaborative, possibly Socratic, question-and-answer session(s) between human and algorithmic actors, as vague ideas are fine-tuned into an original artifact. The interactions between these human and algorithmic agents are stored as digital traces, which can then be used to optimize these interactional enactments of computational creativity.

Fourth, the *entanglement between human and AI agencies* implies that attributions to the source of and responsibility for an idea are difficult to make. The impenetrable intertwining of creative agencies problematizes disclosures and governance of computational creativity.

These four action possibilities, generated when GenAI is engaged in creative endeavors, shape the configurations of human and AI agencies that enact computational creativity. This is consequential for the novelty and usefulness of the outputs (e.g., ideas, artifacts). The goal of gaining insight into the conditions under which different enactments of computational creativity are productive—and why—is central to the five articles in this Special Issue that are summarized in Table 1.

3. Insights Generated by Special Issue Articles

3.1. Stage, Expertise, and the Double-Edged Nature of AI Assistance

The first article shows that GenAI assistance does not have a uniform effect on creative work. In design tasks, AI can be highly valuable during ideation because it broadens search, reduces initial fixation, and exposes creators to alternatives they might not have generated on their own (Hou et al. 2025). At this stage, AI is valuable because it expands the set of possibilities under consideration.

The same assistance can become counterproductive during implementation, particularly for experts. Expert designers possess refined routines, tacit standards, and embodied craft knowledge. When GenAI suggestions deviate from these established methods, they create friction rather than flow. The study, therefore, challenges the simplistic assumption that better AI assistance

Table 1. Summary of Insights from the Special Issue

Article	Empirical focus	Theoretical framing	Main findings	Implications for computational creativity
The Double-Edged Roles of Generative AI in the Creative Process (Hou et al. 2025)	Design work across ideation and implementation	Stage-by-expertise interaction and expertise fixation	GenAI improves ideation broadly, but implementation assistance can reduce efficiency for experts when AI suggestions conflict with established craft knowledge.	Enactment of AI affordances should be tailored to the stage of the creative process and to user expertise, rather than automation that is applied uniformly.
The Indirect Disclosure Effect: How Disclosing Generative AI Use Impacts Human Creative Collaboration with AI (Heigl et al. 2026)	Text-to-image human-GenAI collaboration under anticipated disclosure	Presentation of the creative self, audience validation, and withdrawal	Anticipated disclosure can lead creators to withdraw from the creative process, leaving more of the idea generation and representation to GenAI due to concerns that their identity as an agential, creative self will not be validated.	Transparency mechanisms are process interventions with unintended consequences. They must make human contribution legible, not merely label AI use.
Agency Configurations in Generative AI Ideation (Gordetzki et al. 2026)	Idea refinement using textual and visual AI concretizations	Representational form shapes configuration of human and material agency	Textual concretizations increase creativity relative to visual concretizations but require more ideator effort. Visual concretizations can help when ideas are very immature but constrain mature ideas.	Interface modality should be designed to preserve productive human agency rather than prematurely automate interpretation.
Augmented Learning for Joint Creativity in Human-GenAI Co-Creation (Luan et al. 2025)	Repeated human-GenAI ideation over time	Codevelopment activities and learning through iterative refinement	Joint creativity does not automatically improve over rounds. Scaffolding codevelopment can restore and sustain creative gains.	Process scaffolds and interaction traces are central design levers for learning in human-AI creativity.
Artificial Intelligence, CEO Turnover, and Exploration Orientation in Firm Innovation (Lou et al. 2025)	Organizational innovation following leadership transition	AI as infrastructure for exploration and strategic change	Firms with stronger AI investment are better able to pursue explorative innovation after CEO turnover, partly by mitigating myopia and information overload.	Creative AI affects scale through complementary organizational capabilities, not tool deployment alone.

increases creative performance. The fit between the AI contribution and the human task stage matters, as does the fit between the AI contribution and the creator's expertise.

For IS design, the implication is that the configuration of human and AI agencies in creative tasks needs to take the lifecycle phase (i.e., upstream or downstream) into account, as well as designer expertise. They should provide broad, possibility-generating support in early phases, where the exploration of diverse ideas is valuable. However, in later phases of idea convergence, critique, and refinement, optional technical exploration or user-controlled assistance are needed, especially by experts.

3.2. Disclosure, Validation, and the Indirect Governance of Creative Work

This article introduces a crucial governance insight. Disclosure does not only affect how audiences evaluate finished artifacts. It also changes how creators collaborate with GenAI before the artifact exists. Drawing on Goffman's account of impression management and involvement obligation (Goffman 1959) and its application in technology-mediated interaction (Schultze and Brooks 2019), this article theorizes creative work that is enacted through human-AI collaboration, as a product of a creative self that relies on social validation for its sense of agency (Heigl et al. 2026).

When creators anticipate that their reliance on AI will be disclosed, they tend to fear that audiences will not recognize their human creative agency. For many creators, the anticipation is that their self-presentation as a creative person will not be validated through an appropriate response because the audience will be dismissive of the ideator's contribution to the creative work. This leads the creator to withdraw from the collaboration with AI. They invest less of themselves in prompting GenAI to shape and refine the creative output. As a result, they also feel less ownership over the creative artifact.

This finding highlights the paradoxical nature of transparency. A simple AI-use label may satisfy a narrow accountability requirement while undermining the very human agency it is meant to protect. If creators expect that disclosures of AI use during the production of the creative artifact will result in their creative agency not being seen, validated, and praised by audiences, they are likely to cede creative agency to the technology. Thus, disclosure of AI use not only directly affects audience perceptions, but also indirectly affects the sociomaterial production of the artifact itself.

The design lesson we can draw is that disclosure as a specific approach to accomplishing transparency should not be treated as a binary tag. Platforms, organizations, and regulators should explore disclosure designs that communicate the nature of human involvement, including the creator's efforts and contributions—for example, how many iterations it took to arrive at the final creative output, how the AI was steered, and what ideas were selected/rejected. Such process-sensitive disclosure can preserve transparency while making human creative agency visible.

3.3. Representation, Effort, and Agency Configurations in Ideation

In innovation practice, visual representations are often treated as superior because they are vivid and quick to inspect, making them particularly well suited to getting multiple stakeholders "on the same page." Gordetzki et al. (2026) show that this intuitive logic is incomplete. Textual concretizations can generate greater creativity because they open an interpretive space for creators. However, because textual concretizations demand more effort from the ideator—she must imagine, complete, and elaborate the initial ideas—they highlight the cost-benefit trade-offs associated with different human-AI configurations.

The paper's agency framing is especially important. Textual concretizations configure collaboration as augmentation. GenAI supplies a structured but incomplete representation that human ideators must interpret and extend. Visual concretizations, by contrast, produce a computational creativity configuration that reflects automation. They specify many details at once, which can be helpful for very immature ideas but constraining for more mature ones.

The implication is that representational fidelity should be matched to the maturity of the idea and the purpose of the task. Immature ideas may benefit from the details that a vivid, AI-generated image offers. More developed ideas are more likely to benefit from textual concretizations that require human imagination to complete them. Although this textual modality creates more room for human agency, it comes at the cost of greater ideator effort.

3.4. Augmented Learning as a Designed Process

This augmented learning article adds a temporal perspective. Human-GenAI creativity is often treated as a single interaction in which a user prompts, the system outputs, and someone evaluates. Luan et al. (2025) show that joint creativity over repeated rounds can stall unless the collaboration is deliberately scaffolded. The key mechanism is not the volume of AI-generated ideas, but the quality of codevelopment, including feedback, refinement, and iterative elaboration between human and AI contributions.

This moves computational creativity from output comparison with process design. If creativity improves through structured codevelopment, then interfaces should prompt users to critique, revise, and recombine, rather than merely request more ideas. The result is a vocabulary that can be instrumented. Idea request, idea response, and idea codevelopment are process constructs that can be observed, measured, and designed for.

For IS research, this article underscores the value of interaction traces. Human-AI dialogue logs are not just byproducts of system use; instead, they are empirical windows into how creative search unfolds and where learning occurs.

3.5. AI as Organizational Infrastructure for Exploration

This study raises the analysis of computational creativity from the individual to the organizational level. Lou et al. (2025) show that AI capabilities can support explorative innovation after CEO turnover, a moment when firms may be especially open to strategic redirection but also vulnerable to myopia and information overload. AI investment appears to help firms search more broadly, allocate attention and resources to new domains, and pursue innovation that departs from existing trajectories.

This article is important because it prevents the Special Issue from becoming solely an account of individual human-GenAI interaction. Computational creativity also concerns organizational capability. The creative potential of AI depends on data infrastructure, talent, routines, leadership attention, governance, and incentives. A firm does not become more creative simply by adopting AI tools. It becomes more capable of exploration when AI is embedded in structures that help people search, evaluate, coordinate, and act on novel possibilities.

The finding also places limits on AI-enabled exploration. AI may be especially useful for moderate departures from prior knowledge, where existing data and organizational capabilities remain informative. More radical departures may still require forms of imagination, institutional courage, and strategic commitment that are not reducible to prediction or automation.

4. Cross-Cutting Themes

4.1. Agencies Are (Re)Configured for Situated Computational Creativity

Across the papers, agency is not seen as a fixed property that belongs to either the human ideator or the AI algorithm. Instead, its configuration is shaped by the stage of the idea's evolution, the ideator's expertise, the materialization of the idea, governance, and organizational context. This insight extends the IS distinction between human and material agency (Leonardi 2011). A textual concretization relies on human agency to complete it, thus generating an augmentation configuration. In contrast, a visual concretization is likely to rely more heavily on algorithmic agency, because incomplete ideas are embellished to produce a coherent rendition of vague imaginings.

Luan et al. (2025) extend this point by showing that agency in human-GenAI creativity is not allocated once at the beginning of a task, but is repeatedly reconfigured across cocreation activities and over time. Their distinction among idea request, idea generation-response, and idea codevelopment shows that creative agency shifts as humans and GenAI move from producing alternatives to critiquing, refining, and elaborating on them.

Although human and algorithmic agency is continuously negotiated throughout the performance of computational creativity, public disclosure of AI use makes attributions that lead audiences—especially those with little AI experience—to discount the value of the creative output and the role of human agency in its production. Anticipating this negative evaluation and dismissive response to their creative self, creators are likely to withdraw from the collaboration with AI. By relinquishing creative agency to the algorithm, creators protect their creative agency.

Organizational investments in AI may pay off for incremental innovation that is heavily anchored in prior knowledge, existing data, and established organizational capabilities. An automation configuration of computational creativity may be effective here. However, radical innovation still requires creative agency, demanding organizational imagination, institutional courage, and strategic commitment.

The key IS question is therefore not only how sociomaterial arrangements configure creative agency, but also when particular allocations of human and algorithmic involvement are productive for different creative activities and time horizons.

4.2. Human Effort Is a Creative Resource

Several articles problematize the conventional assumption that reducing human effort to achieve efficiency is as desirable in creative endeavors as it is in most other organizational activities. In the study on the implications of different concretization modalities, the additional human effort required for the textual representation of ideas plays an important role in developing output that was deemed not only novel, but also useful.

In the disclosure study, human effort is key to a creator's sense of selfhood, particularly the creative self. Unless the creator's investment in the computationally creative task is likely to elicit an appropriate response from the audience—for example, appreciation, awe—that will validate the creator's sense of self, such creative efforts are wasted. In the augmented learning study, Luan et al. (2025) show that the valuable form of human effort is not simply prompting the system for more ideas, but engaging in feedback, critique, and iterative refinement. Their findings suggest that joint creativity improves over time when human effort is directed toward idea codevelopment rather than repeated idea generation.

Computational creativity should therefore distinguish wasteful from productive effort. The objective of designing configurations of computational creativity is not to minimize human effort indiscriminately, but to preserve the forms of effort through which imagination, judgment, ownership, and learning occur.

4.3. Governance Shapes Computational Creativity

The disclosure study makes visible a broader point that applies across AI-enabled creativity. Governance regimes shape the creative process. Labels, attribution norms, evaluation criteria, and organizational policies play an important role in the audience responses that creators anticipate (e.g., validating their performance of creative self). This shapes how much creators invest in the computationally creative process and what kinds of artifacts are produced. The augmented learning study similarly suggests that governance can operate through interaction design: templates, instructions, and training can steer human-GenAI collaboration toward codevelopment rather than shallow delegation.

Governance should therefore be considered in the design of the creative system as a whole, not just a mechanism for signaling agency attributions post hoc. IS research is uniquely qualified to explore the configuration of computational creativity because it draws on theorizing the sociomaterial entanglements that produce creative outputs.

5. An Information Systems Research Agenda

We conclude this Special Issue editorial by putting forward a five-point agenda for IS research on computational creativity (Table 2). Our goal is to highlight both analytical and design-oriented opportunities, because the field of IS needs to build theories, methods, and artifacts that improve creative processes in a way that preserves the social conditions that make creativity meaningful. This orientation is consistent with the design science tradition in IS, which treats artifact design and evaluation as central vehicles for theory development (Hevner et al. 2004, Peffers et al. 2007).

5.1. Process Instrumentation and Dynamic Measurement

Creativity research still relies heavily on post hoc evaluation of finished artifacts. Creativity, however, often evolves through repeated interaction, cumulative learning, organizational capability building, and delayed evaluation. A short-term improvement in novelty may not be indicative of long-term creative capacity. A reduction in effort may result in increased output today, while eroding skill, ownership, or the creative self tomorrow. Computational creativity research should therefore examine temporal dynamics and level-crossing effects, including how individual interactions become routines, how routines become capabilities, and how capabilities shape fields and markets.

GenAI systems create opportunities to observe creative processes directly through digital traces consisting of prompts, revisions, alternative outputs, selections, rejections, dialogue turns, tool use, and collaborative sequences. IS researchers can develop process measures of creative breadth, depth, fixation, exploration, co-development, and convergence. Such measures can demystify creativity by offering insight into why and under what conditions some interventions improve durable creative capability, whereas others merely increase short-term output.

Illustrative research questions include:

- What process traces reliably predict downstream creative value?
- How do interaction patterns differ by task stage, modality, expertise, and organizational context?
- How does process instrumentation support intervention without disrupting creative flow?

5.2. Diversity-Preserving and Antihomogenization Design

A central risk of AI-enabled creativity is convergence. If many users rely on similar models, trained on similar data, prompted through similar interfaces, creative outputs are likely to become increasingly fluent but also increasingly similar. Computational creativity should therefore study how to design systems that expand, rather than contract, the explored solution space. Analytical creativity research focuses on this area of study, offering Structured Inventive methods such as TRIZ, or the Theory of Inventive Problem Solving (Altshuller 1984, 1999), and Logical Creativity (Ding 2020); analogy

Table 2. Research Agenda for Computational Creativity in IS

Research program	Core problem	Representative methods	Potential artifacts
Process instrumentation	Creativity is often evaluated after the fact, obscuring how outcomes emerge.	Process mining, trace analysis, longitudinal field studies, and mixed-method experiments	Creative process dashboards, interaction-trace metrics, and intervention triggers.
Diversity-preserving design	AI systems may increase fluency while homogenizing outputs.	Large-scale output diversity analysis, design science, simulation, and field experiments	Diversity-aware prompting tools, analogy engines, and constraint inversion interfaces
Agency-sensitive governance	Disclosure and attribution can shape production as well as evaluation.	Behavioral experiments, platform studies, policy design, and ethnography	Process-sensitive disclosure labels, provenance records, and human contribution summaries
Organizational and agentic capability building	Creative AI value depends on complementary routines and governance.	Case studies, econometric studies, action research, and multiagent simulations	Human-agent workflow templates, agent oversight routines, and creative AI capability audits
Responsible computational creativity	Highly creative human-AI outputs may generate bias, exclusion, manipulation, or other downstream harms, even when they appear novel and useful.	Stakeholder analysis, algorithmic auditing, red-teaming, participatory design, field experiments, and process-trace analysis	Harm-sensitive creativity audits, stakeholder impact canvases, misuse stress tests, inclusive prompt scaffolds, and accountability logs

engines; constraint inversion; diversity-aware prompting; and multiagent debate architectures as promising mechanisms for countering homogenization.

Research questions that focus on creative convergence include:

- Under what conditions is an AI system design that searches underrepresented regions of a solution space effective at producing creative artifacts that are both novel and useful?
- When do visual, textual, and multimodal representations increase or reduce creative diversity?
- What organizational and market-level mechanisms preserve creative diversity when AI tools become widely standardized?

5.3. Agency-Sensitive Governance and Attribution

Transparency, disclosure, and attribution of AI use are not only legal or ethical concerns, but also design variables that shape creative behavior. IS research should examine disclosure designs that communicate meaningful process information without discouraging human involvement. This includes studying provenance records, human contribution metrics, explainable cocreation histories, and governance regimes that recognize hybrid authorship without collapsing human agency into machine output.

Illustrative research questions include:

- What disclosure formats preserve human creative involvement while satisfying accountability requirements?
- How do audience expertise, platform norms, and professional identities moderate disclosure effects in computational creativity?
- How should organizations allocate credit and responsibility when human and algorithmic agency are inextricably intertwined in creative work?

5.4. Organizational and Agentic Creative Capability Building

The next wave of creative AI will increasingly involve agentic systems. These tools will plan, call other tools, remember prior work, coordinate with other agents, and act across longer time horizons. This makes organizational capability building more important. Firms will need routines for supervising agentic exploration, evaluating candidate ideas, preserving human judgment, documenting creative processes, and learning from failures. IS scholars are well positioned to study how such capabilities emerge, building on prior theory about configurations that delegate tasks to agentic IS artifacts, thus changing the allocation of work between humans and AI (Baird and Maruping 2021, Fügener et al. 2026).

Proposed research questions into agency configurations in computational creativity encompass:

- What complementary organizational capabilities are required for creative AI and agentic systems to enhance exploration in creative work?
- What agentic configurations of augmentation are feasible in a given context of computational creativity? How are these augmentation configurations most optimally designed and governed?
- What are the implications of augmentation-based computational creativity on an organization's performance?

5.5. Responsible Computational Creativity

Creativity is commonly defined in terms of novelty and usefulness. However, this definition leaves important questions unresolved: useful for whom, under what institutional conditions, over what time horizon, and at whose expense? A human-AI system may generate a highly creative solution that is novel and locally useful, while also producing bias, exclusion, manipulation, deskilling, reputational harm, or other negative externalities. In this sense, responsible computational creativity is not simply a matter of making AI systems more accurate, transparent, or efficient. Instead, it needs to consider how creative search can be directed toward outcomes that are not only novel and useful, but also socially appropriate.

This issue is particularly important because GenAI changes both the scale and direction of creative search. By generating alternatives rapidly, concretizing vague ideas, and making unusual recombinations easy, AI can help creators reach parts of the solution space that would otherwise remain unexplored. Yet, this same capability can also amplify problematic patterns. Models trained on historically biased or culturally narrow data may reproduce dominant assumptions, while presenting them as imaginative possibilities. Interfaces may make some users, bodies, languages, communities, or use cases more visible than others. Visual concretizations may prematurely fix details that encode stereotypes, while textual prompts may steer ideators toward familiar framings of the problem. Thus, a system can expand the search space in one sense while narrowing it in another.

Responsible computational creativity, therefore, requires moving beyond the evaluation of finished artifacts to the evaluation of creative trajectories. Researchers should examine not only whether a creative output is novel and useful, but also how the output was generated, what assumptions structured the search, which alternatives were made salient or invisible, and which stakeholders were included in judging value. This perspective aligns with the broader argument of this editorial that it is valuable to see computational creativity as involving sociomaterial configurations of human and machine agency. Responsibility cannot be assigned only to the model, the user, the platform, or the organization. Instead, it is distributed across the creative system, including data, prompts, interfaces, model behavior, evaluation criteria, disclosure regimes, organizational routines, and institutional norms.

One implication is that computational creativity systems should be designed to support critical as well as generative imagination. Generative imagination expands the space of possibilities by helping creators ask *what else might be possible?* Critical imagination complements this by encouraging them to interrogate those possibilities: *For whom is this desirable? What assumptions does it embed? Who might be excluded or harmed? What might happen if it were implemented at scale?* In this sense, responsible computational creativity requires systems that help users not only generate novel possibilities, but also reflect critically on their consequences. Such systems could incorporate design features that prompt counterfactual evaluation, stakeholder simulation, bias detection, misuse analysis, and comparison across affected groups. These features should not merely constrain creativity by ruling out risky outputs. Rather, they should also expand creative search toward alternatives that are more inclusive, accountable, and resilient.

This agenda is especially relevant as creative AI becomes more agentic and organizationally embedded. Agentic systems that plan, call tools, remember prior work, and coordinate with other agents may generate outputs whose downstream effects are difficult to trace. Organizations will therefore need routines for documenting creative processes, auditing the assumptions embedded in AI-generated alternatives, preserving human judgment, and assigning responsibility for hybrid outputs. The goal is not to suppress experimentation, but to make experimentation more reflective. Responsible computational creativity asks how human-AI systems can generate surprising and valuable possibilities, while also making visible the social consequences of those possibilities.

Illustrative research questions include the following.

- How should novelty and usefulness be measured when different stakeholders experience the value and harm of creative outputs differently?
- What process interventions help creators identify bias, exclusion, misuse, or downstream harm before AI-generated ideas are implemented?
- How do prompts, model defaults, representational modalities, and interface designs shape whose needs and perspectives are included in creative search?
- What governance arrangements allocate responsibility for harmful outcomes produced through human-AI cocreation?
- Under what conditions do computational creativity systems encourage socially responsible experimentation without reducing creative work to bland, risk-averse output?

6. Engineering Creativity Without Destroying It

The central tension in computational creativity is produced by the opposing forces of systematization and spontaneity/serendipity. If creativity is treated only as a process to be optimized, we risk stripping it of the ambiguity, surprise, embodiment, identity, and social recognition that make it meaningful. Yet, if creativity is treated only as a mystery or magic, we lose the opportunity to design systems that help more people and organizations produce novel and useful work reliably.

The contributions in this Special Issue suggest a middle path. Computational creativity can illuminate the mechanisms of creative work without reducing creativity to automation. The studies demonstrate why text sometimes outperforms images (Gordetzki et al. 2026), why experts need different AI assistance than novices (Hou et al. 2025), why disclosure can alter production (Heigl et al. 2026), why codevelopment must be scaffolded (Luan et al. 2025), and why organizational AI capabilities matter for exploration (Lou et al. 2025). These are not transient findings about a particular generation of AI models. Instead, they are design-relevant insights about the sociomaterial configuration of computational creativity.

For Information Systems research, the opportunity is substantial. IS scholars can build the conceptual vocabulary, measurement approaches, design artifacts, and governance frameworks needed for human-AI creative systems that are effective, accountable, and socially responsible. The goal is not to substitute creators, but to design conditions under which human and computational capabilities jointly expand what can be imagined, collaboratively refined, and realized.

If the field succeeds, future creative AI systems will not simply produce more content. They will also help people ask better questions, explore more diverse alternatives, learn through interaction, preserve ownership of their choices, and organize creative work at scales that were previously impossible to sustain economically. The promise of computational creativity in the AI era is the situationally appropriate and socially responsible configuration of human and algorithmic agency.

Associate Editors and Editorial Review Board

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